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If you would like to learn more about the statistics available from NASS or have questions concerning this report, visit our Web site at www.usda.gov/nass/, send e-mail to nass@nass.usda.gov, or call the Agricultural Statistics Hotline at 800.727.9540.

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Introduction

PURPOSE AND SCOPE OF THE SURVEY

The 2003 Farm and Ranch Irrigation Survey provides data that supplement the basic irrigation data collected from all farm and ranch operators in the 2002 Census of Agriculture. Irrigation data from this survey combined with 2002 census data provide one of the most complete and detailed profiles of irrigation in the United States. The 2003 Farm and Ranch Irrigation survey collected detailed data for on-farm irrigation practices in 2003. These data include acres irrigated by category of land use, acres and yields of irrigated and nonirrigated crops, quantity of water applied and method of application to selected crops, acres irrigated by type of water distribution system, and number of irrigation wells and pumps. Also, included are irrigation expenditures in 2003 for maintenance and repair of irrigation equipment and facilities; purchase of energy for on-farm pumping of irrigation water; investment in irrigation equipment, facilities, and land improvement; and cost of water received from off-farm water suppliers.

The 25,014 operations sampled for the 2003 survey were selected from farms and ranches reporting irrigated acres in the 2002 census, including American Indian reservations. Farms that reported horticultural crop sales of at least $10,000 and all institutional, research, and experimental farms were excluded from the survey. Therefore, 23,767 irrigation operations were excluded from the sample. Most of the irrigated farms (23,116) excluded were horticultural specialty farms which accounted for 1,011,012 acres irrigated, or 2 percent of the land irrigated in 2002. In the 2002 census, 806 institutional, research, and experimental farms accounted for 125,535 acres irrigated, or less than 1 percent of all acres irrigated in the nation.

Some changes occurred between the 2002 Census of Agriculture and the 2003 Farm and Ranch Irrigation Survey. Between 2002 to 2003, 16,088 farms irrigating 2.9 million acres in 2002, ceased operation under the name identifying them in the 2002 census. In addition, results of the 2003 survey show 32,489 irrigation operations reporting irrigation on 1.85 million acres in 2002 did not irrigate in 2003. No attempt was made to identify and select new irrigation operations for 2003.

HISTORY

Selected irrigation data for on-farm irrigation operations have been collected in the census of agriculture since 1890. A census of farms which reported irrigation in the 1900 Census of Agriculture was authorized by Congress. Surveys of irrigation in humid areas were taken in connection with the 1954 and 1959 censuses.

The 2003 Farm and Ranch Irrigation Survey is the sixth survey devoted entirely to collecting on-farm irrigation data for the United States. The 1979, 1984, 1988, and 1994 Farm and Ranch Irrigation Surveys were conducted by the U.S. Department of Commerce, Bureau of Census. Responsibility for the survey was transferred from the Bureau of Census to the U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS) in 1997. The 1998 survey utilized the resources of NASS' 45 State Statistical Offices (SSO) which expanded opportunities for telephone follow-up or personal enumeration of nonresponse cases. The 1998 Farm and Ranch Irrigation Survey was the first survey to collect and publish data for each of the 50 States. Previous farm and ranch irrigation surveys published data only for leading irrigation States, with a U.S. total, excluding Alaska and Hawaii.

AUTHORITY

The census of agriculture is required by law under the

"Census of Agriculture Act of 1997", Public Law 105-113 (Title 7, United States Code, Section 2204g). The law authorizes the Secretary of Agriculture to conduct surveys deemed necessary to furnish annual or other data on the subjects covered by the census. The 2003 Farm and Ranch Irrigation Survey was conducted under the provisions of this section.

FARM DEFINITION

The census definition of a farm is any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year. The definition has changed nine times since it was established in 1850. The current definition was first used for the 1974 Census of Agriculture and has been used in each subsequent agriculture census and related surveys. This definition is consistent with the definition used for current USDA surveys.

WATER RESOURCES AREAS MAP

The map on page 1 shows Water Resources Areas delineated on the basis of county boundaries that approximate actual basin boundaries based on topographic drainage characteristics. Data are tabulated separately for each of the 20 water resources areas shown on the map.

PERCENT OF NORMAL PRECIPITATION MAP

The map on page 2 shows the areas of the United States with deviations from normal precipitation during 2003. The map is included for reference purposes only.

TABLES AND APPENDIX

Table 1 shows farms and acres irrigated for the 1982 through 2002 censuses for each State. Tables 2 through 41 present detailed irrigation operation data collected in the survey from irrigation operations that reported irrigated land in the 2002 census and also irrigated in 2003. Table 42 presents data for farm operations that irrigated in 2002, but discontinued irrigation either temporarily or permanently in 2003 while continuing to operate a farm or ranch. Data from the 2003 survey are reported for each State and for the 20 Water Resources Areas. Additional text tables are shown in the General Explanation. The appendix provides facsimiles of the report form used to collect the data.

RESPONDENT CONFIDENTIALITY

In keeping with the provisions of Title 7 of the United States Code, no data are published that would disclose information about the operations of an individual farm or ranch. All tabulated data are subjected to an extensive disclosure review prior to publication. Any tabulated item that identifies data reported by a respondent or allows a respondent's data to be accurately estimated or derived, was suppressed and coded with a 'D'. However, the number of farms reporting an item is not considered confidential information and is provided even though other information is withheld.

DATA PRODUCTS

The 2003 Farm and Ranch Irrigation Survey data, as well as the 2002 Census of Agriculture Volume 1 Geographic Area Series and related reports, are available on the Internet at www.usda.gov/nass, CD-ROM, and in printed reports. Printed reports and a CD-ROM can be ordered by calling 1-800-727-9540.

CUSTOM TABULATIONS

Special studies such as the 2003 Farm and Ranch Irrigation Survey and 2005 Census of Aquaculture are part of the census program and provide supplemental information to the 2002 Census of Agriculture in the respective subject area. Results are published in print and on the internet.

Custom-designed tabulations may be developed when data are not published elsewhere. These tabulations are developed to individual user specifications on a cost-reimbursable basis and shared with the public. The census Volume 1 on CD-ROM is an alternative data source that should be investigated before requesting a custom tabulation.

All special studies and custom tabulations are subject to a thorough disclosure review prior to release to prevent the disclosure of any individual respondent

data. Requests for custom tabulations can be submitted via the internet from the NASS home page, by mail, or by e-mail to:

Associate Administrator
National Agricultural Statistics Service
1400 Independence Avenue, S.W.
Washington, D.C. 20250
or
HQ AA@nass.usda.gov

DEFINITIONS AND EXPLANATIONS

Definitions and explanations of selected terms used in the tables are defined in the General Explanation.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used throughout the tables:

-	Represents zero.
cwt	Hundredweight.
(D)	Withheld to avoid disclosing data for individual farms.
gpm	Gallons per minute.
(NA)	Not available.
psi	Pounds per square inch.
WRA	Water Resources Areas.
(X)	Not applicable.
(Z)	Less than half of the unit shown.

General Explanation

PLANNING AND DEVELOPMENT

Planning for the survey started in 1999 with a review of the previous farm and ranch irrigation survey. Letters were sent to more than 200 individuals in water-related government organizations, industry, and academic positions to solicit their comments on questionnaire content and table format. Presentations were made to several associations seeking their comments. Sixty responses were received. All responses were reviewed and categorized to evaluate data collection feasibility and priority needs.

METHOD OF ENUMERATION AND DATA COLLECTION

The 2003 Farm and Ranch Irrigation Survey was conducted primarily by mail and was supplemented by telephone calls and personal enumeration by NASS SSO staff and enumerators. A sample of 25,014 irrigators was selected and mailed a questionnaire in January 2004. This was a 6 percent increase over the 1998 sample size and was designed to enhance data quality for the 2003 survey. The initial mail packet included a report form and letter requesting a prompt response. The operators were asked to complete and return the report form to NASS. The initial mailing was followed by one follow-up mailing to everyone who had not responded in the first 4 weeks. The follow-up packet included a reminder letter and a report form. Six weeks after the initial mailing the SSOs were provided nonresponse lists. The offices made telephone calls and personal visits to maximize the response. For a description of the adjustment for nonresponse, see Statistical Methodology.

DATA PROCESSING

All report forms were reviewed by NASS staff prior to data keying to identify inconsistencies and ensure that the data could be keyed. Major inconsistencies, respondent remarks, blank forms, and large irrigation cases were reviewed by analysts and adjusted prior to data keying as needed. All forms with data were scanned and keyed from image. Data from each report form were processed through a computer edit which flagged inconsistent entries. Each flagged entry was reviewed manually. During the edit process, an imputation program supplied missing data and made adjustments based on responses of similarly sized farms within the same geographic area. Data entries of large magnitude and data items that were changed significantly in the computer edit process were reviewed and verified by analysts.

Prior to publication, tabulated totals were reviewed to identify and resolve remaining inconsistencies and potential coverage problems. Comparisons were made to 2002 census data and other available check data.

DATA COMPARABILITY

The 2002 Census of Agriculture introduced new methodology to account for all farms in the United States. All 2002 published census items were reweighted for incompleteness in the mail list. This adjustment for undercoverage was also used for the 2003 Farm and Ranch Irrigation Survey. To provide comparable data, 1998 data published in 2003 were also reweighted for undercoveraage. An explanation of the methodology is included in the 2002 Census of Agriculture Volume 1, Appendix C.

Differences exist between the expanded results of the 2003 Farm and Ranch Irrigation Survey and published data from the 2002 Census of Agriculture. Some of these are as follows:

1. The survey excludes horticultural specialty farms and institutional, research, and experimental farms.

The effect of these exclusions is listed below:

	Irrigated farms	Acres irrigated
2002 U.S. totals	299,583	55,311,236
Excluded from survey	23,767	1,136,547
Eligible for selection in survey	275,816	54,174,689

2. The survey includes data only for operators who irrigated in both 2002 and 2003. Operators in some areas, especially the Eastern States, irrigate intermittently according to moisture needs. Operators having irrigation capabilities may not irrigate depending on the amount of rainfall for a particular year or geographic area. The number of operators who irrigated in 2002 but discontinued irrigation in 2003 is tabulated in Table 42 by reason of discontinuance.

3. Some operators reported that they had been misclassified as irrigators and did not irrigate in either 2002 or 2003. An estimated 22,719 operators with 948,400 acres irrigated in 2002 were misclassified as irrigators in the 2002 census. This is estimated by expanding reports in the survey where the respondents reported that they did not irrigate in 2003 nor in 2002. In addition to errors in processing data, some operators misreported or misinterpreted the questions. Most of the operators misreporting irrigation in the 2002 census reported irrigation of small acreages of vegetables, fruits and nuts, tobacco, potatoes, or berries. Small amounts of water were applied to these crops at the time of transplanting.

4. Some respondents indicated they had quit farming, retired, moved, gone bankrupt, etc., since 2002. After analytical review of the 2003 receipts, an estimated 16,088 operators accounting for 2,941,413 acres irrigated in 2002, after expansion, were dropped from processing because they were no longer farming. Special care was taken with large operations to ensure that they were not erroneously dropped due to reorganization or name change rather than discontinuing agricultural operations. This included the use of field and telephone enumeration.

5. New irrigators in 2003 (not included in the 2002 census) did not have a chance of being selected in the sample and, therefore, were excluded from the survey. It is believed that the impact of new irrigators is probably minimal. This conclusion is supported by comparisons between the 1997 and 2002 censuses which show little change in acres of irrigated cropland harvested.

6. For the 2002 census and the 2003 Farm and Ranch Irrigation Survey, farms were classified by type of activity or activities according to the North American Industry Classification System (NAICS). Table 33 provides irrigation data for farms classified by NAICS.

When comparing the number of farms and irrigated acres between the 2003 survey and the 2002 census published U.S. totals, most of the differences are for operators reporting less than 100 acres irrigated. This is expected since the excluded horticultural farms average 48 acres irrigated per farm and the other categories of discontinued or excluded irrigators generally are smaller than average irrigators. Table A shows acres irrigated in the 2003 survey (expanded) compared with U.S. totals from the 2002 census. The expanded survey accounts for 95 percent of all land reported as irrigated in the 2002 census and all irrigation characteristics associated with that land.

DEFINITIONS AND EXPLANATIONS

This section provides definitions and explanations of selected items that are used on the report form or in the tables. A facsimile of the 2003 Farm and Ranch Irrigation Survey report form is found in the appendix.

Water Resources Areas (WRA)

Data from the 2003 Farm and Ranch Irrigation Survey were tabulated by WRA. Boundaries of these areas are shown on the map on page I. These boundaries are essentially the same as the water resources regions (WRR) delineated and defined in the past by the U.S. Water Resources Council. The areas differ somewhat from the regions because of the method used for boundary delineation. Region boundaries are delineated on the basis of topographic drainage characteristics, whereas areas are delineated on the basis of county boundaries which approximate actual drainage-basin boundaries. Geographic descriptions of each water resources region that were used to

approximate the area included in each water resources area are as follows:

Table A. **Farms with Irrigation by Acres Irrigated: 2003 Survey Compared with 2002 Census**

Item	2002 Census of Agriculture	2003 Farm and Ranch Irrigation Survey	
	U. S. totals	U.S. totals (expanded)	Percent of 2002 census totals
Acres irrigated			
farms....	299,583	220,163	73.5
acres....	55,311,236	52,583,431	95.0
1 to 49 acres			
farms....	183,120	116,256	63.5
acres....	2,032,251	1,658,408	81.6
50 to 99 acres			
farms....	27,094	22,288	82.3
acres....	1,878,687	1,551,154	82.6
100 to 199 acres			
farms....	28,011	24,657	88.0
acres....	3,851,651	3,454,895	89.7
200 to 499 acres			
farms....	31,449	28,032	89.1
acres....	9,883,105	8,922,430	90.3
500 to 999 acres			
farms....	17,329	16,771	96.8
acres....	12,001,034	11,827,596	98.6
1,000 acres or more			
farms....	12,580	12,159	96.7
acres....	25,664,508	25,168,948	98.1

01 New England Region- The drainage within the United States that ultimately discharges into the Bay of Fundy and the Atlantic Ocean. These points of discharge are located within and between Maine and Connecticut; Long Island Sound and the St. Francis River, a tributary of the St. Lawrence River.

02 Middle Atlantic Region- The drainage within the United States that ultimately discharges into the Atlantic Ocean, whose point of discharge is located within and between New York and Virginia, and the Richelieu River, a tributary of the St. Lawrence River.

03 South Atlantic-Gulf Region- The drainage that ultimately discharges into the Atlantic Ocean, whose point of discharge is located within and between North Carolina and Florida; and the Gulf of Mexico, whose point of discharge is located within and between Florida and Mississippi, including the Pearl River.

04 Great Lakes Region- The drainage within the United States that discharges into the Great Lakes system, including the Lakes' surfaces; and the St. Lawrence River as far east as, but excluding the Richelieu River.

05 Ohio Region- The drainage of the Ohio River, excluding that of the Tennessee River.

06 Tennessee Region- The drainage of the Tennessee River.

07 Upper Mississippi Region- The drainage of the Mississippi River above the mouth of the Ohio River, excluding drainage of the Missouri River above a point immediately below the mouth of the Gasconade River.

08 Lower Mississippi River- The drainage of the Mississippi River below the mouth of the Ohio River, but excluding the drainage of the Arkansas, White, and Red Rivers and above the points of highest backwater affects of the Mississippi River in those parts; and the coastal streams, other than the Mississippi River, that discharge into the Gulf of Mexico from the boundaries of, but excluding the Pearl and Sabine Rivers.

09 Souris-Red-Rainy Region- The drainage within the United States of the Souris, Red, and Rainy Rivers.

10 Missouri Region- The drainage within the United States of the Missouri River above a point immediately below the mouth of the Gasconade River and the Saskatchewan River.

11 Arkansas-White-Red Region- The drainage of the Arkansas River above the point of highest backwater affect of the Mississippi River, the Red River above the point of highest backwater affect of the Mississippi River, and the White River above the point of highest backwater affect of the Mississippi River near Peach Orchard Bluff, AR.

12 Texas-Gulf Region- The drainage that discharges into the Gulf of Mexico from and including Sabine Pass to, but excluding the Rio Grande and the Lower Rio Grande Valley.

13 Rio Grande Region- The drainage within the United States of the Rio Grande; the San Luis Valley, North Plains, San Augustine Plains, Mimbres, Estancia Jonado del Muerto, Tularosa, Salt, and various smaller

closed basins; and the Lower Rio Grande Valley.

14 Upper Colorado Region- The drainage of the Colorado River above the Lee Ferry Compact Point, which is about 1 mile below the mouth of the Paria River; and the Great Divide closed basin.

15 Lower Colorado Region- The drainage within the United States of the Colorado River below the Lee Ferry Compact Point, which is about 1 mile below the mouth of the Paria River; the Rios Yaqui, Magdelena, Sonoita, and other lesser streams that ultimately discharge into the Gulf of California; and the Animas Valley, Wilcox Playa, El Dorado Valley, and other smaller closed basins.

16 Great Basin Region- The drainage of the Great Basin that ultimately discharges into Utah and Nevada.

17 Pacific-Northwest Region- The drainage within the United States that ultimately discharges into the Straits of Georgia and Juan de Fuca and the Pacific Ocean. The point of discharge is within Washington and Oregon, including the Columbia river.

18 California Region- The drainage within the United States that ultimately discharges into the Pacific Ocean, whose point of discharge is within California, which includes the Central Valley; and that portion of the Great Basin and other closed basins in California.

19 Alaska- entire State.

20 Hawaii- entire State.

Acre-Feet of Water - An acre-foot of water is the quantity of water required to cover 1 acre to a depth of 1 foot. This is equivalent to 43,560 cubic feet or 325,851 gallons.

Acres and Quantity Harvested - If two or more crops were harvested from the same land during the year, the acres were counted for each crop. Therefore, the total acres of all crops harvested generally exceeds the acres of harvested cropland. Exceptions to this procedure are hay crops. When more than one cutting of hay was taken from the same acres, the acres were counted only once, but the quantity harvested included hay from all cuttings.

For interplanted crops or ''skip-row'' crops, acres were reported according to the portion of the field occupied by each crop. If a crop was interplanted in an orchard or vineyard and harvested, then the entire orchard or vineyard acreage was reported under the appropriate fruit crop and the interplanted estimated crop acreage was reported under the appropriate crop.

Acres of land in bearing and nonbearing orchards, citrus or other groves, vineyards, and nut trees were reported as harvested cropland regardless of whether the crop was harvested or failed. Abandoned orchards were reported as cropland idle, not harvested cropland.

Acres irrigated - Acres irrigated are the acres of agricultural land to which water was artificially applied by controlled means including preplanted, partial, supplemental, and semi-irrigation. Land flooded during high water periods was to be included as irrigated only if the water was diverted to agricultural land by dams, canals, or other works.

All other land - This category includes land in house lots, barn lots, ponds, roads, ditches, wasteland, etc. It includes those acres in the farm operation not classified as cropland, pastureland, or woodland.

Cropland harvested - This category includes land from which crops were harvested and hay was cut, and land used to grow short-rotation woody crops, land in orchards, citrus groves, Christmas trees, vineyards, nurseries, and greenhouses. Land from which two or more crops were harvested was counted only once. Land in tapped maple trees was included in woodland not pastured. The 1997 census definition for harvested cropland was the same as the 2002 definition. Short-rotation woody crops were not explicitly referenced in the 1997 census definition, but were included as "Other nursery and greenhouse crops."

Cropland used only for pasture or grazing - This is land used only for pasture or grazing that could have been used for crops without additional improvement. Also included are acres of crops hogged or grazed but not harvested prior to grazing. However, cropland that was pastured before or after crops were harvested was to be included as harvested cropland rather than cropland for pasture or grazing.

Crops unit of measurement - Respondents were instructed to report crops in the units published.

Flowing or Artesian wells - Flowing or artesian wells are wells which flow freely and provide water used for irrigation without pumping. All flowing or artesian wells were excluded from pumping data on Tables 14 and 15. This should be taken into consideration when using data from these two tables. The 1998 survey was the first time the question was a respondent-reported item. Past surveys subtracted the reported number of pumped wells from the reported total wells used to derive the number of artesian wells.

Institutional, research, experimental, and American Indian reservation farms - Institutional, research, and experimental farms were previously called abnormal farms. In the 2002 census, these farms were combined with Indian Reservation farms into one category. However, in the 2003 survey American Indian Reservations are included while the others are excluded. Research farms include farms operated by private companies as well as those operated by universities, colleges, and government organizations for the purpose of expanding agricultural knowledge.

Irrigated farms - Irrigated farms or ranches are those with any agricultural land irrigated by any artificial or controlled means in the specific calendar year. The acreage irrigated may vary from a very small portion of the total acreage in the farm or ranch to irrigation of all agricultural land in the farm or ranch. Livestock lagoon waste water distributed by sprinkler or flood systems was also included.

Land in farms - The acreage designated as ''land in farms'' consists primarily of agricultural land used for crops, pasture, or grazing. It also includes woodland and wasteland not actually under cultivation or used for pasture or grazing, provided it was part of the farm operator's total operation. Large acreages of woodland or wasteland held for nonagricultural purposes were deleted from individual reports during the edit process. Land in farms includes acres in the Conservation Reserve and Wetlands Reserve Programs.

Land in farms is an operating unit concept and includes land owned and operated as well as land rented from others. Land used rent free was reported as land rented from others. All grazing land, except land used under government permits on a per-head basis, was included as ''land in farms'' provided it was part of a farm or ranch. Land under the exclusive use of a grazing association was reported by the grazing association and included as land in farms. All land in American Indian reservations used for growing crops or grazing livestock was included as land in farms. Land in reservations not reported by individual American Indians or non-Native Americans was reported in the name of the cooperative group that used the land. In many instances, an entire American Indian reservation was reported as one farm.

Market value of agricultural products sold - The market value of agricultural products sold represents the gross market value before taxes and production expenses of all agricultural products sold or removed from the place in 2003 regardless of who received the payment. It is equivalent to total sales. It includes sales by the operator as well as the value of any shares received by partners, landlords, contractors, or others associated with the operation. The market value of agricultural products sold represents the sum of all crops, including nursery products, and livestock and poultry and their products. It does not include income from farm-related sources, such as custom work or agricultural services, or income from nonfarm sources.

The 2003 Farm and Ranch Irrigation Survey is the first time sales data from the survey year has been collected. In the previous surveys, these data were taken from the previous census report forms of the irrigation survey respondents. Therefore, the market value of sales did not always match up to the commodities reported in the survey due to differing yields and prices and operation changes from year to year.

North American Industry Classification System - Beginning with the 1997 census and the 1998 Farm and Ranch Irrigation Survey, farms were classified by type of activity or activities according to the North American Industry Classification System, (NAICS). Prior to 1997, farms were classified using the Standard Industrial Classification (SIC). An establishment primarily engaged in crop production (major group 111) or production of livestock and animal specialties (major group 112) is classified in the four-digit industry and three-digit industry group which accounts

for 50 percent or more of the total value of sales of its agricultural products. If the total value of sales of agricultural products of an establishment is less than 50 percent from a single four-digit industry, but 50 percent or more from the products of two or more four-digit industries within the same three-digit industry group, the establishment is classified in the miscellaneous industry of that industry group. Otherwise, it is classified as "All Other Crop Farming" in industry 11199 or a general livestock farm in industry 11299.

Classifications of irrigated farms by selected NAICS groupings are shown in Table 33. The NAICS codes for the 2003 survey respondents were determined from their 2002 census report.

Off-farm water supply - Off-farm water supply is water from off-farm water suppliers, such as the U.S. Bureau of Reclamation; irrigation districts; mutual, private, cooperative, or neighborhood ditches; commercial companies; or community water systems.

On-farm surface supply - On-farm surface supply is water from a surface source not controlled by a water supply organization. It includes sources such as streams, drainage ditches, lakes, ponds, and reservoirs on or adjacent to the operated land.

Other cropland - Other cropland includes cropland not harvested and not grazed which was used for cover crops or soil-improvement crops, land on which all crops failed, land in cultivated summer fallow, idle cropland, and land planted in crops that were to be harvested after the survey year.

Other pastureland and rangeland - This land use category is very inclusive and encompasses all grazable land that does not qualify as cropland pasture. It may be irrigated or dry land. In some areas, it can be a high quality pasture that could not be cropped without improvements. In other areas, it is barely able to be grazed and is only marginally better than wasteland.

Sprinkler systems - Sprinkler irrigation is divided into four areas to reflect current trends in irrigation. The center pivot and mechanical-move methods have, by definition, high-pressure delivery with water delivered at 60 psi or more, medium pressure delivery with water delivered at 30 to 59 psi, and low pressure delivery with water delivered at less than 30 psi. The mechanical-move systems are classified as either linear move, side roll, wheel move, or big gun where the sprinkler device is moved across the field either by self-propelled methods or by tractor. Since all big guns operate at high pressure, pressure was not asked. Hand move systems include distribution systems laid out in the spring and removed at the end of the season, as well as other sprinkler systems which are moved without mechanical assistance. Solid set and permanent systems are sprinklers placed in the ground permanently and used mostly for perennial crops.

Total cropland - This category includes cropland harvested, cropland used only for pasture or grazing, cropland idle or used for cover crops or soil improvement but not harvested and not pastured or grazed, cropland on which all crops failed or were abandoned, and cropland in cultivated summer fallow.

Woodland - Woodland includes natural or planted woodlots or timber tracts, cutover and deforested land with young growth which has or will have value for wood products and woodland pastured. Land covered by sagebrush or mesquite was reported as other pastureland and rangeland or other land. Land planted for Christmas tree production and short rotation woody crops was reported in cropland harvested and land in tapped maple trees was reported as woodland not pastured.

STATISTICAL METHODOLOGY

Target Population

The target population for the survey was composed of all farms irrigating in the reference year 2003, provided they were neither horticultural speciality farms nor institutional, research, or experimental farms. To obtain measurement for this target population, the frame population was constructed to include all farms that reported irrigated acres in the 2002 Census of Agriculture except for farms that reported horticultural crop sales of at least $10,000 and all institutional, research, and experimental farms. The farms in these excluded categories represented 11 percent of the total number of irrigators and 2 percent of the irrigated land reported in the 2002 census.

Undercoverage existed in the frame population to the extent that there were farms that either erroneously reported not irrigating in the 2002 census, started irrigating in 2003, or had succeeding irrigators in 2003 (i.e., an operator who, since 2002, took over control of an irrigating farm through sales, rental, or other arrangements). Overcoverage existed in the frame because some operations were misclassified as irrigators and did not irrigate in 2002 or had either stopped farming or irrigating in 2003. Farms in these groups that were selected into the sample were identified during the survey and estimates of their number and acres irrigated are provided. Table B provides the farm count and acres irrigated by State for both the survey frame population and the 2002 census.

Sample Design

Sampling frames were created at the State level and consisted of the farm operations reported in that State in the 2002 census that satisfied the frame definition stated above. The survey estimates were based on a probability sample of farms from each State frame. The sample design consisted of a stratified systematic sample selected independently from each of the 50 State frames. All farms in a sampling frame were stratified on the basis of total irrigated acres reported in the 2002 census. The stratification boundaries varied among the States and were dependent on the distribution of total acres irrigated variable within the State. A certainty stratum, whose farms were selected with probability one, was included in each State so that the major irrigators in each State were included.

The State sample sizes necessary to obtain the desired level of precision were determined by analyzing the variation of the total acres irrigated variable in each State's sampling frame. These sample sizes were adjusted using historical nonresponse data to the survey. The total national sample size was 25,014 farms; 1,823 of these farms were selected from the certainty strata and the remaining 23,191 farms were systematically selected from the noncertainty strata. Table B provides the State sample sizes.

Estimation

Estimates were produced for the Nation as a whole, for each of the 50 States, and for the geographic domains known as Water Resources Areas (WRA). The estimation methodology accounted for both selection of the survey sample and survey nonresponse. The estimator for the State totals was a direct expansion reweighted estimator. The expansion factor was the inverse of the selection probability for the sample farms in a stratum. This expansion factor was reweighted at the stratum level to account for whole-farm nonresponse. The nonresponse adjustment factor used to reweight the expansion factor was the ratio of the number of sample farms in a stratum to the number of sample farms that responded to the survey in that stratum. The assumption underlying this weighting approach to survey nonresponse was that survey respondents and nonrespondents within a stratum constitute a homogeneous population, thus allowing respondents to represent nonrespondents. The reweighted expansion factor is the product of these two factors and is equal to the ratio of the total number of farms in the stratum to the total number of sample farms that responded to the survey in that stratum. An expanded data value for a sample record was obtained by multiplying the data value by the reweighted expansion factor. State totals for a characteristic were estimated by summing the expanded data values from all responding sample records across all strata within the State. National estimates were obtained by summing across all States. The WRA estimates were obtained by summing the expanded data values for the portion of the sample falling into the WRA.

Survey Error

The statistics in this report are estimates derived from a sample survey. There are two types of errors possible in an estimate-based sample survey: sampling and nonsampling. Sampling error is the error caused by observing only a sample instead of the entire population. The sampling error is subject to sample-to-sample variation. Nonsampling errors include all other errors and can arise from many different sources. These sources may include respondent or enumerator error or incorrect data keying, editing, or imputing for missing data. Nonsampling error due to mail list incompleteness and duplication, as well as misclassification of records on the mail list, is referred to as coverage error.

Table B. **Irrigated Farms: 2003 Farm and Ranch Survey and the 2002 Census**

Geographic area	2003 Farm and Ranch Irrigation Survey						2002 Census			
	Initial mailout counts		Final reports processed and tabulated				Published totals		Sample universe [1]	
			Unexpanded		Expanded					
	Farms	2002 acres	Farms [2]	Acres irrigated	Farms [3]	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
United States	25,014	20,963,602	17,310	15,358,202	220,163	52,583,431	299,583	55,311,236	203,123	49,031,141
Alabama	509	68,986	264	32,778	578	52,722	1,698	108,783	940	74,220
Alaska	45	2,278	32	2,013	73	2,252	150	2,742	84	2,353
Arizona	505	676,385	328	513,907	2,777	836,587	4,172	931,735	2,377	849,354
Arkansas	823	1,282,455	584	963,372	4,834	3,944,867	5,847	4,149,766	4,957	3,903,271
California	1,202	2,668,447	862	1,931,009	46,841	8,471,936	55,596	8,709,353	37,803	7,551,425
Colorado	591	692,926	449	483,183	11,567	2,562,329	13,623	2,590,654	10,346	2,311,638
Connecticut	104	3,257	81	1,428	234	2,213	801	10,139	276	3,764
Delaware	207	83,194	140	46,321	213	69,088	439	97,167	300	87,109
Florida	672	1,174,105	411	972,930	8,335	1,497,653	13,456	1,815,174	7,485	1,485,803
Georgia	783	499,744	559	307,172	2,847	710,893	5,369	870,810	3,415	754,538
Hawaii	402	56,022	279	69,553	1,214	78,538	2,231	69,194	1,406	58,352
Idaho	773	1,242,864	575	1,003,451	14,303	3,126,857	15,901	3,288,522	11,976	3,145,799
Illinois	569	279,261	484	254,915	1,195	374,919	2,031	390,843	1,221	336,963
Indiana	580	228,105	416	160,319	1,193	276,294	2,212	313,130	1,464	287,687
Iowa	462	122,167	305	89,159	709	134,164	976	142,109	756	128,731
Kansas	616	876,807	434	623,085	4,878	2,543,950	5,915	2,678,277	5,381	2,623,544
Kentucky	647	19,689	457	11,860	943	20,685	3,606	36,751	2,415	30,334
Louisiana	919	666,876	625	453,143	2,280	838,717	3,496	938,841	2,243	803,247
Maine	105	15,910	84	13,078	507	18,163	1,031	19,703	490	16,846
Maryland	305	61,501	197	34,415	509	53,734	1,265	80,828	708	65,597
Massachusetts	125	9,611	109	7,282	842	16,151	1,580	23,720	816	17,021
Michigan	584	298,638	405	231,642	2,366	432,665	4,413	456,278	2,588	377,628
Minnesota	659	331,676	447	254,765	1,639	434,500	2,433	454,850	1,647	396,265
Mississippi	791	1,064,232	469	768,247	1,567	1,169,793	2,235	1,175,530	1,662	1,153,086
Missouri	791	740,514	591	580,131	1,966	1,020,728	3,304	1,032,973	2,083	883,096
Montana	647	575,696	495	478,008	8,625	2,131,955	10,150	1,976,111	8,409	1,807,548
Nebraska	585	774,332	457	630,357	16,278	7,516,171	17,970	7,625,170	14,450	6,650,859
Nevada	404	487,946	299	341,918	1,722	639,310	1,981	746,653	1,539	608,589
New Hampshire	129	689	96	425	161	818	451	2,292	214	871
New Jersey	383	51,162	253	30,041	807	46,679	2,124	96,893	967	56,130
New Mexico	579	501,622	417	359,750	6,741	769,787	8,282	844,799	5,499	745,851
New York	404	45,914	203	16,166	1,284	48,545	3,307	74,663	1,629	62,723
North Carolina	495	115,094	270	26,948	2,281	101,055	6,721	264,057	4,127	220,792
North Dakota	352	162,327	257	129,461	541	207,772	659	202,817	520	175,369
Ohio	314	19,086	205	9,393	670	14,476	2,623	40,685	932	21,128
Oklahoma	568	351,478	391	273,820	1,819	508,842	2,942	517,553	2,104	434,217
Oregon	771	793,879	569	591,991	14,205	1,731,660	17,776	1,907,627	11,641	1,604,468
Pennsylvania	470	19,383	283	7,621	1,589	19,633	4,108	42,516	1,928	26,046
Rhode Island	56	612	35	497	58	648	264	3,963	98	719
South Carolina	285	61,627	158	31,985	951	52,046	1,918	95,642	1,122	70,523
South Dakota	409	204,243	316	149,250	1,444	390,406	1,755	401,083	1,301	312,647
Tennessee	411	38,198	215	26,109	759	34,429	2,592	61,217	1,043	39,602
Texas	1,054	1,365,569	698	880,953	15,441	4,947,745	21,164	5,074,638	14,038	4,509,969
Utah	591	351,200	495	267,931	10,070	1,082,213	11,587	1,091,011	8,950	966,653
Vermont	97	724	62	326	204	825	508	2,335	175	887
Virginia	414	49,728	228	14,622	905	33,635	3,331	98,913	2,027	74,402
Washington	733	818,305	506	617,101	12,862	1,806,782	15,534	1,823,155	9,780	1,523,908
West Virginia	83	1,039	55	507	100	801	408	1,981	185	1,248
Wisconsin	513	310,106	409	285,661	1,414	391,763	2,457	385,902	1,405	344,976
Wyoming	498	697,994	351	378,203	4,822	1,415,037	5,191	1,541,688	4,201	1,423,345

[1] Excludes institutional, research, and experimental farms and horticultural specialty farms.
[2] Includes 2,361 farms that discontinued irrigation since 2002.
[3] Includes 32,489 farms that discontinued irrigation since 2002.

Table C. **Relative Standard Error (percent) for Selected Irrigation Data: 2003**

Geographic area	Irrigated farms	Acres in farms	Acres irrigated				Acre-feet of water applied, all sources	Wells used in 2003	Pumps, all types	Expenses for irrigation		
			Total	Cropland harvested	By sprinkler systems	By gravity flow				Energy used for pumping	For wells, pumps, equipment, and facilities	Maintenance and repair
United States	1.0	3.1	1.0	3.2	1.7	1.4	1.4	1.8	1.6	3.0	4.3	3.0
Alabama	6.6	9.4	6.1	9.5	6.5	31.2	7.7	10.3	7.4	6.3	18.1	18.1
Alaska	6.5	8.8	3.9	6.9	4.2	53.5	35.4	12.6	11.3	8.2	13.9	12.4
Arizona	9.9	7.1	2.4	2.6	7.9	2.8	2.6	28.9	32.4	6.5	11.0	7.7
Arkansas	3.6	2.9	2.3	2.7	9.0	2.6	3.4	3.5	3.3	3.5	15.7	7.0
California	2.8	8.5	3.5	3.9	11.2	3.8	3.4	7.5	5.5	9.9	15.0	8.7
Colorado	3.9	10.2	3.9	12.7	5.0	7.8	5.3	9.2	8.2	5.5	15.4	10.9
Connecticut	10.5	17.0	8.2	15.3	10.7	-	11.0	24.8	11.9	7.9	26.8	29.9
Delaware	12.4	5.6	4.1	5.7	4.0	-	9.8	4.7	5.4	5.7	13.4	16.0
Florida	5.9	8.7	2.3	6.8	8.9	5.6	3.2	7.5	6.2	4.6	12.0	6.1
Georgia	7.1	5.3	4.3	4.3	5.0	19.0	5.2	6.1	4.6	6.1	19.7	7.1
Hawaii	3.4	34.7	14.1	20.3	9.6	22.2	19.7	25.8	11.4	16.9	17.4	12.6
Idaho	3.1	8.9	2.1	4.8	3.0	6.0	3.0	7.9	6.1	3.4	9.2	6.7
Illinois	3.5	4.8	1.7	5.0	1.7	29.9	2.2	2.2	2.2	2.3	9.9	5.6
Indiana	5.8	6.5	2.4	6.6	2.4	35.5	3.3	5.4	4.6	3.3	9.7	12.3
Iowa	3.8	15.3	2.8	16.2	2.9	15.2	3.3	4.5	4.0	3.9	12.7	7.3
Kansas	3.6	5.2	2.5	4.9	2.9	9.2	3.4	3.2	4.9	4.0	11.3	7.4
Kentucky	6.5	8.4	5.6	8.7	6.1	24.4	6.4	15.7	7.9	9.4	18.6	18.4
Louisiana	5.5	9.9	3.1	8.8	7.1	3.4	3.7	5.0	18.0	3.8	7.5	43.6
Maine	12.6	18.0	9.6	26.2	11.6	41.0	13.2	21.9	14.5	20.4	17.6	25.0
Maryland	10.5	12.1	5.6	12.1	5.7	97.9	8.0	9.6	12.1	13.0	18.1	13.8
Massachusetts	7.0	10.2	6.7	11.8	7.8	43.5	10.6	29.4	8.4	14.8	19.9	11.6
Michigan	4.6	4.5	2.2	4.6	2.4	98.0	2.8	6.9	6.8	2.8	11.0	5.2
Minnesota	4.0	3.6	2.2	3.6	2.4	13.8	2.6	3.2	3.4	2.7	38.1	5.2
Mississippi	21.3	3.5	2.4	2.6	4.1	3.1	3.3	4.8	4.4	3.7	6.9	5.9
Missouri	6.2	4.8	2.3	4.3	4.0	3.5	3.1	2.8	2.7	2.9	7.5	7.4
Montana	4.0	14.2	4.1	35.6	7.0	5.1	5.4	30.1	9.2	7.7	18.9	9.4
Nebraska	2.2	8.4	3.2	7.4	4.5	6.8	4.4	3.9	3.7	5.1	16.1	8.5
Nevada	3.5	8.4	3.6	6.5	7.5	4.9	4.3	7.5	7.0	6.8	13.6	11.4
New Hampshire	6.5	13.6	9.4	14.2	13.4	21.4	18.0	13.0	9.2	14.0	24.1	26.5
New Jersey	8.6	7.8	4.0	8.8	5.0	29.7	8.7	8.8	6.6	5.8	19.4	8.3
New Mexico	5.7	25.5	4.7	5.8	5.4	8.5	4.4	7.2	8.1	5.0	9.9	8.0
New York	11.7	12.8	10.7	14.0	12.0	-	13.7	19.9	13.9	15.1	18.4	17.5
North Carolina	12.3	11.6	7.9	14.2	8.5	59.9	15.7	26.8	11.3	10.7	20.6	16.1
North Dakota	2.7	8.0	2.8	10.0	3.6	10.4	6.2	5.5	4.7	5.2	12.3	13.6
Ohio	9.1	10.1	9.6	10.1	11.4	53.5	36.2	18.4	11.9	31.7	23.1	14.3
Oklahoma	8.0	12.5	3.8	8.2	4.4	11.4	5.4	7.4	7.1	4.0	14.3	8.8
Oregon	4.5	9.4	2.8	16.1	5.0	4.8	3.5	17.2	8.2	5.8	14.7	11.9
Pennsylvania	7.7	17.8	11.0	20.3	11.1	34.8	11.5	16.9	11.4	11.7	18.5	24.0
Rhode Island	15.1	11.9	8.7	16.1	6.0	13.0	12.1	37.8	19.5	8.6	27.3	55.9
South Carolina	15.7	17.1	6.8	12.4	7.0	74.6	11.1	21.6	15.1	11.3	16.2	13.9
South Dakota	3.8	9.5	2.7	9.1	4.1	8.7	49.9	6.4	5.9	5.6	20.5	10.1
Tennessee	10.0	7.8	5.1	8.1	6.0	34.4	7.5	16.1	10.8	17.7	21.8	14.5
Texas	5.9	13.6	5.4	5.6	7.6	8.8	6.0	4.9	5.0	9.0	12.2	12.7
Utah	3.2	14.7	3.2	6.7	6.2	4.3	4.4	15.7	15.0	9.2	14.3	10.2
Vermont	8.0	17.9	13.9	22.8	25.3	50.9	17.2	16.7	14.0	24.4	35.8	53.1
Virginia	16.7	19.6	8.9	12.4	10.9	-	10.9	28.8	15.7	12.1	30.3	32.3
Washington	3.8	10.0	3.5	6.5	4.4	9.2	3.9	13.0	7.4	5.3	13.6	8.2
West Virginia	16.5	22.8	11.5	33.2	10.1	(Z)	7.0	31.1	22.1	17.1	49.7	62.5
Wisconsin	4.1	4.3	1.8	5.0	1.8	74.9	4.2	3.6	10.2	3.4	9.3	5.1
Wyoming	2.2	13.5	3.8	9.1	8.8	4.9	4.7	16.6	11.8	10.8	25.1	8.6
Water Resources Areas												
WRA 01 New England	4.8	11.6	5.3	17.1	6.4	35.5	9.4	12.7	6.0	11.7	11.8	9.8
WRA 02 Mid-Atlantic	6.0	7.2	2.7	6.5	2.9	24.0	4.5	6.9	5.7	4.2	9.4	10.0
WRA 03 South Atlantic-Gulf	4.5	5.1	2.0	3.9	3.7	5.3	2.7	5.6	4.1	3.4	8.9	4.7
WRA 04 Great Lakes	5.0	3.8	2.1	3.9	2.2	74.7	2.4	5.6	5.5	2.6	8.9	4.3
WRA 05 Ohio	6.1	6.4	3.7	6.7	3.7	31.4	6.3	6.4	5.1	6.4	9.6	13.1
WRA 06 Tennessee	20.0	14.2	10.8	13.7	11.7	97.2	12.7	20.2	17.7	17.3	19.7	48.3
WRA 07 Upper Mississippi	2.8	3.9	1.5	4.3	1.5	14.8	2.2	2.5	4.5	2.2	14.2	3.4
WRA 08 Lower Mississippi	3.3	2.8	1.7	2.5	4.2	2.0	2.6	2.5	3.7	2.6	11.0	11.0
WRA 09 Souris-Red-Rainy	10.7	6.1	4.3	6.3	4.6	15.2	5.4	6.3	6.7	6.3	11.5	9.1
WRA 10 Missouri	2.5	6.2	2.2	9.0	3.2	3.6	4.0	3.3	3.0	3.9	11.2	6.0
WRA 11 Arkansas-White-Red	6.6	8.3	5.4	5.2	6.9	6.7	5.6	5.2	4.9	9.7	12.7	13.7
WRA 12 Texas-Gulf	8.1	10.5	3.9	6.3	4.8	10.7	4.8	5.7	5.9	4.4	11.3	8.4
WRA 13 Rio Grande	10.9	29.4	6.4	6.7	8.5	9.4	6.3	8.0	8.0	7.4	10.6	11.6
WRA 14 Upper Colorado	8.8	23.7	7.9	23.5	11.6	9.8	8.0	53.1	20.3	16.5	26.8	11.9
WRA 15 Lower Colorado	10.1	18.0	2.6	2.7	8.2	2.8	2.6	26.1	28.5	6.3	11.3	7.6
WRA 16 Great Basin	6.5	10.1	3.4	6.6	6.1	4.1	3.7	8.5	11.6	6.1	10.8	15.6
WRA 17 Pacific Northwest	2.7	5.6	1.7	6.4	2.3	3.9	2.1	8.1	4.4	2.7	7.1	4.4
WRA 18 California	2.9	8.4	3.4	3.8	10.6	3.8	3.3	7.5	5.4	9.8	14.8	8.6
WRA 19 Alaska	6.5	8.8	3.9	6.9	4.2	53.5	35.4	12.6	11.3	8.2	13.9	12.4
WRA 20 Hawaii	3.4	34.7	14.1	20.3	9.6	22.2	19.7	25.8	11.4	16.9	17.4	12.6

Measures of Precision

The survey sample was one of a large number of possible samples of the same size that could have been selected using the same sample design. Survey estimates derived from the different samples will differ from each other.

The relative standard error is used as an indicator of the precision in the survey estimates and is reported for major survey items in Table C. The relative standard error expresses the standard error of an estimate as a percent of the estimated value. The standard error of a survey estimate is a measure of the variation among the estimates from all possible samples. It is a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples.

The relative standard errors given in Table C can be used to construct confidence intervals for the major survey items. Confidence intervals are another way to express the precision of an estimate by calculating the upper and lower bounds for a level of confidence. This confidence interval is designed to contain the true value being estimated. If all possible samples were selected, each of the samples were surveyed under essentially the same conditions, and an estimate and its standard error were calculated from each sample, then:

1. Approximately 67 percent of the intervals from one standard error below the estimate to one standard error above the estimate would include the average value of all possible samples.

2. Approximately 90 percent of the intervals from 1.65 standard errors below the estimate to 1.65 standard errors above the estimate would include the average value of all possible samples.

The computations necessary to construct the confidence intervals associated with these statements are illustrated in the following example: Assume that the estimated number of irrigated acres of a certain item is 669,813 and the relative standard error of the estimate is 1.6 percent (0.016). Multiplying 669,813 by 0.016 yields 10,717, the standard error. Therefore, a 67 percent confidence interval is 659,096 to 680,530 (i.e., 669,813 + 10,717). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Similarly, a 90 percent confidence interval is 652,130 to 687,496 (i.e., 669,813 + 1.65 x 10,717).

EDITING

Reported data that were obviously incorrect due to misinterpretation of a question were either corrected or deleted prior to the computer edit. In some cases, respondents may have failed to provide all of the information requested, only indicating the presence of an item but not the amount. Imputations were made for missing data on acres irrigated, quantity of water used, method of water distribution, yield of crops harvested, maintenance and repair costs, cost of water received from off-farm water suppliers, well characteristics, and energy cost of well pumps.

QUALIFICATIONS OF THE DATA

Analysts reviewing the returned report forms and results of the computer edit detected a few inquiries that were not uniformly interpreted by all respondents. Data users should be aware that respondent interpretation of some questions may affect the final results in their use of these selected statistics. Clarification of data items with potential extortions and data impacted by unique problems or definitions are provided below.

Irrigated land - Irrigated land is defined as "all land watered by artificial or controlled means." No attempt has been made to define the degree or intensity of irrigation. Therefore, the figures for irrigated land include land with as little as one inch of water applied as well as land having several feet of water applied.

Nonirrigated crop yields - Data users are reminded that the nonirrigated crop yield averages in Table 27 are for nonirrigated crops harvested from farms having land irrigated and may not be comparable with crop yield averages for total farms in the State. Yields for sweet corn, tomatoes, and lettuce were asked for the first time in 2003. However, many respondents left yields blank which required a large amount of imputation and the yields that were reported for these

crops covered an extremely large range indicating respondents did not always use the hundredweight unit requested on the form. Therefore it was decided that these three vegetable yields would not be published.

Estimated quantity of water applied - Most water used for irrigation is not metered or measured accurately. The quantity of water data are on the basis of best estimates provided by irrigators. Generally, in areas of water scarcity such as southern California and Arizona, irrigators are more likely to be able to provide actual quantities of water used than in Mountain States such as Montana, Wyoming, and Idaho where scarcity of water is less of a problem. In the Mountain States where water from snow-melt is diverted for use in season, the amount of water used may be a rough estimate, seldom a measured figure.

Farms using off-farm water - In 2003, respondents were asked to report the amount (none, some, all, or unknown) of off-farm water supplied by the U.S. Bureau of Reclamation, other federal agencies, and all other suppliers. However, many respondents did not answer this question. No imputation was used to determine an amount by source. Instead, the edit set the entry to unknown. The number using water from U.S. Bureau of Reclamation, other federal agencies, and all other suppliers may be understated.

Average hours of operation - The total hours a well pump operated was collected for each of the first three wells reported. For the remaining number of well pumps, respondents were asked to report the average hours the pumps operated. Some data collected in this entry exceeded 8,760 hours, the maximum number of hours in a year, meaning that some respondents had entered their total pump operating hours rather than the average hours used. Records exceeding the 8,760 hour threshold were edited, but other records may have been tabulated with inflated operating hours.

Application of commercial fertilizers or pesticides in irrigation water - This inquiry was intended to measure the number of farms and acres on which fertilizer and pesticides were distributed through irrigation systems. The question was redesigned in 2003 to avoid the overstated farm count and acres thought to have occurred in 1998 because respondents misinterpreted the inquiry to include conventional application of fertilizer and pesticides to the irrigated crop as well. Review of the 2003 data suggests that farmers may have missed the question on the report form and left it blank. Therefore, farms and acres may be understated in 2003.

Cost of water received from off-farm water suppliers - Irrigators receiving water from off-farm water suppliers are generally required to pay for the water in charges, fees, or assessment. The computer edit procedures called for imputing an estimate for cost of water based on other reports from the same geographic area. If there were any indications written on the report form that the water was received free, no cost of water was imputed. The final tabulated results for this item may be overstated because it was not possible to distinguish cases where the respondent received free water from cases where the cost amount was omitted in error, leading to imputation of a dollar amount. States with small sample sizes, mostly in the Northeast, reported a wide range for the cost of water with data skewed to the high end which may be due to the use of expensive municipal water on small acres.

Irrigation wells - The question was intended to capture only those wells used for irrigation purposes. However, some farm operators reported wells used for domestic purposes or livestock as well. When such errors were identified, these entries were deleted.

Artesian wells - A specific entry space was provided for artesian wells. The data for well pumps exclude any pumps that may have actually been used to pump water from artesian wells.

Irrigation pumps - The inventory figures for number of irrigation pumps reported in Table 16 include reserve pumps not actually used in 2003, but exclude any pumps on wells not used in 2003. By definition, flowing or artesian wells do not have well pumps.

Expenditures for maintenance and repair and investment in irrigation facilities and equipment - The expenditure data reported are expenditures that occurred only in 2003. Some respondents found it difficult to separate expenditures for maintenance and repairs from investment in irrigation facilities and equipment as defined on the report form. For example, replacement of worn-out sprinkler nozzles, pumps, and

motors could be considered as either repair cost or investment in new equipment. Data users are reminded that the distinction between the two expenditure categories was left up to the respondent.

Government programs - This item shows the effect of government programs on irrigation practices.

Improvements to irrigation systems that reduce energy and/or conserve water used in irrigation - This item shows the benefits of new resource-conserving irrigation systems. Respondents were asked to respond for the period covering 1998 to 2003. The information was tabulated as reported. No imputation was made for a blank response.

Sources of irrigation information - This question identifies where farmers look for help in making irrigation decisions. The information for this item was tabulated as reported. No imputation was made for a blank response.

Reason for discontinuance of irrigation since 2002 - The data shown in Table 42 reflect the expansion of reported entries. Some respondents reported multiple reasons, while others gave no specific reason.

SUMMARY

Irrigated Crops

Compared with 1998, the number of farms and ranches irrigating fell 2 percent to 220,163 in 2003, and total land irrigated was down 3 percent to 52.6 million acres. The leading States in total acreage of irrigated land in 2003 were California (16 percent of U.S. total), Nebraska (14 percent), and Texas (9 percent). Table D shows the top twenty states from the 2002 census and their previous census acres irrigated and rank.

Table D. **Leading Irrigation States: Census Years 2002, 1997, and 1992**

Geographic area	Acres irrigated			Rank			2002 cumulative percent of U.S. total
	2002	1997	1992 [1]	2002	1997	1992	
United States	55,311,236	56,289,172	49,404,030	(X)	(X)	(X)	100.0
20 Leading States	50,812,487	52,266,055	45,703,882	(X)	(X)	(X)	91.9
California	8,709,353	8,886,693	7,571,313	1	1	1	15.7
Nebraska	7,625,170	7,065,556	6,311,633	2	2	2	29.5
Texas	5,074,638	5,764,295	4,912,308	3	3	3	38.7
Arkansas	4,149,766	3,785,338	2,701,651	4	4	7	46.2
Idaho	3,288,522	3,543,805	3,260,006	5	5	4	52.2
Kansas	2,678,277	2,695,816	2,680,343	6	7	6	57.0
Colorado	2,590,604	3,374,233	3,169,839	7	6	5	61.7
Montana	1,976,111	2,101,548	1,978,167	8	8	8	65.3
Oregon	1,970,627	1,963,478	1,622,235	9	9	9	68.7
Washington	1,823,155	1,787,120	1,641,437	10	11	11	72
Florida	1,815,174	1,873,823	1,782,680	11	10	10	75.3
Wyoming	1,541,688	1,749,908	1,464,585	12	12	12	78.1
Mississippi	1,175,530	1,110,145	882,976	13	14	19	80.2
Utah	1,091,011	1,218,474	1,142,514	14	13	13	82.2
Missouri	1,032,973	921,113	708,864	15	17	20	84
Louisiana	938,841	960,831	897,641	16	16	17	85.7
Arizona	931,735	1,075,336	956,454	17	15	14	87.4
Georgia	870,710	773,066	724,792	18	19	18	89
New Mexico	844,799	851,735	738,272	19	18	16	90.5
Nevada	746,653	763,742	556,172	20	20	15	91.9

[1] 1992 Data have not been adjusted for farms not on the mail list.

Corn for grain or seed continues to be the dominant irrigated crop accounting for nearly 19 percent of irrigated land. The top irrigated crops in the United States in 2003 were corn for grain or seed, alfalfa hay, soybeans, land in orchards, and cotton. These crops accounted for 56 percent of all irrigated land. Irrigated pastureland accounted for 3.63 million acres in 2003, down 8 percent from 1998.

Method of Irrigation

In 2003, farmers and ranchers irrigated 52.6 million acres by different water distribution systems. Of the total acres irrigated, 26.9 million acres were irrigated by sprinkler systems and 23.1 million acres by gravity flow systems. For the first time, the Farm and Ranch Irrigation Survey shows more acres irrigated with sprinkler systems than gravity flow systems.

Sprinkler systems were used on 51 percent of the total land irrigated in 2003 compared with 46 percent in 1998, 46 percent in 1994, and 40 percent in 1988. Gravity flow systems were used on 43 percent of the land in 2003, compared with 50 percent in 1998, 50 percent in 1994, and 59 percent in 1988. Table E shows acres irrigated by method in 2003 and 1998.

Table E. **Acres Irrigated by Method of Irrigation**

Method	1998 Acres irrigated	2003 Acres irrigated	Percent change
Sprinklers	24,865,142	26,937,835	+ 8
Center pivot- low pressure	9,292,022	9,696,930	+ 4
Center pivot- Medium pressure	7,419,409	9,657,353	+30
Center pivot- High pressure	1,983,869	1,938,808	- 2
Linear move towers	284,756	344,162	+21
Solid set and permanent	1,222,683	1,177,953	- 4
Side roll	2,033,825	1,825,901	-10
Big gun or traveller	765,794	633,188	-17
Hand move	1,862,784	1,663,540	-11
Gravity flow	27,273,419	23,124,131	-15
Down rows or furrows	14,025,125	11,723,084	-16
Controlled flooding	8,472,646	8,847,392	+ 4
Uncontrolled flooding	3,273,796	2,297,956	-30
Other gravity	1,501,852	255,699	-83
Drip trickle or low-flow	2,259,176	2,988,101	+32
Subirrigation	549,655	279,522	- 49

Estimated Quantity of Water Applied

The total quantity of water applied in 2003 was down 11 percent from 1998. Nationally, irrigators estimated a total of 86.9 million acre-feet of water was applied to the 52.6 million acres irrigated in 2003 for an average of 1.7 acre-feet per acre irrigated. Table F shows the average acre-feet of water applied per irrigated acre in the U.S. over the last 29 years. The average amount of water applied per acre in 2003 ranged from a high of 5.6 acre-feet in Massachusetts, to a low of 0.4 acre-feet in several States.

Table F. **Average Acre-Feet of Water Applied**

Year and source	Amount applied (ac-feet)
2003 Farm and Ranch Irrigation Survey	1.65
1998 Farm and Ranch Irrigation Survey	1.79
1994 Farm and Ranch Irrigation Survey	1.72
1988 Farm and Ranch Irrigation Survey	1.82
1984 Farm and Ranch Irrigation Survey	1.8
1979 Farm and Ranch Irrigation Survey	1.86
1974 Census of Agriculture	2.09

Data tabulations for farms having only one of the four kinds of distribution systems- sprinklers, gravity, drip, or subirrigation- show noticeable differences in the amount of water applied per acre by each system. For example, farms using only sprinkler systems applied 1.3 acre-feet per acre irrigated, compared with 2.0 acre-feet for farms using only gravity flow systems.

Source of Water

Of the 52.6 million acres irrigated by water from all sources in 2003, about 32.3 million acres (61 percent) were irrigated from farm irrigation wells, 7.28 million acres (13 percent) from on-farm surface sources, and 13.9 million acres (26 percent) from off-farm water suppliers. Of the 86.9 million acre-feet of water estimated to be used for irrigation in 2003, 43.5 million were pumped from wells, 11.8 million were provided by on-farm surface sources, and 31.6 million came from off-farm water suppliers. Table G shows how these data correspond to previous farm and ranch irrigation surveys.

Table G. **Irrigation Water Used by Source**

Source	2003	1998	1994	1988	1984
Total					
Acre-feet (million)	86.9	97.3	79.6	84.1	82.7
Wells:					
Acre-feet (million)	43.5	43.8	39.4	40.5	36.2
Percent	50	45	49	48	44
On-farm:					
Acre-feet (million)	11.8	11.9	8.6	8.9	10.2
Percent	14	12	11	11	12
Off-farm:					
Acre-feet (million)	31.6	41.5	31.6	34.9	36.2
Percent	36	43	40	41	44

The average amount of water applied per acre varies significantly by source. Land irrigated from wells only averaged 1.2 acre-feet per acre, while land irrigated from off-farm water suppliers averaged 2.3 acre-feet per acre. Sprinkler irrigation is more closely related to the distribution of well water, while gravity flow systems are generally used to distribute water from off-farm water suppliers.

Irrigation Wells

There were 401,193 irrigation wells capable of being used on 104,776 farms. Of these, 375,851 wells were actually pumped in 2003 and 3,823 were artesian or free flowing. All irrigation wells supplied 43.5 million acre-feet of water to 32.3 million acres of land, averaging 1.35 acre-feet of water applied and 85.2 acres irrigated per well. Farms with wells used in 2003 averaged 3.6 wells per farm. Nearly 66 percent of the farms using wells in 2003 used one or two wells. However, the majority of wells used, 229,626, were on the18,618 farms using more than five wells, indicating the impact of the large irrigators. Pumped wells for the United States averaged 238 feet in well depth, 158 feet in pumping depth, 819 gallons per minute in pumping capacity, and 1,039 hours in operation.

Irrigation Expenditures

Pumping costs - There were 497,443 irrigation pumps of all kinds used on 153,117 farms in 2003 irrigating 42.9 million acres of land. These pumps were powered by fuels and electricity costing irrigators a total of $1.55 billion or an average of $10,135 per farm. The principal energy source used was electricity, for which $953 million was spent to power 319,102 pumps that irrigated 24.1 million acres at an average cost of $39.50 per acre. Solar energy was reported as the source for pumping wells on 360 farms irrigating 16,430 acres.

Cost of water from off-farm water suppliers - The 31.6 million acre-feet of water received from off-farm water suppliers to irrigate 13.9 million acres cost irrigators $579 million, for an average cost of $18.29 per acre-foot of water or $41.73 per acre irrigated. There were 20,349 farms receiving off-farm water at no cost.

Maintenance and repair cost - Expenditures for maintenance and repairs totaled $492 million on 119,952 farms, for an average of $4,099 per farm.

Expenses for hired and contract labor - In 2003, 62,260 farms paid $658 million for labor, an average of $10,559 per farm or $24.13 per acre. Nearly 90 percent of the wages were paid to hired laborers.

Investment in irrigation equipment, facilities, and land improvement - Investments totaled $1.13 billion for an average of $13,056 per farm in 2003. The principal investment was the purchase of irrigation equipment and machinery which totaled $817 million and represents 73 percent of total investments.

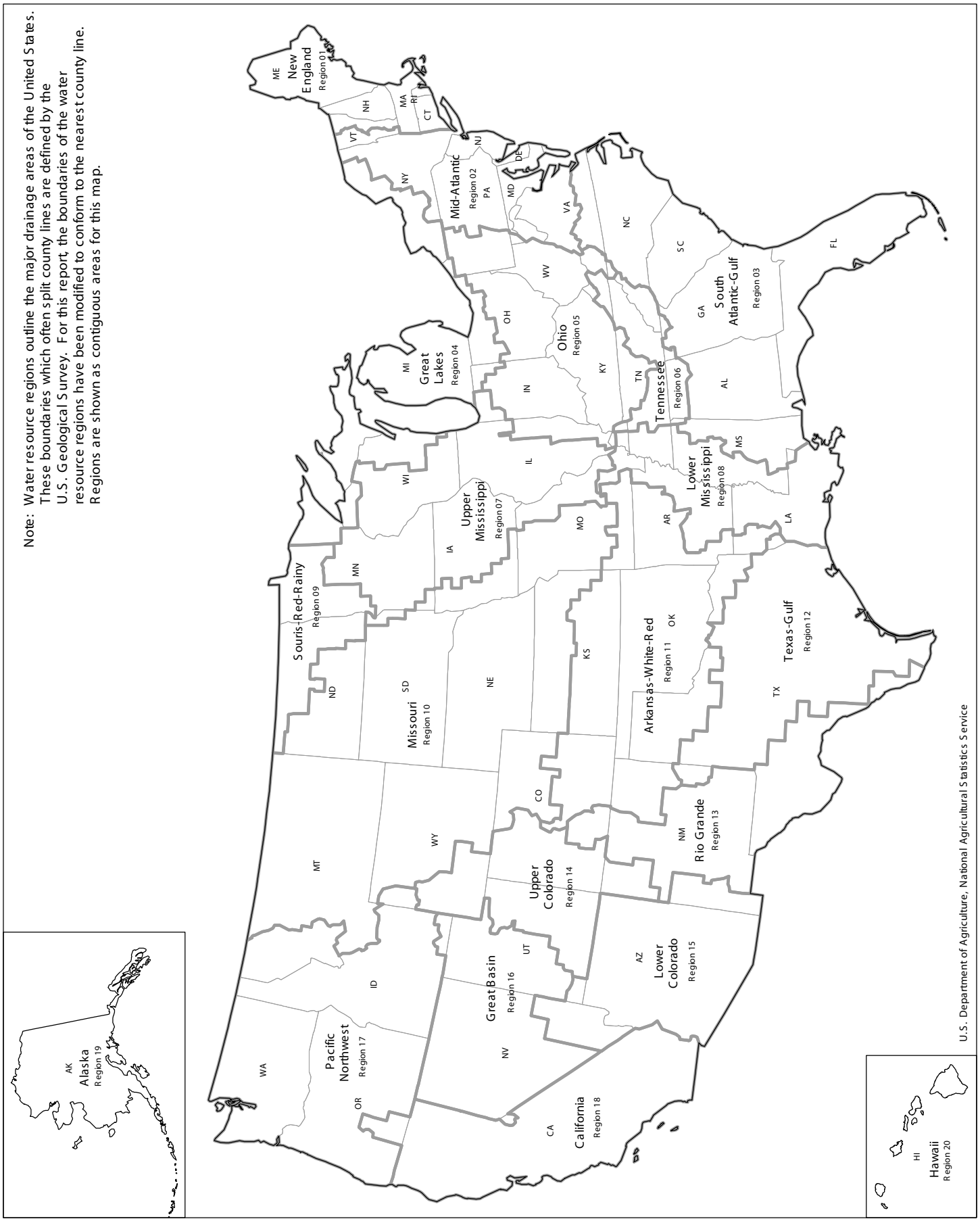
Discontinuance of Irrigation in 2003

An estimated 32,489 farmers who irrigated a total of 1.85 million acres in 2002, according to the census of agriculture, did not irrigate in 2003. The majority, 91 percent, of these operators reported that their discontinuance was not permanent.

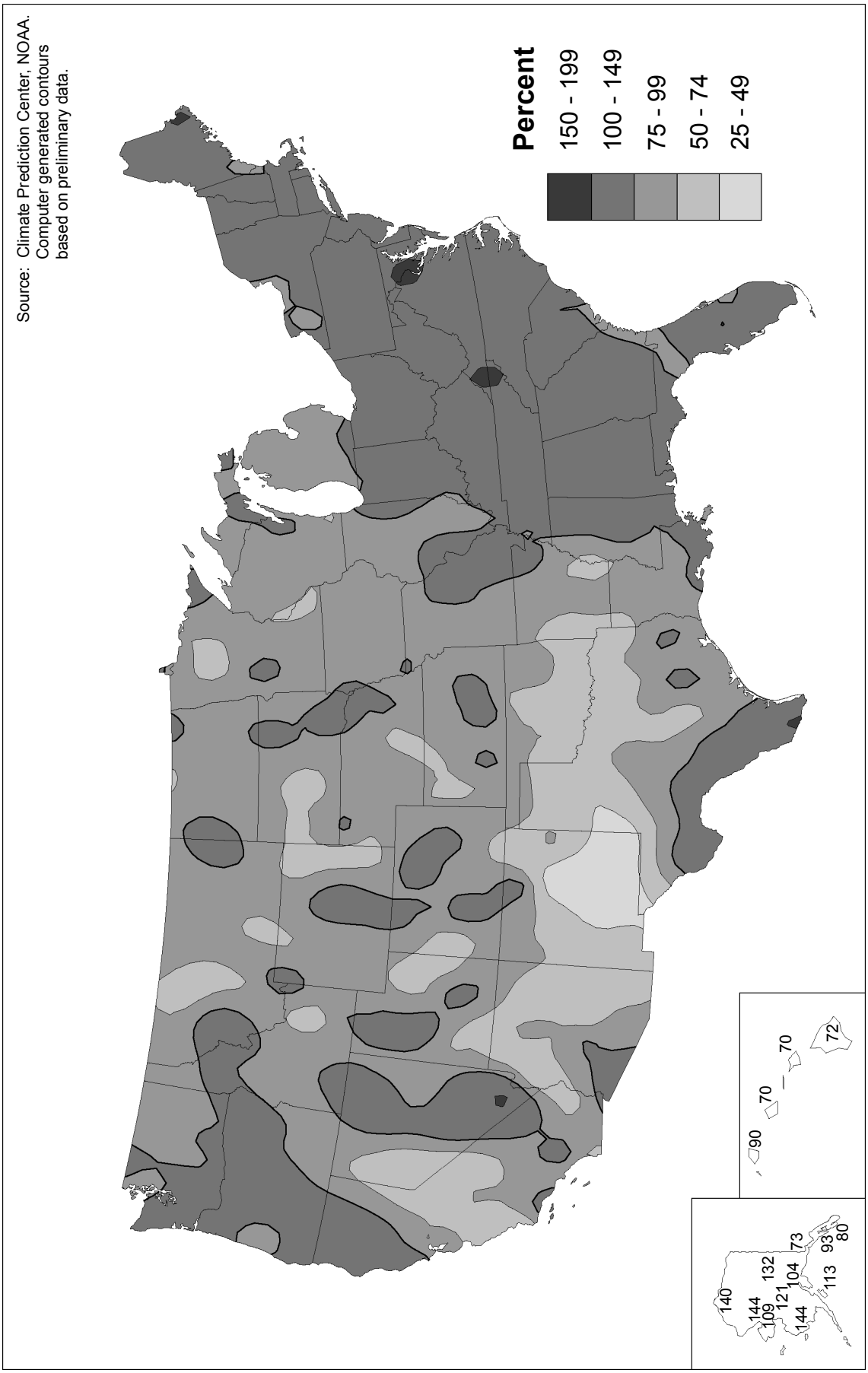
Improvements to Irrigation Systems

Approximately 26.4 million acres irrigated were reported to have had improvements made on them to reduce energy use or conserve water since 1998. These improvements resulted in reduced water requirements on 18.5 million acres irrigated, improved crop yield on 18.7 million acres irrigated, and decreased energy costs on 15.3 million acres irrigated.

Water Resources Areas Map of the United States



Percent of Normal Precipitation, Jan. - Dec. 2003



USDA, National Agricultural Statistics Service

Table 1. **Irrigated Farms in the Censuses of Agriculture: 2002 and Earlier Censuses**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	2002		1997		Not adjusted for coverage							
					1997		1992		1987		1982	
	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
United States	299,583	55,311,236	308,818	56,289,172	279,442	55,058,128	279,357	49,404,030	291,628	46,386,201	278,277	49,002,433
Conterminous United States	297,202	55,239,300	306,463	56,209,534	277,087	54,978,490	277,044	49,268,126	289,727	46,235,491	276,687	48,855,784
Alabama	1,698	108,783	1,503	79,647	1,301	76,871	1,380	82,015	1,344	84,054	1,040	66,020
Alaska	150	2,742	114	2,667	114	2,667	93	1,566	74	1,826	46	667
Arizona	4,172	931,735	4,233	1,075,336	3,426	1,013,902	3,965	956,454	4,241	913,841	4,437	1,097,825
Arkansas	5,847	4,149,766	6,887	3,785,338	6,593	3,717,217	6,682	2,701,651	7,269	2,406,338	6,678	2,022,695
California	55,596	8,709,353	63,226	8,886,693	55,920	8,712,893	56,546	7,571,313	58,868	7,546,091	58,389	8,460,508
Colorado	13,623	2,590,654	15,747	3,374,233	15,470	3,430,129	15,193	3,169,839	14,913	3,013,773	15,232	3,200,942
Connecticut	801	10,139	809	7,689	674	7,366	524	5,893	430	7,245	367	6,695
Delaware	439	97,167	430	75,024	415	72,635	352	61,774	384	60,812	323	44,168
Florida	13,456	1,815,174	14,573	1,873,823	12,673	1,862,404	13,500	1,782,680	11,981	1,622,750	10,550	1,585,080
Georgia	5,369	870,810	4,752	773,066	4,372	748,520	4,701	724,792	4,985	640,256	4,443	575,306
Hawaii	2,231	69,194	2,241	76,971	2,241	76,971	2,220	134,338	1,827	148,884	1,544	145,982
Idaho	15,901	3,288,522	16,683	3,543,805	15,191	3,493,542	15,487	3,260,006	16,620	3,219,192	17,355	3,450,443
Illinois	2,031	390,843	2,072	351,676	2,021	349,799	2,061	328,316	1,635	208,105	1,182	166,012
Indiana	2,212	313,130	1,918	255,917	1,753	250,050	1,742	240,898	1,481	169,703	1,206	131,987
Iowa	976	142,109	1,006	133,149	957	124,983	1,063	115,724	851	92,247	616	91,427
Kansas	5,915	2,678,277	6,109	2,695,816	6,135	2,707,489	6,543	2,680,343	7,352	2,463,073	7,257	2,675,167
Kentucky	3,606	36,751	4,233	60,027	4,104	58,490	2,120	27,647	3,733	37,693	2,815	22,707
Louisiana	3,496	938,841	3,784	960,831	3,400	942,528	4,064	897,641	3,929	646,677	3,693	693,698
Maine	1,031	19,703	805	22,229	671	21,791	523	10,241	359	6,065	200	5,831
Maryland	1,265	80,828	1,198	68,663	1,154	68,588	1,063	56,913	1,074	50,762	845	38,556
Massachusetts	1,580	23,720	2,021	26,820	1,630	24,564	1,336	19,909	1,316	20,158	1,000	17,331
Michigan	4,413	456,278	4,123	407,071	3,752	393,485	3,823	366,465	3,755	314,953	3,179	285,983
Minnesota	2,433	454,850	2,265	403,289	2,193	380,394	2,368	370,404	2,425	353,504	2,172	315,376
Mississippi	2,235	1,175,530	1,912	1,110,145	1,769	1,076,231	2,127	882,976	2,012	636,842	1,462	430,901
Missouri	3,304	1,032,973	3,108	921,113	2,891	881,924	2,914	708,864	2,823	534,795	2,037	402,914
Montana	10,150	1,976,111	10,098	2,101,548	9,059	1,994,484	8,883	1,978,167	9,520	1,996,882	9,226	2,023,003
Nebraska	17,970	7,625,170	19,297	7,065,556	18,804	6,939,036	19,328	6,311,633	22,596	5,681,835	22,190	6,039,292
Nevada	1,981	746,653	2,296	763,742	2,159	764,738	2,151	556,172	2,221	778,977	2,154	829,761
New Hampshire	451	2,292	506	2,838	429	2,691	308	1,746	253	2,948	176	1,307
New Jersey	2,124	96,893	2,222	94,380	2,089	92,965	1,911	80,409	1,846	91,208	1,681	83,049
New Mexico	8,282	844,799	8,953	851,735	7,444	804,616	7,331	738,272	7,022	718,449	6,918	807,206
New York	3,307	74,663	2,835	73,791	2,501	69,197	2,020	46,600	1,992	50,920	1,713	52,125
North Carolina	6,721	264,057	5,059	156,315	4,695	156,250	4,337	112,630	6,445	137,858	4,026	81,078
North Dakota	659	202,817	730	183,004	710	180,362	816	187,212	809	168,013	762	162,643
Ohio	2,623	40,685	1,967	35,073	1,778	33,997	1,755	29,479	1,562	32,472	1,152	27,688
Oklahoma	2,942	517,553	2,860	509,109	2,710	506,459	2,581	512,487	3,029	478,437	3,069	492,077
Oregon	17,776	1,907,627	17,016	1,963,478	15,348	1,948,739	15,002	1,622,235	14,411	1,648,205	15,334	1,807,882
Pennsylvania	4,108	42,516	3,554	40,089	2,814	36,150	2,121	23,096	2,208	29,505	1,548	18,139
Rhode Island	264	3,963	211	3,333	180	3,265	132	2,979	105	3,494	84	2,224
South Carolina	1,918	95,642	1,435	88,898	1,248	86,477	1,219	75,681	1,216	80,689	946	81,326
South Dakota	1,755	401,083	1,555	367,195	1,439	343,742	1,674	371,263	1,869	361,796	1,815	376,447
Tennessee	2,592	61,217	1,985	47,010	1,768	45,581	1,544	36,974	1,899	39,776	1,141	17,745
Texas	21,164	5,074,638	21,106	5,764,295	18,756	5,484,663	18,784	4,912,308	19,806	4,271,043	19,775	5,575,553
Utah	11,587	1,091,011	12,230	1,218,474	11,291	1,212,201	10,901	1,142,514	11,143	1,161,207	11,174	1,082,328
Vermont	508	2,335	409	2,845	333	2,570	255	2,123	178	1,823	120	1,254
Virginia	3,331	98,913	2,509	86,388	2,337	84,926	2,312	61,759	3,054	78,681	1,839	42,824
Washington	15,534	1,823,155	16,261	1,787,120	13,131	1,705,025	14,068	1,641,437	15,437	1,518,684	16,252	1,638,470
West Virginia	408	1,981	319	3,543	268	3,285	312	2,769	255	3,132	135	945
Wisconsin	2,457	385,902	2,269	358,467	2,025	341,813	2,146	330,838	1,850	284,637	1,695	259,270
Wyoming	5,191	1,541,688	5,384	1,749,908	5,306	1,719,463	5,076	1,464,585	5,221	1,517,891	5,284	1,564,576

Table 2. **Irrigated Farms by Acres Irrigated: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Total			1 to 49 acres			50 to 99 acres			100 to 199 acres		
	Farms	Acres in farms	Acres irrigated	Farms	Acres in farms	Acres irrigated	Farms	Acres in farms	Acres irrigated	Farms	Acres in farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	220,163	196,515,390	52,583,431	116,256	12,235,580	1,658,408	22,288	11,817,481	1,551,154	24,657	28,650,930	3,454,895
1998 . .	223,932	194,529,190	54,249,965	111,492	12,606,952	1,668,968	21,554	13,014,584	1,509,026	28,584	21,894,227	3,938,695
2003 DATA												
Alabama	578	315,083	52,722	421	53,332	3,783	58	50,447	3,787	43	47,671	5,869
Alaska	73	13,717	2,252	61	3,879	286	4	537	257	5	2,127	689
Arizona	2,777	1,354,975	836,587	1,821	110,089	17,232	172	36,007	10,963	167	119,300	21,465
Arkansas	4,834	5,703,693	3,944,867	975	166,550	24,537	233	55,578	16,462	367	187,908	52,415
California	46,841	15,714,032	8,471,936	29,663	1,271,804	444,360	5,048	1,164,764	343,640	4,117	1,989,340	568,017
Colorado	11,567	11,546,709	2,562,329	4,949	281,624	99,842	1,688	1,203,667	112,471	1,779	2,523,800	240,197
Connecticut	234	13,580	2,213	223	9,854	1,047	7	(D)	(D)	3	1,576	374
Delaware	213	192,493	69,088	52	(D)	(D)	29	(D)	(D)	46	38,002	6,681
Florida	8,335	3,976,525	1,497,653	6,269	673,075	73,890	754	82,012	50,112	493	317,334	65,163
Georgia	2,847	2,078,620	710,893	1,217	137,218	17,171	382	251,268	27,925	321	202,441	40,212
Hawaii	1,214	308,611	78,538	1,171	128,054	4,937	16	5,615	1,051	11	8,148	1,305
Idaho	14,303	6,336,063	3,126,857	8,466	369,023	135,993	1,094	350,227	76,006	1,673	555,875	241,956
Illinois	1,195	1,248,453	374,919	316	40,957	3,832	101	48,011	7,367	275	286,819	39,625
Indiana	1,193	1,103,897	276,294	465	58,490	5,129	125	86,033	9,134	154	141,676	21,431
Iowa	709	576,988	134,164	304	128,267	2,521	87	45,038	6,456	129	116,244	18,163
Kansas	4,878	9,570,633	2,543,950	628	637,424	17,394	592	905,746	39,986	810	866,965	111,160
Kentucky	943	298,298	20,685	889	180,959	7,383	19	35,475	1,399	12	19,855	1,825
Louisiana	2,280	2,374,244	838,717	605	120,242	10,128	251	224,926	17,674	273	174,289	33,981
Maine	507	192,712	18,163	466	72,774	1,969	10	(D)	(D)	17	16,042	1,999
Maryland	509	187,682	53,734	324	23,260	1,905	58	36,388	3,514	57	34,511	8,212
Massachusetts	842	74,178	16,151	778	47,581	6,228	40	(D)	(D)	10	3,245	1,335
Michigan	2,366	1,220,101	432,665	1,432	134,372	15,813	186	57,341	13,856	208	179,807	28,284
Minnesota	1,639	1,153,741	434,500	510	40,255	6,678	229	86,217	16,906	414	265,508	57,083
Mississippi	1,567	2,180,689	1,169,793	666	39,294	3,663	20	5,600	1,600	50	46,540	6,701
Missouri	1,966	2,289,921	1,020,728	494	183,550	7,671	164	76,296	11,899	259	246,222	36,820
Montana	8,625	23,046,094	2,131,955	3,660	737,813	82,923	911	706,414	63,265	1,382	6,228,853	198,353
Nebraska	16,278	22,574,776	7,516,171	865	342,984	15,250	1,525	1,390,608	112,672	4,118	4,027,882	613,253
Nevada	1,722	4,088,606	639,310	761	144,787	11,927	193	103,032	13,392	179	101,974	22,034
New Hampshire	161	14,552	818	160	(D)	(D)	1	(D)	(D)	-	-	-
New Jersey	807	126,649	46,679	616	46,132	5,767	54	(D)	(D)	53	18,271	7,328
New Mexico	6,741	8,556,784	769,787	4,899	672,681	54,250	845	865,444	56,871	306	2,700,941	41,219
New York	1,284	275,475	48,545	1,106	71,454	8,436	45	8,160	2,850	79	79,929	10,503
North Carolina	2,281	698,205	101,055	1,769	202,731	18,754	259	152,984	16,485	156	119,099	21,205
North Dakota	541	1,477,038	207,772	73	213,552	1,415	43	78,630	3,149	138	342,417	18,564
Ohio	670	97,788	14,476	639	54,419	3,684	12	6,077	804	4	(D)	(D)
Oklahoma	1,819	3,081,687	508,842	637	169,135	12,003	193	314,821	14,351	413	906,421	56,611
Oregon	14,205	9,913,275	1,731,660	9,597	520,910	147,647	1,597	581,564	118,134	1,222	1,699,093	162,348
Pennsylvania	1,589	276,614	19,633	1,474	214,525	7,994	79	22,998	4,884	21	16,266	2,589
Rhode Island	58	4,862	648	55	(D)	(D)	2	(D)	(D)	-	-	-
South Carolina	951	300,910	52,046	815	108,135	4,700	32	23,970	2,000	36	26,669	4,729
South Dakota	1,444	3,268,827	390,406	160	61,512	2,753	198	235,065	16,340	440	858,715	59,421
Tennessee	759	298,741	34,429	682	108,170	4,355	22	(D)	(D)	14	20,906	1,668
Texas	15,441	20,465,276	4,947,745	7,216	980,001	107,785	1,181	574,493	80,620	1,305	1,243,013	192,901
Utah	10,070	6,285,621	1,082,213	6,224	786,481	93,716	1,492	392,044	105,442	844	459,847	122,500
Vermont	204	15,975	825	201	15,221	649	3	754	176	-	-	-
Virginia	905	357,982	33,635	801	223,600	5,852	35	24,886	2,399	25	27,014	3,432
Washington	12,862	5,024,117	1,806,782	8,254	187,606	102,590	1,392	260,208	96,922	1,304	634,368	174,780
West Virginia	100	10,163	801	98	(D)	(D)	-	-	-	1	(D)	(D)
Wisconsin	1,414	1,044,557	391,763	611	114,359	6,981	211	95,123	15,049	224	186,981	32,517
Wyoming	4,822	15,185,178	1,415,037	1,718	1,312,303	43,085	596	1,128,938	41,505	700	554,574	97,318
Water Resources Areas												
WRA 01 New England	1,917	309,246	38,410	1,795	155,864	10,594	62	(D)	(D)	30	20,863	3,708
WRA 02 Mid-Atlantic	4,142	996,233	233,602	3,328	370,609	23,403	269	95,680	17,114	235	140,550	32,863
WRA 03 South Atlantic-Gulf	15,567	7,472,460	2,410,814	11,066	1,311,921	122,569	1,472	550,138	99,848	1,070	736,418	139,488
WRA 04 Great Lakes	3,694	1,797,625	611,881	2,366	245,086	24,618	263	78,896	19,210	298	259,208	40,757
WRA 05 Ohio	2,928	1,393,401	220,290	2,372	366,544	14,918	103	94,220	7,382	144	173,944	20,212
WRA 06 Tennessee	891	217,167	31,065	803	80,786	5,148	40	28,242	2,498	18	24,613	2,300
WRA 07 Upper Mississippi	4,359	3,655,167	1,145,841	1,427	308,954	16,075	579	327,774	42,453	954	787,898	133,756
WRA 08 Lower Mississippi	7,817	10,792,231	6,199,006	1,133	251,986	27,588	524	291,476	37,899	677	424,603	92,004
WRA 09 Souris-Red-Rainy	491	750,834	183,590	93	31,152	1,628	87	(D)	(D)	92	147,432	12,286
WRA 10 Missouri	34,813	71,088,623	12,922,399	6,750	3,060,658	142,155	3,815	4,070,855	271,488	7,581	13,612,657	1,097,277
WRA 11 Arkansas-White-Red	10,805	20,648,533	5,285,088	2,934	681,991	52,658	1,024	929,974	74,098	1,342	2,731,253	184,071
WRA 12 Texas-Gulf	12,439	10,550,868	3,284,293	6,113	777,793	102,126	1,041	529,496	70,392	1,224	882,087	180,600
WRA 13 Rio Grande	6,844	8,060,807	799,492	5,016	602,135	45,553	615	802,177	39,413	342	180,202	47,204
WRA 14 Upper Colorado	9,068	9,265,206	1,366,203	4,620	766,724	97,371	1,546	1,093,942	105,597	1,202	2,920,943	163,852
WRA 15 Lower Colorado	3,393	2,061,452	897,445	2,234	342,451	27,807	292	65,197	18,279	182	121,341	23,127
WRA 16 Great Basin	9,821	9,311,710	1,516,775	5,967	482,649	88,189	1,348	443,665	94,433	681	468,410	98,363
WRA 17 Pacific Northwest	42,003	21,738,781	6,679,626	26,712	972,412	386,541	4,074	1,179,389	289,455	4,321	2,987,665	594,699
WRA 18 California	47,884	16,082,718	8,676,821	30,295	1,293,932	464,244	5,114	1,173,344	349,712	4,248	2,020,568	586,334
WRA 19 Alaska	73	13,717	2,252	61	3,879	286	4	537	257	5	2,127	689
WRA 20 Hawaii	1,214	308,611	78,538	1,171	128,054	4,937	16	5,615	1,051	11	8,148	1,305

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Table 2. **Irrigated Farms by Acres Irrigated: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	200 to 499 acres			500 to 999 acres			1,000 to 1,999 acres			2,000 or more		
	Farms	Acres in farms	Acres irrigated	Farms	Acres in farms	Acres irrigated	Farms	Acres in farms	Acres irrigated	Farms	Acres in farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	28,032	45,758,559	8,922,430	16,771	37,994,582	11,827,596	8,446	28,038,465	11,402,171	3,713	32,019,793	13,766,777
1998 . .	31,110	45,011,307	9,907,309	18,611	37,249,552	12,899,705	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	21	(D)	(D)	20	51,774	12,692	14	72,618	18,880	1	(D)	(D)
Alaska	3	7,174	1,020	-	-	-	-	-	-	-	-	-
Arizona	186	108,140	65,546	219	209,367	155,853	104	205,635	144,282	108	566,437	421,246
Arkansas	885	598,979	313,913	905	960,304	656,745	967	1,819,505	1,320,543	502	1,914,869	1,560,252
California	4,200	2,356,394	1,391,042	2,107	2,265,955	1,519,642	1,082	1,948,794	1,520,550	624	4,716,981	2,684,685
Colorado	1,733	2,644,439	553,534	932	1,981,404	652,399	375	1,658,337	515,347	111	1,253,438	388,539
Connecticut	1	(D)	(D)	-	-	-	-	-	-	-	-	-
Delaware	41	47,948	13,952	27	34,969	20,349	16	37,627	19,766	2	(D)	(D)
Florida	397	280,594	125,312	194	304,702	131,070	124	427,755	157,059	104	1,891,053	895,047
Georgia	514	590,419	164,499	249	381,839	169,819	120	339,986	163,609	44	175,449	127,658
Hawaii	3	(D)	(D)	2	(D)	(D)	5	18,641	7,625	6	143,749	61,382
Idaho	1,570	1,642,783	485,295	812	986,221	564,603	455	1,014,522	639,440	233	1,417,412	983,564
Illinois	268	332,379	84,532	159	291,562	110,343	62	166,346	82,531	14	82,379	46,689
Indiana	286	358,060	85,340	103	194,812	66,135	51	221,040	63,596	9	43,786	25,529
Iowa	117	142,897	37,302	48	75,115	31,800	18	45,904	24,335	6	23,523	13,587
Kansas	1,196	2,124,708	382,456	968	2,078,677	688,683	474	1,591,027	633,991	210	1,366,086	670,280
Kentucky	16	(D)	(D)	5	25,539	3,635	2	(D)	(D)	-	-	-
Louisiana	549	670,251	183,759	418	643,923	282,181	134	318,617	173,271	50	221,996	137,723
Maine	7	(D)	(D)	3	(D)	(D)	1	(D)	(D)	3	68,474	8,486
Maryland	43	40,632	13,363	15	26,143	10,571	12	26,748	16,169	-	-	-
Massachusetts	11	10,914	3,061	2	(D)	(D)	1	(D)	(D)	-	-	-
Michigan	307	320,079	86,056	137	222,688	93,581	71	176,776	100,396	25	129,038	94,679
Minnesota	283	291,840	87,594	111	174,173	72,203	53	111,013	69,415	39	184,735	124,621
Mississippi	203	276,416	65,268	221	360,619	152,483	232	573,792	320,953	175	878,428	619,125
Missouri	393	402,366	125,315	304	452,844	222,237	248	553,712	331,627	104	374,931	285,159
Montana	1,486	5,322,937	470,056	784	4,820,477	543,224	302	3,214,386	399,206	100	2,015,214	374,928
Nebraska	4,711	5,687,604	1,522,346	3,192	5,947,342	2,294,094	1,580	3,780,036	2,074,493	287	1,398,320	884,063
Nevada	256	309,634	79,749	189	714,367	132,506	74	890,067	98,692	70	1,824,745	281,010
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	67	29,910	17,711	15	14,718	9,410	2	(D)	(D)	-	-	-
New Mexico	317	1,497,239	105,600	218	1,380,208	151,009	108	980,555	146,298	48	459,716	214,540
New York	47	73,346	15,046	3	5,460	1,510	-	-	-	4	37,126	10,200
North Carolina	69	116,790	19,111	19	55,455	11,970	8	(D)	(D)	1	(D)	(D)
North Dakota	163	466,322	51,083	76	212,045	50,921	33	95,024	42,306	15	69,048	40,334
Ohio	6	(D)	(D)	7	15,980	4,745	2	(D)	(D)	-	-	-
Oklahoma	300	679,493	99,460	180	536,417	127,011	64	248,323	86,484	32	227,077	112,922
Oregon	960	1,621,076	296,539	553	2,105,223	374,283	174	1,046,807	231,069	102	2,338,602	401,640
Pennsylvania	14	(D)	(D)	1	(D)	(D)	-	-	-	-	-	-
Rhode Island	1	(D)	(D)	-	-	-	-	-	-	-	-	-
South Carolina	36	48,391	10,043	23	49,837	14,689	6	33,260	8,817	3	10,648	7,068
South Dakota	457	1,375,086	136,912	144	517,814	98,269	38	143,597	45,791	7	77,038	30,920
Tennessee	21	63,205	6,477	15	65,309	10,042	3	(D)	(D)	2	(D)	(D)
Texas	2,447	7,172,803	754,259	2,060	5,699,556	1,465,621	827	2,354,189	1,125,788	405	2,441,221	1,220,771
Utah	1,067	1,830,648	324,412	323	885,907	218,313	86	351,938	110,649	34	1,578,756	107,181
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	32	50,210	9,462	6	14,137	3,783	6	18,135	8,707	-	-	-
Washington	1,051	1,028,396	317,209	549	785,411	392,352	210	441,167	275,404	102	1,686,961	447,525
West Virginia	1	(D)	(D)	-	-	-	-	-	-	-	-	-
Wisconsin	210	202,519	66,255	67	108,173	45,150	52	152,243	73,259	39	185,159	152,552
Wyoming	1,080	4,832,785	333,788	386	2,311,468	256,895	250	2,895,380	326,666	92	2,149,730	315,780
Water Resources Areas												
WRA 01 New England	20	21,759	5,476	5	21,341	3,083	2	(D)	(D)	3	68,474	8,486
WRA 02 Mid-Atlantic	206	193,063	61,756	66	93,459	45,663	36	(D)	(D)	2	(D)	(D)
WRA 03 South Atlantic-Gulf	1,036	1,069,109	324,331	504	835,097	338,980	266	854,556	349,825	153	2,115,221	1,035,773
WRA 04 Great Lakes	455	483,723	130,493	171	283,013	116,291	101	235,916	141,461	40	211,783	139,051
WRA 05 Ohio	176	284,099	52,701	100	246,896	65,905	23	166,046	29,369	10	61,652	29,803
WRA 06 Tennessee	10	(D)	(D)	13	(D)	(D)	7	43,563	9,720	-	-	-
WRA 07 Upper Mississippi	840	920,420	260,629	318	491,579	213,268	172	463,612	226,595	69	354,930	253,065
WRA 08 Lower Mississippi	1,673	1,636,377	563,524	1,623	2,123,046	1,154,585	1,435	2,984,768	1,951,316	752	3,079,975	2,372,090
WRA 09 Souris-Red-Rainy	111	198,150	34,273	65	165,794	42,982	23	77,629	29,341	20	(D)	(D)
WRA 10 Missouri	8,556	18,788,279	2,714,593	5,118	14,959,664	3,632,783	2,418	10,693,998	3,184,209	575	5,902,512	1,879,894
WRA 11 Arkansas-White-Red	2,322	4,254,894	748,588	1,764	5,235,861	1,261,823	868	3,152,387	1,182,532	551	3,662,173	1,781,318
WRA 12 Texas-Gulf	1,769	2,675,958	561,593	1,507	3,485,866	1,059,199	610	1,438,220	825,325	175	761,448	485,058
WRA 13 Rio Grande	421	4,546,786	135,930	239	327,865	171,156	174	1,323,376	232,009	37	278,266	128,227
WRA 14 Upper Colorado	1,079	1,776,092	337,601	467	1,179,421	315,899	109	456,870	148,182	45	1,071,214	197,701
WRA 15 Lower Colorado	223	156,002	77,498	244	586,349	170,625	107	211,675	148,163	111	578,437	431,946
WRA 16 Great Basin	1,128	1,784,340	350,954	436	1,498,867	306,241	166	1,281,355	218,071	95	3,352,424	360,524
WRA 17 Pacific Northwest	3,705	4,530,960	1,132,560	1,934	4,054,326	1,339,070	826	2,540,468	1,124,713	431	5,473,561	1,812,588
WRA 18 California	4,296	2,422,254	1,425,031	2,195	2,370,891	1,580,285	1,098	2,000,974	1,543,534	638	4,800,755	2,727,681
WRA 19 Alaska	3	7,174	1,020	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	3	(D)	(D)	2	(D)	(D)	5	18,641	7,625	6	143,749	61,382

Table 3. **Land Use on Farms with Irrigation: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Land in farms			Total cropland			Cropland harvested			Cropland used only for pasture or grazing		
	Farms	Acres in farms	Acres irrigated	Farms	Acres	Acres irrigated	Farms	Acres	Acres irrigated	Farms	Acres	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	220,163	196,515,390	52,583,431	214,491	102,018,107	51,626,377	195,361	75,071,795	48,626,955	68,600	17,385,454	2,677,079
1998 . .	223,932	194,529,190	54,249,965	218,001	94,849,129	53,227,248	203,511	72,473,003	50,138,419	68,024	13,910,388	2,919,146
2003 DATA												
Alabama	578	315,083	52,722	578	233,269	52,502	572	185,952	51,432	187	31,400	1,061
Alaska	73	13,717	2,252	73	6,516	2,252	69	4,074	2,236	16	505	16
Arizona	2,777	1,354,975	836,587	2,771	956,679	835,872	2,535	812,964	812,826	888	41,855	18,946
Arkansas	4,834	5,703,693	3,944,867	4,834	5,300,208	3,944,867	4,834	5,073,507	3,937,008	664	52,688	7,411
California	46,841	15,714,032	8,471,936	46,072	9,484,934	8,356,585	42,606	8,184,914	7,902,973	5,494	925,655	396,183
Colorado	11,567	11,546,709	2,562,329	11,311	5,297,156	2,436,949	10,539	3,194,769	2,192,822	4,129	856,566	228,456
Connecticut	234	13,580	2,213	234	7,838	2,213	232	6,051	2,193	53	680	20
Delaware	213	192,493	69,088	213	173,973	69,088	213	167,806	69,062	29	705	26
Florida	8,335	3,976,525	1,497,653	8,002	2,112,923	1,471,463	7,999	1,508,669	1,404,118	1,399	502,241	40,118
Georgia	2,847	2,078,620	710,893	2,847	1,332,764	710,021	2,771	1,228,311	701,047	765	61,135	7,205
Hawaii	1,214	308,611	78,538	1,189	125,548	76,675	1,161	53,842	45,922	97	33,887	1,044
Idaho	14,303	6,336,063	3,126,857	13,258	3,910,296	3,024,873	10,535	2,980,788	2,746,630	7,678	622,555	275,447
Illinois	1,195	1,248,453	374,919	1,195	1,177,629	374,919	1,195	1,148,702	374,891	134	9,828	10
Indiana	1,193	1,103,897	276,294	1,193	1,043,897	276,274	1,193	966,485	276,252	253	4,904	-
Iowa	709	576,988	134,164	709	543,546	133,884	707	525,001	133,679	112	7,120	180
Kansas	4,878	9,570,633	2,543,950	4,878	7,832,276	2,543,950	4,860	5,785,174	2,527,401	1,069	479,138	11,663
Kentucky	943	298,298	20,685	943	237,684	20,685	943	179,715	20,685	470	49,471	-
Louisiana	2,280	2,374,244	838,717	2,277	2,017,414	836,789	2,277	1,654,058	830,986	415	101,087	1,750
Maine	507	192,712	18,163	507	77,396	18,163	505	60,608	17,973	81	1,758	186
Maryland	509	187,682	53,734	509	168,463	53,734	482	161,659	53,224	176	3,664	510
Massachusetts	842	74,178	16,151	842	26,611	15,967	810	24,206	15,748	80	802	128
Michigan	2,366	1,220,101	432,665	2,366	1,039,786	432,665	2,366	997,945	431,205	294	8,632	1,460
Minnesota	1,639	1,153,741	434,500	1,639	1,016,911	434,500	1,617	943,000	432,883	368	18,930	278
Mississippi	1,567	2,180,689	1,169,793	1,567	1,942,196	1,169,793	1,567	1,878,589	1,169,387	37	4,520	60
Missouri	1,966	2,289,921	1,020,728	1,966	2,110,965	1,020,503	1,913	1,977,441	1,019,406	386	106,646	255
Montana	8,625	23,046,094	2,131,955	8,213	7,650,558	1,979,903	7,388	2,480,122	1,672,882	4,250	4,441,298	298,806
Nebraska	16,278	22,574,776	7,516,171	16,278	16,596,572	7,515,981	16,187	12,906,822	7,429,626	5,301	2,982,145	83,989
Nevada	1,722	4,088,606	639,310	1,710	908,764	612,471	1,393	503,468	487,343	773	357,131	124,938
New Hampshire	161	14,552	818	161	3,966	818	161	3,109	818	29	213	-
New Jersey	807	126,649	46,679	807	89,858	46,679	807	82,851	46,473	84	1,088	-
New Mexico	6,741	8,556,784	769,787	6,635	1,082,258	737,852	5,216	667,880	629,994	2,880	251,395	95,287
New York	1,284	275,475	48,545	1,278	221,940	48,185	1,278	185,346	48,167	256	8,128	-
North Carolina	2,281	698,205	101,055	2,264	419,089	99,675	2,214	363,561	90,574	488	36,299	8,761
North Dakota	541	1,477,038	207,772	541	1,121,367	206,617	533	825,709	205,455	138	187,302	66
Ohio	670	97,788	14,476	670	75,378	14,266	670	70,441	14,082	153	3,027	184
Oklahoma	1,819	3,081,687	508,842	1,779	1,560,883	500,530	1,682	1,082,457	457,972	759	316,708	34,446
Oregon	14,205	9,913,275	1,731,660	12,649	3,776,217	1,605,271	8,566	2,111,539	1,303,030	7,002	1,055,269	291,340
Pennsylvania	1,589	276,614	19,633	1,589	196,971	19,633	1,583	171,348	19,234	490	16,629	354
Rhode Island	58	4,862	648	58	1,418	648	58	1,302	648	10	74	-
South Carolina	951	300,910	52,046	941	181,903	51,986	810	143,403	51,213	426	18,867	773
South Dakota	1,444	3,268,827	390,406	1,411	1,778,414	387,497	1,411	1,313,065	385,045	466	411,115	1,348
Tennessee	759	298,741	34,429	759	243,056	34,429	739	204,886	32,413	303	29,887	2,016
Texas	15,441	20,465,276	4,947,745	15,328	10,781,676	4,891,955	13,948	7,390,992	4,607,667	5,847	1,528,645	169,502
Utah	10,070	6,285,621	1,082,213	9,602	1,474,928	999,225	8,006	907,305	798,597	5,685	411,210	198,956
Vermont	204	15,975	825	204	5,924	825	204	4,320	825	55	903	-
Virginia	905	357,982	33,635	905	176,803	33,635	847	136,063	32,865	325	17,641	770
Washington	12,862	5,024,117	1,806,782	12,595	2,429,414	1,795,277	11,439	1,922,819	1,706,758	4,514	304,802	84,911
West Virginia	100	10,163	801	100	5,268	801	100	4,531	801	39	543	-
Wisconsin	1,414	1,044,557	391,763	1,414	765,003	391,763	1,414	730,500	390,671	342	15,075	1,092
Wyoming	4,822	15,185,178	1,415,037	4,627	2,293,601	1,335,269	4,206	1,153,726	1,041,813	2,711	1,063,688	287,127
Water Resources Areas												
WRA 01 New England	1,917	309,246	38,410	1,917	120,367	38,226	1,881	97,308	37,797	290	4,322	334
WRA 02 Mid-Atlantic	4,142	996,233	233,602	4,136	770,704	233,242	4,045	700,220	231,466	939	27,501	1,570
WRA 03 South Atlantic-Gulf	15,567	7,472,460	2,410,814	15,207	4,277,177	2,382,162	14,941	3,424,712	2,294,818	3,175	650,279	58,008
WRA 04 Great Lakes	3,694	1,797,625	611,881	3,694	1,539,639	611,861	3,694	1,454,593	610,383	627	20,057	1,460
WRA 05 Ohio	2,928	1,393,401	220,290	2,928	1,196,814	220,080	2,910	1,033,448	219,491	1,139	80,635	544
WRA 06 Tennessee	891	217,167	31,065	891	160,351	30,995	891	129,028	29,386	345	20,627	1,600
WRA 07 Upper Mississippi	4,359	3,655,167	1,145,841	4,359	3,174,552	1,145,751	4,335	3,043,555	1,142,613	784	43,633	1,274
WRA 08 Lower Mississippi	7,817	10,792,231	6,199,006	7,814	9,900,596	6,197,078	7,812	9,286,036	6,185,482	795	129,058	6,377
WRA 09 Souris-Red-Rainy	491	750,834	183,590	491	681,577	182,990	491	614,262	182,464	144	19,223	106
WRA 10 Missouri	34,813	71,088,623	12,922,399	34,637	33,818,200	12,717,671	33,495	21,568,142	12,160,515	13,059	9,202,988	541,366
WRA 11 Arkansas-White-Red	10,805	20,648,533	5,285,088	10,765	12,536,599	5,250,092	9,630	9,320,198	5,015,326	3,644	1,230,213	178,840
WRA 12 Texas-Gulf	12,439	10,550,868	3,284,293	12,326	7,256,339	3,235,369	11,418	4,992,593	3,063,179	4,909	1,135,312	88,714
WRA 13 Rio Grande	6,844	8,060,807	799,492	6,844	964,849	759,516	6,116	698,036	683,474	2,085	160,736	66,395
WRA 14 Upper Colorado	9,068	9,265,206	1,366,203	8,449	2,433,830	1,229,421	7,448	1,145,828	900,455	4,571	833,779	323,374
WRA 15 Lower Colorado	3,393	2,061,452	897,445	3,369	1,015,872	891,780	3,031	854,734	854,596	1,264	57,270	33,084
WRA 16 Great Basin	9,821	9,311,710	1,516,775	9,511	2,267,812	1,442,758	7,875	1,392,800	1,196,457	5,244	681,479	244,774
WRA 17 Pacific Northwest	42,003	21,738,781	6,679,626	39,174	10,103,724	6,456,468	31,027	6,963,134	5,760,754	19,581	2,057,013	673,859
WRA 18 California	47,884	16,082,718	8,676,821	46,717	9,667,041	8,521,990	43,091	8,295,252	8,010,141	5,892	996,937	454,340
WRA 19 Alaska	73	13,717	2,252	73	6,516	2,252	69	4,074	2,236	16	505	16
WRA 20 Hawaii	1,214	308,611	78,538	1,189	125,548	76,675	1,161	53,842	45,922	97	33,887	1,044

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Table 3. **Land Use on Farms with Irrigation: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Other cropland			Total woodland		Other pastureland and rangeland			All other land	
	Farms	Acres	Acres irrigated	Farms	Acres	Farms	Acres	Acres irrigated	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	33,782	9,560,858	322,343	41,159	9,548,905	47,231	76,555,438	957,054	110,433	8,392,940
1998 . .	30,854	8,465,738	169,683	32,223	9,509,014	55,413	79,140,112	1,022,717	129,343	11,030,935
2003 DATA										
Alabama	109	15,917	9	304	55,831	123	17,417	220	364	8,566
Alaska	12	1,937	-	53	2,922	8	29	-	47	4,250
Arizona	459	101,860	4,100	131	8,275	540	275,963	715	1,306	114,058
Arkansas	717	174,013	448	1,998	263,887	99	15,839	-	1,595	123,759
California	4,636	374,365	57,429	3,412	934,153	4,520	3,744,816	115,351	18,213	1,550,129
Colorado	2,615	1,245,821	15,671	1,874	861,039	3,820	4,891,241	125,380	6,538	497,273
Connecticut	35	1,107	-	128	2,265	26	1,296	-	170	2,181
Delaware	36	5,462	-	110	12,680	5	224	-	137	5,616
Florida	815	102,013	27,227	1,452	801,431	758	631,991	26,190	2,867	430,180
Georgia	354	43,318	1,769	1,826	564,943	407	62,839	872	1,965	118,074
Hawaii	195	37,819	29,709	94	2,042	58	111,342	1,863	555	69,679
Idaho	1,696	306,953	2,796	125	68,703	3,754	2,039,387	101,984	7,842	317,677
Illinois	237	19,099	18	389	37,114	73	5,591	-	714	28,119
Indiana	141	72,508	22	550	28,032	168	6,288	20	771	25,680
Iowa	143	11,425	25	261	16,626	85	4,315	280	426	12,501
Kansas	2,657	1,567,964	4,886	510	40,682	1,595	1,414,440	-	3,032	283,235
Kentucky	169	8,498	-	572	36,905	128	13,083	-	634	10,626
Louisiana	618	262,269	4,053	526	66,909	121	33,180	1,928	1,475	256,741
Maine	95	15,030	4	325	100,363	11	864	-	383	14,089
Maryland	97	3,140	-	266	14,916	38	1,024	-	270	3,279
Massachusetts	105	1,603	91	470	27,710	149	1,008	184	642	18,849
Michigan	583	33,209	-	1,418	108,954	157	8,832	-	1,744	62,529
Minnesota	404	54,981	1,339	679	50,218	227	28,682	-	1,075	57,930
Mississippi	206	59,087	346	920	169,955	369	8,122	-	1,033	60,416
Missouri	217	26,878	842	621	86,805	343	55,604	225	697	36,547
Montana	1,199	729,138	8,215	2,290	1,086,859	4,103	13,995,290	152,052	4,224	313,387
Nebraska	3,563	707,605	2,366	1,659	208,262	5,651	5,105,907	190	10,049	664,035
Nevada	218	48,165	190	62	11,970	556	2,871,077	26,839	1,161	296,795
New Hampshire	36	644	-	126	8,401	15	132	-	116	2,053
New Jersey	161	5,919	206	442	24,838	63	1,753	-	569	10,200
New Mexico	783	162,983	12,571	329	1,710,547	1,702	5,476,992	31,935	3,647	286,987
New York	301	28,466	18	400	31,357	76	1,495	360	886	20,683
North Carolina	234	19,229	340	1,058	193,610	152	22,434	1,380	1,427	63,072
North Dakota	223	108,356	1,096	46	4,837	243	294,884	1,155	342	55,950
Ohio	178	1,910	-	333	13,450	74	2,721	210	519	6,239
Oklahoma	505	161,718	8,112	497	73,305	863	1,302,557	8,312	1,037	144,942
Oregon	798	609,409	10,901	4,692	583,250	3,906	5,313,570	126,389	8,225	240,238
Pennsylvania	291	8,994	45	907	54,919	210	7,197	-	1,079	17,527
Rhode Island	5	42	-	32	3,021	5	9	-	32	414
South Carolina	173	19,633	-	672	64,650	161	5,123	60	604	49,234
South Dakota	189	54,234	1,104	178	22,311	774	1,413,951	2,909	988	54,151
Tennessee	133	8,283	-	430	38,749	13	3,365	-	490	13,571
Texas	4,921	1,862,039	114,786	2,996	291,709	3,271	8,942,357	55,790	6,140	449,534
Utah	529	156,413	1,672	996	197,553	3,391	4,371,269	82,988	3,960	241,871
Vermont	39	701	-	119	7,358	47	589	-	128	2,104
Virginia	204	23,099	-	747	127,587	297	25,826	-	706	27,766
Washington	1,113	201,793	3,608	1,592	133,856	1,472	2,250,683	11,505	5,855	210,164
West Virginia	22	194	-	50	3,591	20	405	-	59	899
Wisconsin	302	19,428	-	901	126,515	158	13,492	-	1,052	139,547
Wyoming	311	76,187	6,329	591	163,040	2,426	11,758,943	79,768	2,643	969,594
Water Resources Areas										
WRA 01 New England	291	18,737	95	1,138	146,599	225	3,515	184	1,406	38,765
WRA 02 Mid-Atlantic	808	42,983	206	2,205	140,545	485	22,530	360	2,709	62,454
WRA 03 South Atlantic-Gulf	1,748	202,186	29,336	6,104	1,778,753	2,030	742,104	28,652	7,917	674,426
WRA 04 Great Lakes	907	64,989	18	2,247	153,245	299	10,809	20	2,811	93,932
WRA 05 Ohio	515	82,731	45	1,492	119,952	389	28,422	210	1,999	48,213
WRA 06 Tennessee	131	10,696	9	315	38,848	66	10,515	70	491	7,453
WRA 07 Upper Mississippi	828	87,364	1,864	1,890	200,911	491	65,034	90	2,827	214,670
WRA 08 Lower Mississippi	1,560	485,502	5,219	2,099	403,880	314	59,468	1,928	3,238	428,287
WRA 09 Souris-Red-Rainy	207	48,092	420	201	15,328	110	29,056	600	331	24,873
WRA 10 Missouri	7,596	3,047,070	15,790	3,861	1,242,167	13,749	33,740,666	204,728	20,995	2,287,590
WRA 11 Arkansas-White-Red	3,640	1,986,188	55,926	2,552	275,385	4,361	7,166,904	34,996	5,131	669,645
WRA 12 Texas-Gulf	3,870	1,128,434	83,476	2,959	284,209	1,635	2,772,362	48,924	5,279	237,958
WRA 13 Rio Grande	550	106,077	9,647	230	131,918	1,517	6,847,613	39,976	3,183	116,427
WRA 14 Upper Colorado	1,280	454,223	5,592	1,533	2,379,159	3,413	3,985,324	136,782	4,847	466,893
WRA 15 Lower Colorado	519	103,868	4,100	131	8,275	905	915,475	5,665	1,658	121,830
WRA 16 Great Basin	1,233	193,533	1,527	778	176,370	2,956	6,370,778	74,017	4,194	496,750
WRA 17 Pacific Northwest	3,245	1,083,577	21,855	7,779	1,057,798	9,246	9,812,173	223,158	22,392	765,086
WRA 18 California	4,647	374,852	57,509	3,498	990,599	4,974	3,861,319	154,831	18,423	1,563,759
WRA 19 Alaska	12	1,937	-	53	2,922	8	29	-	47	4,250
WRA 20 Hawaii	195	37,819	29,709	94	2,042	58	111,342	1,863	555	69,679

Table 4. **Land Irrigated by Method of Water Distribution: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Acres Irrigated	Gravity flow systems		Sprinkler systems		Drip trickle or low-flow micro sprinklers		Subirrigation	
		Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	52,583,431	101,239	23,124,131	109,241	26,937,835	45,627	2,988,101	614	279,522
1998 . .	54,249,965	118,114	27,273,419	99,443	24,865,142	35,939	2,259,176	5,632	549,655
2003 DATA									
Alabama	52,722	27	572	316	49,362	249	3,035	7	14
Alaska	2,252	1	(D)	53	2,164	19	(D)	-	-
Arizona	836,587	2,021	751,568	175	152,754	745	29,695	6	330
Arkansas	3,944,867	3,972	3,390,951	1,317	550,123	334	14,245	-	-
California	8,471,936	21,549	5,261,073	10,792	1,723,040	23,817	1,706,916	117	58,655
Colorado	2,562,329	8,845	1,315,863	4,396	1,246,601	114	3,978	-	-
Connecticut	2,213	-	-	118	1,401	132	820	-	-
Delaware	69,088	-	-	209	68,202	25	1,356	-	-
Florida	1,497,653	1,183	531,476	2,999	176,384	5,313	718,338	97	184,600
Georgia	710,893	89	39,148	1,949	596,133	1,034	75,776	-	-
Hawaii	78,538	114	2,305	498	5,934	682	70,026	-	-
Idaho	3,126,857	8,206	929,177	7,815	2,202,917	251	502	106	15,286
Illinois	374,919	72	3,286	1,095	372,212	76	1,168	1	(D)
Indiana	276,294	39	2,426	927	271,231	285	5,220	13	2,740
Iowa	134,164	114	7,428	550	128,824	107	454	-	-
Kansas	2,543,950	1,815	278,088	3,986	2,283,103	10	565	-	-
Kentucky	20,685	39	1,232	729	18,475	220	1,105	-	-
Louisiana	838,717	1,891	737,470	361	99,285	195	3,771	-	-
Maine	18,163	4	70	369	14,027	217	4,096	-	-
Maryland	53,734	24	(D)	300	49,328	236	3,778	-	-
Massachusetts	16,151	82	1,073	656	14,525	150	522	2	(D)
Michigan	432,665	26	208	1,832	418,778	692	16,583	23	1,276
Minnesota	434,500	47	16,203	1,478	416,901	160	2,265	4	1,808
Mississippi	1,169,793	767	795,237	813	377,268	333	333	3	900
Missouri	1,020,728	985	602,552	1,254	412,214	142	5,525	-	-
Montana	2,131,955	6,267	1,361,731	3,443	773,008	166	652	14	3,610
Nebraska	7,516,171	9,016	1,957,597	13,337	5,605,283	91	182	-	-
Nevada	639,310	1,371	425,829	555	211,890	94	493	2	(D)
New Hampshire	818	9	77	92	518	83	302	-	-
New Jersey	46,679	38	699	582	34,656	333	11,499	2	(D)
New Mexico	769,787	5,573	370,202	1,241	389,774	139	13,579	-	-
New York	48,545	-	-	749	33,668	590	15,561	3	180
North Carolina	101,055	5	1,550	1,855	89,728	582	11,227	-	-
North Dakota	207,772	140	36,365	437	171,673	6	(D)	-	-
Ohio	14,476	75	918	357	10,139	346	3,778	1	(D)
Oklahoma	508,842	359	77,402	1,446	433,099	222	690	-	-
Oregon	1,731,660	3,610	685,264	10,779	1,048,211	1,075	16,425	-	-
Pennsylvania	19,633	12	148	859	13,031	878	6,868	-	-
Rhode Island	648	5	80	22	447	33	189	-	-
South Carolina	52,046	27	2,570	541	42,053	532	9,635	-	-
South Dakota	390,406	566	105,123	950	287,014	46	736	-	-
Tennessee	34,429	80	1,431	525	31,881	219	3,197	-	-
Texas	4,947,745	7,901	1,401,607	8,372	3,506,636	1,872	102,661	-	-
Utah	1,082,213	6,961	602,590	4,503	472,180	171	6,853	39	4,740
Vermont	825	22	63	94	477	130	444	-	-
Virginia	33,635	-	-	502	28,103	413	5,532	-	-
Washington	1,806,782	3,346	268,122	10,040	1,450,274	1,915	98,768	149	2,977
West Virginia	801	1	(D)	51	478	51	(D)	-	-
Wisconsin	391,763	23	1,726	1,327	389,434	88	1,460	4	360
Wyoming	1,415,037	3,920	1,155,461	1,595	262,994	14	6,925	21	590
Water Resources Areas									
WRA 01 New England	38,410	112	1,318	1,306	31,137	688	6,127	2	(D)
WRA 02 Mid-Atlantic	233,602	82	1,026	2,409	198,933	2,087	34,619	2	(D)
WRA 03 South Atlantic-Gulf	2,410,814	1,333	576,352	8,039	951,558	7,794	815,552	104	184,614
WRA 04 Great Lakes	611,881	52	286	2,846	586,752	1,065	29,006	27	1,546
WRA 05 Ohio	220,290	134	2,455	1,968	213,673	989	8,550	1	(D)
WRA 06 Tennessee	31,065	18	(D)	523	25,238	486	5,681	-	-
WRA 07 Upper Mississippi	1,145,841	193	21,209	3,891	1,123,011	416	6,227	17	3,100
WRA 08 Lower Mississippi	6,199,006	6,612	4,961,696	2,366	1,234,103	344	16,384	3	900
WRA 09 Souris-Red-Rainy	183,590	31	15,545	459	166,237	-	-	4	1,808
WRA 10 Missouri	12,922,399	21,880	4,680,387	21,795	8,296,402	294	11,348	16	3,120
WRA 11 Arkansas-White-Red	5,285,088	5,194	1,411,668	6,644	3,918,131	411	4,404	-	-
WRA 12 Texas-Gulf	3,284,293	5,828	1,057,809	7,069	2,162,919	1,878	103,643	-	-
WRA 13 Rio Grande	799,492	6,050	370,828	1,001	422,026	82	10,749	-	-
WRA 14 Upper Colorado	1,366,203	6,349	1,035,866	4,097	329,552	131	3,721	26	2,880
WRA 15 Lower Colorado	897,445	2,270	779,022	444	179,673	870	36,014	8	692
WRA 16 Great Basin	1,516,775	7,419	911,009	3,596	599,537	171	(D)	25	1,980
WRA 17 Pacific Northwest	6,679,626	15,594	1,940,866	28,580	4,655,591	3,401	116,337	262	19,223
WRA 18 California	8,676,821	21,973	5,354,436	11,657	1,835,264	23,819	1,706,922	117	58,655
WRA 19 Alaska	2,252	1	(D)	53	2,164	19	(D)	-	-
WRA 20 Hawaii	78,538	114	2,305	498	5,934	682	70,026	-	-

Table 5. **Land Irrigated by Sprinkler Systems: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms	Acres irrigated	Center pivot system							
			Farms	Acres irrigated	Low pressure under 30 psi		Medium pressure 30 to 59 psi		High pressure 60 psi or more	
					Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	109,241	26,937,835	47,720	21,293,091	22,124	9,696,930	21,812	9,657,353	7,338	1,938,808
1998 . .	99,443	24,865,142	43,275	18,695,300	20,633	9,292,022	19,637	7,419,409	6,976	1,983,869
2003 DATA										
Alabama	316	49,362	130	40,479	29	11,673	79	23,033	26	5,773
Alaska	53	2,164	7	(D)	5	(D)	2	(D)	-	-
Arizona	175	152,754	93	71,562	74	52,838	19	18,724	-	-
Arkansas	1,317	550,123	877	521,877	322	121,598	455	335,874	122	64,405
California	10,792	1,723,040	1,554	217,235	1,297	69,507	240	125,162	72	22,566
Colorado	4,396	1,246,601	2,548	1,127,586	1,098	488,837	1,375	598,728	172	40,021
Connecticut	118	1,401	29	65	11	29	18	(D)	9	(D)
Delaware	209	68,202	172	64,718	48	17,416	108	39,122	24	8,180
Florida	2,999	176,384	265	76,959	151	40,746	82	31,793	34	4,420
Georgia	1,949	596,133	1,397	532,852	312	118,433	824	298,061	432	116,358
Hawaii	498	5,934	81	(D)	54	(D)	12	(D)	15	121
Idaho	7,815	2,202,917	2,220	1,333,589	655	423,697	1,277	740,088	364	169,804
Illinois	1,095	372,212	874	361,374	293	130,953	493	190,367	181	40,054
Indiana	927	271,231	703	248,352	241	85,871	384	132,270	149	30,211
Iowa	550	128,824	389	122,854	124	38,741	180	56,374	139	27,739
Kansas	3,986	2,283,103	3,669	2,209,246	2,432	1,524,936	1,217	644,913	155	39,397
Kentucky	729	18,475	67	10,525	17	2,537	35	7,396	19	592
Louisiana	361	99,285	171	80,405	47	20,688	105	44,682	38	15,035
Maine	369	14,027	82	2,877	37	(D)	43	1,412	2	(D)
Maryland	300	49,328	160	44,786	82	14,706	73	27,429	15	2,651
Massachusetts	656	14,525	69	1,639	-	-	69	1,639	-	-
Michigan	1,832	418,778	731	323,384	149	39,060	361	193,405	312	90,919
Minnesota	1,478	416,901	1,079	388,988	336	133,804	517	183,953	353	71,231
Mississippi	813	377,268	470	359,610	112	97,005	305	216,827	68	45,778
Missouri	1,254	412,214	915	395,775	492	202,983	350	155,331	126	37,461
Montana	3,443	773,008	1,413	495,051	786	275,326	646	203,885	42	15,840
Nebraska	13,337	5,605,283	12,758	5,467,393	3,338	1,290,030	8,355	3,533,421	2,871	643,942
Nevada	555	211,890	255	172,745	133	84,025	109	82,423	22	6,297
New Hampshire	92	518	5	13	-	-	3	(D)	2	(D)
New Jersey	582	34,656	54	4,970	39	2,463	11	1,345	6	1,162
New Mexico	1,241	389,774	866	362,190	777	296,161	91	65,019	7	1,010
New York	749	33,668	116	5,873	54	432	59	4,889	3	552
North Carolina	1,855	89,728	320	22,500	249	12,536	73	9,328	4	636
North Dakota	437	171,673	398	165,269	130	49,341	227	95,729	71	20,199
Ohio	357	10,139	43	6,348	20	(D)	22	4,736	1	(D)
Oklahoma	1,446	433,099	898	394,615	560	271,019	288	117,301	64	6,295
Oregon	10,779	1,048,211	1,315	367,743	946	165,871	259	162,464	115	39,408
Pennsylvania	859	13,031	15	2,042	2	(D)	7	1,200	6	(D)
Rhode Island	22	447	-	-	-	-	-	-	-	-
South Carolina	541	42,053	206	32,817	141	10,442	43	15,182	35	7,193
South Dakota	950	287,014	860	278,822	259	75,761	429	147,993	251	55,068
Tennessee	525	31,881	126	25,013	36	5,418	66	18,383	24	1,212
Texas	8,372	3,506,636	5,475	3,347,809	5,026	2,981,144	520	334,775	106	31,890
Utah	4,503	472,180	621	162,207	196	68,188	362	76,198	78	17,821
Vermont	94	477	17	40	6	6	11	34	-	-
Virginia	502	28,103	55	16,415	21	6,295	36	9,470	4	650
Washington	10,040	1,450,274	1,864	905,233	376	297,861	1,137	496,837	444	110,535
West Virginia	51	478	1	(D)	-	-	-	-	1	(D)
Wisconsin	1,327	389,434	592	341,033	88	50,700	274	150,504	329	139,829
Wyoming	1,595	262,994	695	178,260	523	114,293	161	58,645	25	5,322
Water Resources Areas										
WRA 01 New England	1,306	31,137	196	4,610	54	(D)	138	3,091	13	(D)
WRA 02 Mid-Atlantic	2,409	198,933	452	131,548	190	40,880	233	77,333	55	13,335
WRA 03 South Atlantic-Gulf	8,039	951,558	2,212	698,576	776	192,811	1,111	374,648	519	131,117
WRA 04 Great Lakes	2,846	586,752	1,122	456,101	283	66,368	524	252,513	459	137,220
WRA 05 Ohio	1,968	213,673	553	187,466	176	70,912	315	97,834	99	18,720
WRA 06 Tennessee	523	25,238	218	17,403	141	(D)	44	7,587	35	(D)
WRA 07 Upper Mississippi	3,891	1,123,011	2,658	1,040,768	821	309,402	1,296	504,586	839	226,780
WRA 08 Lower Mississippi	2,366	1,234,103	1,901	1,175,240	731	370,342	1,011	673,966	240	130,932
WRA 09 Souris-Red-Rainy	459	166,237	400	161,783	107	53,407	224	84,108	109	24,268
WRA 10 Missouri	21,795	8,296,402	19,004	7,877,971	6,657	2,499,738	10,954	4,571,058	3,539	807,175
WRA 11 Arkansas-White-Red	6,644	3,918,131	5,332	3,801,062	3,867	2,880,274	1,533	883,129	179	37,659
WRA 12 Texas-Gulf	7,069	2,162,919	4,106	2,003,279	3,742	1,780,861	329	190,528	106	31,890
WRA 13 Rio Grande	1,001	422,026	796	400,267	465	220,235	331	178,822	6	1,210
WRA 14 Upper Colorado	4,097	329,552	906	112,607	410	41,326	425	53,581	83	17,700
WRA 15 Lower Colorado	444	179,673	108	89,157	75	54,671	32	(D)	1	(D)
WRA 16 Great Basin	3,596	599,537	726	297,901	286	144,009	413	141,729	53	12,163
WRA 17 Pacific Northwest	28,580	4,655,591	5,336	2,601,715	1,961	884,151	2,625	1,399,438	910	318,126
WRA 18 California	11,657	1,835,264	1,606	233,824	1,323	80,225	260	129,937	78	23,662
WRA 19 Alaska	53	2,164	7	(D)	5	(D)	2	(D)	-	-
WRA 20 Hawaii	498	5,934	81	(D)	54	(D)	12	(D)	15	121

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Table 5. **Land Irrigated by Sprinkler Systems: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Linear move tower sprinklers						Solid set and permanent sprinklers					
	Farms	Acres irrigated	Low pressure under 30 psi		Medium to high pressure 30 psi or more		Farms	Acres irrigated	Low pressure under 30 psi		Medium to high pressure 30 psi or more	
			Farms	Acres irrigated	Farms	Acres irrigated			Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	2,330	344,162	791	149,566	1,542	194,596	20,706	1,177,953	5,216	278,000	15,557	899,953
1998 . .	1,551	284,756	(NA)	(NA)	(NA)	(NA)	19,709	1,222,683	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	7	210	-	-	7	210	31	623	2	(D)	29	(D)
Alaska	-	-	-	-	-	-	1	(D)	-	-	1	(D)
Arizona	6	6,675	3	(D)	3	(D)	12	10,279	1	(D)	11	(D)
Arkansas	-	-	-	-	-	-	42	7,460	12	4,800	30	2,660
California	154	42,603	18	14,587	137	28,016	5,401	602,011	1,758	182,974	3,690	419,037
Colorado	301	7,442	295	6,952	6	490	-	-	-	-	-	-
Connecticut	-	-	-	-	-	-	12	468	-	-	12	468
Delaware	3	(D)	2	(D)	1	(D)	4	160	-	-	4	160
Florida	6	2,370	2	(D)	4	(D)	2,215	76,905	1,257	55,512	958	21,393
Georgia	16	693	3	300	13	393	163	15,225	112	1,344	51	13,881
Hawaii	12	805	2	(D)	10	(D)	107	1,192	12	37	96	1,155
Idaho	273	55,285	113	20,846	160	34,439	1,143	49,565	36	3,659	1,107	45,906
Illinois	23	2,751	16	1,836	7	915	29	580	-	-	29	580
Indiana	11	1,938	8	1,354	3	584	60	770	3	200	57	570
Iowa	14	686	2	(D)	14	(D)	43	372	9	9	34	363
Kansas	49	51,089	28	35,689	21	15,400	-	-	-	-	-	-
Kentucky	-	-	-	-	-	-	28	77	14	21	14	56
Louisiana	5	3,400	3	(D)	2	(D)	70	2,739	4	1,563	66	1,176
Maine	5	(D)	1	(D)	4	330	19	3,529	1	(D)	18	(D)
Maryland	1	(D)	-	-	1	(D)	5	(D)	3	159	2	(D)
Massachusetts	7	545	-	-	7	545	315	10,290	8	(D)	309	(D)
Michigan	35	4,130	-	-	35	4,130	440	13,071	54	208	388	12,863
Minnesota	22	3,623	2	(D)	20	(D)	55	852	2	(D)	53	(D)
Mississippi	8	6,820	3	1,806	5	5,014	2	(D)	-	-	2	(D)
Missouri	16	2,932	-	-	16	2,932	51	51	-	-	51	51
Montana	79	14,752	4	712	75	14,040	-	-	-	-	-	-
Nebraska	166	21,177	56	8,850	110	12,327	91	91	91	91	-	-
Nevada	14	3,680	5	1,000	9	2,680	68	623	-	-	68	623
New Hampshire	1	(D)	-	-	1	(D)	16	108	6	6	10	102
New Jersey	39	2,607	6	1,500	33	1,107	119	7,614	29	207	90	7,407
New Mexico	91	8,450	70	5,920	21	2,530	5	892	2	(D)	3	(D)
New York	2	(D)	-	-	2	(D)	31	(D)	9	(D)	22	822
North Carolina	15	2,250	-	-	15	2,250	346	15,299	33	1,310	313	13,989
North Dakota	3	2,674	1	(D)	2	(D)	-	-	-	-	-	-
Ohio	6	(D)	1	(D)	5	152	62	410	17	49	45	361
Oklahoma	7	(D)	5	1,640	2	(D)	2	(D)	-	-	2	(D)
Oregon	326	32,038	20	9,005	306	23,033	2,723	72,236	1,133	9,614	1,602	62,622
Pennsylvania	4	64	-	-	4	64	75	1,058	4	176	71	882
Rhode Island	-	-	-	-	-	-	6	(D)	-	-	6	(D)
South Carolina	1	(D)	-	-	1	(D)	178	2,813	123	173	55	2,640
South Dakota	-	-	-	-	-	-	10	1,400	-	-	10	1,400
Tennessee	3	150	-	-	3	150	41	2,001	-	-	41	2,001
Texas	34	17,587	34	17,587	-	-	1,152	18,592	5	3,296	1,147	15,296
Utah	64	9,376	54	5,946	10	3,430	155	921	-	-	155	921
Vermont	13	(D)	-	-	13	(D)	9	(D)	2	(D)	7	34
Virginia	-	-	-	-	-	-	2	(D)	-	-	2	(D)
Washington	455	29,512	20	3,353	435	26,159	4,990	232,448	473	10,293	4,520	222,155
West Virginia	1	(D)	-	-	1	(D)	1	(D)	1	(D)	-	-
Wisconsin	18	(D)	1	(D)	17	34	349	21,601	-	-	349	21,601
Wyoming	14	590	13	(D)	1	(D)	27	1,784	-	-	27	1,784
Water Resources Areas												
WRA 01 New England	15	1,207	1	(D)	14	(D)	368	14,517	15	285	355	14,232
WRA 02 Mid-Atlantic	59	3,965	8	1,620	51	2,345	215	9,269	43	(D)	172	(D)
WRA 03 South Atlantic-Gulf	45	5,623	5	540	40	5,083	2,933	110,865	1,527	58,475	1,406	52,390
WRA 04 Great Lakes	40	5,380	1	(D)	39	(D)	588	15,832	74	409	516	15,423
WRA 05 Ohio	21	1,963	10	1,312	11	651	134	1,117	19	131	115	986
WRA 06 Tennessee	-	-	-	-	-	-	4	(D)	-	-	4	(D)
WRA 07 Upper Mississippi	86	8,719	19	2,286	69	6,433	361	21,019	9	9	352	21,010
WRA 08 Lower Mississippi	15	11,220	6	2,406	9	8,814	140	10,936	16	6,363	124	4,573
WRA 09 Souris-Red-Rainy	3	2,674	1	(D)	2	(D)	25	(D)	2	(D)	23	138
WRA 10 Missouri	213	34,089	73	9,952	140	24,137	128	3,275	91	91	37	3,184
WRA 11 Arkansas-White-Red	48	50,809	33	37,329	15	13,480	54	163	-	-	54	163
WRA 12 Texas-Gulf	54	19,847	54	19,847	-	-	1,152	18,592	5	3,296	1,147	15,296
WRA 13 Rio Grande	75	6,410	50	3,660	25	2,750	2	(D)	2	(D)	-	-
WRA 14 Upper Colorado	336	8,752	334	(D)	2	(D)	5	515	-	-	5	515
WRA 15 Lower Colorado	11	7,475	3	(D)	8	(D)	12	10,279	1	(D)	11	(D)
WRA 16 Great Basin	42	12,014	20	5,416	22	6,598	220	1,109	-	-	220	1,109
WRA 17 Pacific Northwest	1,100	118,807	152	31,404	948	87,403	8,658	346,690	1,642	23,566	7,031	323,124
WRA 18 California	155	44,403	19	16,387	137	28,016	5,599	609,570	1,758	182,974	3,888	426,596
WRA 19 Alaska	-	-	-	-	-	-	1	(D)	-	-	1	(D)
WRA 20 Hawaii	12	805	2	(D)	10	(D)	107	1,192	12	37	96	1,155

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Table 5. **Land Irrigated by Sprinkler Systems: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Side roll, wheel move or other mechanical move		Big gun or traveller		Hand move	
	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	15,142	1,825,901	8,450	633,188	32,691	1,663,540
1998 . .	14,240	2,033,825	8,892	765,794	29,298	1,862,784
2003 DATA						
Alabama	17	2,115	92	5,751	74	184
Alaska	8	658	1	(D)	41	330
Arizona	27	3,780	18	1,620	26	58,838
Arkansas	149	10,431	177	9,495	122	860
California	460	173,761	310	19,703	4,209	667,727
Colorado	1,335	103,479	13	1,100	514	6,994
Connecticut	-	-	4	110	83	758
Delaware	5	(D)	25	1,798	30	(D)
Florida	-	-	297	19,904	246	246
Georgia	24	5,470	651	41,215	61	678
Hawaii	1	(D)	8	2,051	292	986
Idaho	2,652	438,616	43	676	5,281	325,186
Illinois	7	998	62	5,588	147	921
Indiana	29	5,163	133	13,061	106	1,947
Iowa	13	1,842	38	2,759	99	311
Kansas	45	13,100	124	6,560	222	3,108
Kentucky	8	445	295	5,020	336	2,408
Louisiana	27	4,099	52	8,592	50	50
Maine	2	(D)	39	4,615	248	2,371
Maryland	8	1,086	60	2,812	85	353
Massachusetts	17	208	25	858	238	985
Michigan	35	1,959	599	70,834	539	5,400
Minnesota	38	2,789	268	19,148	166	1,501
Mississippi	6	(D)	343	7,578	-	-
Missouri	10	2,460	189	10,484	155	512
Montana	1,479	196,136	207	5,728	1,374	61,341
Nebraska	56	40,994	645	63,862	211	11,766
Nevada	207	30,446	57	2,220	125	2,176
New Hampshire	3	(D)	11	113	60	251
New Jersey	13	1,699	134	12,899	293	4,867
New Mexico	291	16,958	-	-	123	1,284
New York	20	3,161	150	17,260	549	6,080
North Carolina	34	1,156	644	45,123	689	3,400
North Dakota	2	(D)	36	3,602	12	(D)
Ohio	2	(D)	53	2,217	222	928
Oklahoma	252	20,167	188	8,382	287	7,735
Oregon	2,496	270,704	656	80,786	5,675	224,704
Pennsylvania	10	461	157	5,951	625	3,455
Rhode Island	-	-	2	(D)	14	77
South Carolina	6	1,517	46	3,724	156	(D)
South Dakota	55	6,128	7	496	25	168
Tennessee	3	(D)	98	2,143	263	(D)
Texas	861	58,870	245	27,748	1,355	36,030
Utah	2,176	234,145	361	5,010	2,664	60,521
Vermont	5	(D)	1	(D)	67	147
Virginia	26	(D)	118	6,615	322	3,938
Washington	1,615	104,243	349	54,144	3,324	124,694
West Virginia	-	-	4	(D)	44	(D)
Wisconsin	26	(D)	313	20,277	307	3,739
Wyoming	581	57,915	102	3,100	535	21,345
Water Resources Areas						
WRA 01 New England	22	334	82	5,972	678	4,497
WRA 02 Mid-Atlantic	69	5,523	522	35,695	1,292	12,933
WRA 03 South Atlantic-Gulf	92	9,143	2,065	118,523	1,368	8,828
WRA 04 Great Lakes	45	4,957	849	94,430	959	10,052
WRA 05 Ohio	21	(D)	398	14,211	935	(D)
WRA 06 Tennessee	1	(D)	109	3,972	200	(D)
WRA 07 Upper Mississippi	90	7,389	585	40,615	562	4,501
WRA 08 Lower Mississippi	63	18,368	212	18,005	85	334
WRA 09 Souris-Red-Rainy	-	-	17	(D)	28	(D)
WRA 10 Missouri	1,865	245,067	1,020	86,254	1,409	49,746
WRA 11 Arkansas-White-Red	605	41,359	361	15,535	660	9,203
WRA 12 Texas-Gulf	882	57,231	245	27,748	1,403	36,222
WRA 13 Rio Grande	157	13,669	-	-	27	(D)
WRA 14 Upper Colorado	2,140	181,315	213	3,497	1,237	22,866
WRA 15 Lower Colorado	202	9,325	18	1,620	273	61,817
WRA 16 Great Basin	1,345	209,106	222	4,873	2,330	74,534
WRA 17 Pacific Northwest	6,737	775,478	1,202	136,680	14,191	676,221
WRA 18 California	797	241,528	321	22,339	4,721	683,600
WRA 19 Alaska	8	658	1	(D)	41	330
WRA 20 Hawaii	1	(D)	8	2,051	292	986

Table 6. **Land Irrigated by Drip, Trickle, or Low-flow Micro Sprinklers: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms	Acred irrigated	Surface drip		Sub-surface drip		Low-flow micro (spray) sprinklers	
			Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	45,627	2,988,101	27,407	1,418,225	4,970	405,285	15,475	1,164,591
1998 . .	35,939	2,259,176	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA								
Alabama	249	3,035	154	1,300	61	1,540	41	195
Alaska	19	(D)	19	(D)	-	-	-	-
Arizona	745	29,695	692	3,924	32	19,661	21	6,110
Arkansas	334	14,245	229	12,790	127	1,345	22	110
California	23,817	1,706,916	14,924	963,749	1,485	192,466	8,700	550,701
Colorado	114	3,978	-	-	5	530	109	3,448
Connecticut	132	820	47	497	22	165	64	158
Delaware	25	1,356	6	135	18	1,113	4	108
Florida	5,313	718,338	1,751	182,516	356	20,056	3,479	515,766
Georgia	1,034	75,776	485	26,453	358	29,434	220	19,889
Hawaii	682	70,026	507	53,666	38	(D)	147	(D)
Idaho	251	502	251	502	-	-	-	-
Illinois	76	1,168	75	1,102	13	(D)	1	(D)
Indiana	285	5,220	200	3,878	85	1,342	-	-
Iowa	107	454	81	244	34	201	9	9
Kansas	10	565	-	-	10	565	-	-
Kentucky	220	1,105	149	656	22	120	56	329
Louisiana	195	3,771	144	3,720	-	-	51	51
Maine	217	4,096	108	(D)	72	(D)	71	(D)
Maryland	236	3,778	197	1,900	36	1,338	4	540
Massachusetts	150	522	77	238	34	71	47	213
Michigan	692	16,583	550	11,412	149	5,068	51	103
Minnesota	160	2,265	137	1,851	23	414	-	-
Mississippi	333	333	-	-	333	333	-	-
Missouri	142	5,525	74	2,463	68	3,062	-	-
Montana	166	652	166	652	-	-	-	-
Nebraska	91	182	91	182	-	-	-	-
Nevada	94	493	53	(D)	41	(D)	-	-
New Hampshire	83	302	57	192	19	77	10	33
New Jersey	333	11,499	225	6,326	65	3,956	50	1,217
New Mexico	139	13,579	55	6,005	83	5,809	50	1,765
New York	590	15,561	391	7,111	106	1,330	179	7,120
North Carolina	582	11,227	479	4,312	86	6,864	17	51
North Dakota	6	(D)	6	(D)	-	-	-	-
Ohio	346	3,778	160	1,647	130	1,836	59	295
Oklahoma	222	690	110	148	57	487	55	55
Oregon	1,075	16,425	655	4,275	7	822	413	11,328
Pennsylvania	878	6,868	669	5,323	234	1,433	38	112
Rhode Island	33	189	17	69	5	24	11	96
South Carolina	532	9,635	395	5,601	135	(D)	2	(D)
South Dakota	46	736	46	621	23	115	-	-
Tennessee	219	3,197	154	2,452	50	655	18	90
Texas	1,872	102,661	1,164	31,925	322	69,550	386	1,186
Utah	171	6,853	168	3,873	-	-	77	2,980
Vermont	130	444	107	319	11	32	14	93
Virginia	413	5,532	330	4,649	129	682	12	201
Washington	1,915	98,768	938	51,543	57	18,338	977	28,887
West Virginia	51	(D)	33	231	12	60	6	(D)
Wisconsin	88	1,460	67	565	17	255	4	640
Wyoming	14	6,925	14	6,925	-	-	-	-
Water Resources Areas								
WRA 01 New England	688	6,127	362	(D)	158	(D)	216	(D)
WRA 02 Mid-Atlantic	2,087	34,619	1,563	22,863	479	8,660	250	3,096
WRA 03 South Atlantic-Gulf	7,794	815,552	3,019	218,842	1,273	57,764	3,804	538,946
WRA 04 Great Lakes	1,065	29,006	843	15,798	223	6,675	73	6,533
WRA 05 Ohio	989	8,550	591	4,832	268	3,254	137	464
WRA 06 Tennessee	486	5,681	347	3,707	125	1,878	24	96
WRA 07 Upper Mississippi	416	6,227	371	5,014	61	524	14	689
WRA 08 Lower Mississippi	344	16,384	318	14,783	48	1,491	22	110
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-
WRA 10 Missouri	294	11,348	219	8,172	98	3,176	-	-
WRA 11 Arkansas-White-Red	411	4,404	184	2,598	172	1,751	55	55
WRA 12 Texas-Gulf	1,878	103,643	1,162	32,165	330	70,292	386	1,186
WRA 13 Rio Grande	82	10,749	57	5,765	73	(D)	1	(D)
WRA 14 Upper Colorado	131	3,721	22	273	-	-	109	3,448
WRA 15 Lower Colorado	870	36,014	766	6,884	34	19,825	144	9,305
WRA 16 Great Basin	171	(D)	127	793	41	(D)	3	1,500
WRA 17 Pacific Northwest	3,401	116,337	2,004	56,962	64	19,160	1,390	40,215
WRA 18 California	23,819	1,706,922	14,926	963,755	1,485	192,466	8,700	550,701
WRA 19 Alaska	19	(D)	19	(D)	-	-	-	-
WRA 20 Hawaii	682	70,026	507	53,666	38	(D)	147	(D)

Table 7. **Land Irrigated with Gravity Flow by Field Water Delivery System: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms	Acres irrigated	Down rows or furrows											
			Farms	Acres irrigated	Above ground pipe (except poly tubing)		Poly tubing (or other single year use, lay flat tubing)		Open surface ditches				Underground pipe	
									Lined		Unlined			
					Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	101,239	23,124,131	50,190	11,723,084	19,225	3,189,138	9,299	3,002,429	6,475	1,320,126	15,881	3,050,606	7,393	1,160,785
1998 . .	118,114	27,273,419	59,305	14,025,125	(NA)	(NA)	(NA)	(NA)	7,974	1,615,289	18,987	2,977,872	6,216	1,177,439
2003 DATA														
Alabama	27	572	21	216	7	77	14	139	-	-	-	-	-	-
Alaska	1	(D)	1	(D)	1	(D)	-	-	-	-	-	-	-	-
Arizona	2,021	751,568	788	413,825	103	13,568	77	11,684	468	346,306	242	38,535	20	3,732
Arkansas	3,972	3,390,951	2,490	1,511,954	149	69,091	2,295	1,320,831	34	33,275	57	22,411	128	66,346
California	21,549	5,261,073	8,416	2,507,908	1,144	420,308	586	16,716	330	215,863	2,758	1,233,240	4,646	621,781
Colorado	8,845	1,315,863	4,457	554,499	1,549	118,456	874	63,241	1,079	100,089	2,173	235,002	399	37,711
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Florida	1,183	531,476	489	348,072	-	-	290	7,941	8	5,960	162	313,886	32	20,285
Georgia	89	39,148	89	39,148	2	(D)	58	(D)	-	-	29	35,980	-	-
Hawaii	114	2,305	47	509	17	29	18	213	8	16	3	(D)	2	(D)
Idaho	8,206	929,177	4,595	528,954	2,082	132,854	265	(D)	1,870	240,997	1,921	152,307	1	(D)
Illinois	72	3,286	39	1,665	21	(D)	1	(D)	-	-	17	1,270	-	-
Indiana	39	2,426	31	1,371	-	-	28	651	-	-	3	720	-	-
Iowa	114	7,428	94	6,485	39	5,489	29	311	9	495	17	190	-	-
Kansas	1,815	278,088	1,775	268,410	1,445	194,189	19	5,515	5	2,800	234	28,210	155	37,696
Kentucky	39	1,232	24	585	7	(D)	15	64	2	(D)	-	-	-	-
Louisiana	1,891	737,470	803	287,834	101	16,375	576	225,453	18	5,860	93	15,000	63	25,146
Maine	4	70	2	(D)	2	(D)	-	-	-	-	-	-	-	-
Maryland	24	(D)	24	(D)	-	-	24	(D)	-	-	-	-	-	-
Massachusetts	82	1,073	31	31	-	-	31	31	-	-	-	-	-	-
Michigan	26	208	26	208	26	208	-	-	-	-	-	-	-	-
Minnesota	47	16,203	32	(D)	-	-	23	69	8	488	-	-	1	(D)
Mississippi	767	795,237	617	519,617	84	36,942	537	430,938	12	19,350	21	18,078	33	14,309
Missouri	985	602,552	849	470,962	100	17,257	760	449,157	-	-	62	3,156	13	1,392
Montana	6,267	1,361,731	1,473	223,866	464	59,063	214	7,063	102	7,966	1,017	147,464	21	2,310
Nebraska	9,016	1,957,597	8,933	1,929,559	7,931	1,598,005	269	50,446	151	9,887	1,155	270,213	18	1,008
Nevada	1,371	425,829	232	33,983	73	5,764	49	2,636	47	8,706	80	13,719	21	3,158
New Hampshire	9	77	3	12	-	-	3	12	-	-	-	-	-	-
New Jersey	38	699	30	(D)	4	40	24	24	-	-	2	(D)	4	80
New Mexico	5,573	370,202	1,962	174,543	173	14,156	354	24,483	858	43,466	672	20,545	153	71,893
New York	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	5	1,550	3	(D)	-	-	3	(D)	-	-	-	-	-	-
North Dakota	140	36,365	71	19,090	27	1,838	2	(D)	2	(D)	40	14,890	7	850
Ohio	75	918	59	788	-	-	45	298	-	-	14	490	-	-
Oklahoma	359	77,402	316	71,200	159	21,680	97	8,088	46	30,326	72	5,800	18	5,306
Oregon	3,610	685,264	1,252	170,319	384	32,948	416	(D)	396	67,154	405	62,533	6	(D)
Pennsylvania	12	148	2	(D)	-	-	2	(D)	-	-	-	-	-	-
Rhode Island	5	80	4	(D)	-	-	4	(D)	-	-	-	-	-	-
South Carolina	27	2,570	15	(D)	-	-	5	350	-	-	-	-	10	(D)
South Dakota	566	105,123	190	27,016	144	22,749	2	(D)	9	(D)	48	2,797	6	789
Tennessee	80	1,431	42	1,070	-	-	2	(D)	19	(D)	21	405	-	-
Texas	7,901	1,401,607	4,303	947,663	1,233	203,030	843	328,151	78	26,204	1,569	168,339	1,015	221,939
Utah	6,961	602,590	1,803	133,216	462	25,454	37	5,503	197	24,062	1,301	71,861	64	6,336
Vermont	22	63	17	(D)	5	30	6	(D)	-	-	-	-	6	12
Virginia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington	3,346	268,122	2,491	216,320	455	48,011	333	21,118	348	79,826	1,132	60,489	498	6,876
West Virginia	1	(D)	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	23	1,726	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	3,920	1,155,461	1,249	306,265	832	129,481	69	8,821	371	48,322	561	112,925	53	6,716
Water Resources Areas														
WRA 01 New England	112	1,318	52	(D)	2	(D)	44	61	-	-	-	-	6	12
WRA 02 Mid-Atlantic	82	1,026	61	444	9	(D)	50	194	-	-	2	(D)	4	80
WRA 03 South Atlantic-Gulf	1,333	576,352	619	389,822	9	1,677	370	10,298	8	5,960	193	350,902	42	20,985
WRA 04 Great Lakes	52	286	52	286	26	208	26	78	-	-	-	-	-	-
WRA 05 Ohio	134	2,455	98	(D)	7	(D)	56	(D)	-	-	35	895	-	-
WRA 06 Tennessee	18	(D)	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	193	21,209	128	11,255	26	815	68	7,947	9	495	28	1,998	-	-
WRA 08 Lower Mississippi	6,612	4,961,696	4,331	2,594,477	342	121,037	3,843	2,267,792	82	57,070	137	47,385	226	101,193
WRA 09 Souris-Red-Rainy	31	15,545	9	(D)	-	-	-	-	8	488	-	-	1	(D)
WRA 10 Missouri	21,880	4,680,387	13,973	2,788,513	10,633	1,954,465	817	100,756	913	100,517	3,643	616,437	183	16,338
WRA 11 Arkansas-White-Red	5,194	1,411,668	3,147	891,604	1,631	228,777	778	247,872	248	62,735	788	124,215	584	228,005
WRA 12 Texas-Gulf	5,828	1,057,809	3,173	634,813	996	147,028	638	257,130	46	10,500	1,071	141,590	702	78,565
WRA 13 Rio Grande	6,050	370,828	2,317	132,194	52	10,681	276	14,717	833	55,196	1,260	33,357	62	18,243
WRA 14 Upper Colorado	6,349	1,035,866	2,753	292,142	943	51,483	397	27,589	610	40,366	1,023	118,241	349	54,463
WRA 15 Lower Colorado	2,270	779,022	859	427,373	110	14,006	90	12,984	521	354,714	251	40,799	35	4,870
WRA 16 Great Basin	7,419	911,009	1,637	126,473	607	25,433	66	(D)	180	26,279	963	64,182	46	(D)
WRA 17 Pacific Northwest	15,594	1,940,866	8,502	915,986	2,668	212,860	1,176	31,532	2,679	389,927	3,711	274,077	505	7,590
WRA 18 California	21,973	5,354,436	8,431	2,511,245	1,146	420,508	586	16,716	330	215,863	2,773	1,236,377	4,646	621,781
WRA 19 Alaska	1	(D)	1	(D)	1	(D)	-	-	-	-	-	-	-	-
WRA 20 Hawaii	114	2,305	47	509	17	29	18	213	8	16	3	(D)	2	(D)

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Table 7. **Land Irrigated with Gravity Flow by Field Water Delivery System: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Controlled flooding (between borders or within rows)											
	Farms	Acres irrigated	Above ground pipe (except poly tubing)		Poly tubing (or other single year use, lay flat tubing)		Open surface ditches				Underground pipe	
							Lined		Unlined			
			Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	42,415	8,847,392	4,283	1,005,041	2,260	502,197	7,484	1,099,469	23,260	4,394,027	8,890	1,846,658
1998 . .	42,377	8,472,646	(NA)	(NA)	(NA)	(NA)	5,857	1,138,089	23,171	3,689,146	11,596	1,981,713
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	1,366	323,749	2	(D)	4	(D)	932	261,062	279	51,928	206	5,289
Arkansas	2,963	1,875,222	836	557,090	828	262,007	214	102,977	402	233,588	1,065	719,560
California	11,288	2,416,652	1,129	181,522	68	26,562	1,951	335,540	2,935	1,148,800	5,941	724,228
Colorado	3,158	418,065	176	16,152	317	16,384	732	61,094	2,398	322,121	30	2,314
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	139	154,878	-	-	-	-	4	(D)	135	(D)	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	46	(D)	-	-	-	-	8	(D)	38	155	-	-
Idaho	2,308	225,620	90	4,340	4	258	68	12,200	2,136	208,570	14	252
Illinois	7	1,565	-	-	-	-	-	-	7	1,565	-	-
Indiana	3	(D)	-	-	-	-	-	-	3	(D)	-	-
Iowa	13	639	2	(D)	-	-	9	495	2	(D)	-	-
Kansas	67	9,678	12	1,120	-	-	-	-	59	8,558	-	-
Kentucky	1	(D)	-	-	1	(D)	-	-	-	-	-	-
Louisiana	1,050	446,226	76	27,089	14	7,372	18	9,924	512	164,425	591	237,416
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	45	952	3	(D)	-	-	3	420	37	(D)	2	(D)
Michigan	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota	14	10,147	-	-	-	-	2	(D)	12	(D)	-	-
Mississippi	332	270,339	42	25,759	93	59,215	41	35,263	104	79,337	98	70,765
Missouri	286	130,835	24	8,234	137	73,700	8	2,967	103	44,592	17	1,342
Montana	3,921	720,752	663	64,530	203	24,072	234	40,244	3,358	591,828	3	78
Nebraska	241	27,428	202	17,231	-	-	-	-	39	10,197	-	-
Nevada	1,033	232,340	17	2,578	-	-	245	35,834	717	172,919	117	21,009
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	7	400	-	-	-	-	-	-	7	400	-	-
New Mexico	3,541	132,345	113	6,430	38	1,712	1,616	57,943	1,922	56,207	160	10,053
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	2	(D)	-	-	-	-	-	-	2	(D)	-	-
North Dakota	90	15,434	20	2,673	5	(D)	3	1,070	64	10,886	1	(D)
Ohio	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Oklahoma	11	2,282	6	(D)	-	-	-	-	1	(D)	6	1,346
Oregon	1,308	255,218	85	12,402	38	(D)	221	26,198	1,042	208,398	25	(D)
Pennsylvania	4	41	-	-	3	(D)	-	-	1	(D)	-	-
Rhode Island	1	(D)	-	-	-	-	-	-	1	(D)	-	-
South Carolina	20	1,400	-	-	-	-	-	-	10	100	10	1,300
South Dakota	346	53,589	145	11,543	48	5,966	42	5,169	177	30,241	30	670
Tennessee	3	325	-	-	1	(D)	2	(D)	-	-	-	-
Texas	3,106	389,343	93	37,060	191	11,771	163	29,178	2,263	273,010	532	38,324
Utah	3,961	354,063	87	6,291	181	2,577	833	51,809	3,158	290,570	23	2,816
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	36	22,420	5	2,333	4	(D)	5	1,400	25	12,872	1	(D)
West Virginia	1	(D)	-	-	-	-	-	-	-	-	1	(D)
Wisconsin	23	1,726	-	-	-	-	-	-	6	468	17	1,258
Wyoming	1,672	351,096	455	16,989	82	907	130	21,757	1,303	311,443	-	-
Water Resources Areas												
WRA 01 New England	46	(D)	3	(D)	-	-	3	420	38	339	2	(D)
WRA 02 Mid-Atlantic	9	(D)	-	-	-	-	-	-	8	(D)	1	(D)
WRA 03 South Atlantic-Gulf	161	157,528	-	-	-	-	4	(D)	147	150,743	10	(D)
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	5	66	-	-	3	(D)	-	-	2	(D)	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	46	9,698	-	-	1	(D)	9	(D)	19	(D)	17	(D)
WRA 08 Lower Mississippi	3,846	2,354,735	798	500,533	708	322,806	245	126,192	1,031	486,110	1,578	919,094
WRA 09 Souris-Red-Rainy	20	8,958	1	(D)	-	-	2	(D)	17	7,409	-	-
WRA 10 Missouri	6,805	1,109,968	1,557	117,270	453	46,064	615	78,199	5,186	866,598	47	1,837
WRA 11 Arkansas-White-Red	1,488	444,130	207	120,117	580	82,001	114	30,474	762	100,003	204	111,535
WRA 12 Texas-Gulf	2,965	362,191	93	37,060	178	9,821	54	15,198	2,241	262,670	531	37,442
WRA 13 Rio Grande	3,610	176,111	128	9,210	38	1,712	1,701	70,343	1,892	84,111	156	10,735
WRA 14 Upper Colorado	2,005	336,151	78	6,430	-	-	459	45,740	1,542	280,906	19	3,075
WRA 15 Lower Colorado	1,501	327,465	4	(D)	4	(D)	972	261,422	370	53,644	208	(D)
WRA 16 Great Basin	4,599	540,458	98	8,495	181	2,577	1,036	86,883	3,530	422,018	136	20,485
WRA 17 Pacific Northwest	3,698	542,329	172	19,710	31	4,228	165	32,607	3,376	478,212	35	7,572
WRA 18 California	11,565	2,475,934	1,144	182,842	83	28,065	2,097	344,771	3,061	1,194,786	5,946	725,470
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	46	(D)	-	-	-	-	8	(D)	38	155	-	-

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Table 7. **Land Irrigated with Gravity Flow by Field Water Delivery System: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Uncontrolled flooding											
	Farms	Acres irrigated	Above ground pipe (except poly tubing)		Poly tubing (or other single year use, lay flat tubing)		Open surface ditches				Underground pipe	
							Lined		Unlined			
			Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	15,700	2,297,956	1,618	89,856	462	19,973	517	101,079	12,513	2,048,745	1,081	38,303
1998 . .	27,468	3,273,796	(NA)	(NA)	(NA)	(NA)	2,209	205,592	22,292	2,656,722	1,026	96,284
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	157	(D)	-	-	3	2,556	4	(D)	153	11,228	-	-
Arkansas	22	1,100	-	-	22	1,100	-	-	-	-	-	-
California	1,785	241,303	23	10,740	344	5,160	3	6	601	208,063	814	17,334
Colorado	2,277	330,169	31	2,920	-	-	34	21,325	2,237	305,924	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	507	18,956	-	-	-	-	-	-	507	18,956	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	3	(D)	-	-	-	-	2	(D)	1	(D)	-	-
Idaho	2,124	150,395	101	3,307	-	-	16	19,884	2,007	127,204	-	-
Illinois	-	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	8	280	-	-	-	-	-	-	8	280	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	7	(D)	7	(D)	-	-	-	-	-	-	-	-
Louisiana	105	3,410	-	-	-	-	-	-	51	510	54	2,900
Maine	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi	4	(D)	1	(D)	2	(D)	-	-	1	(D)	1	(D)
Missouri	51	(D)	-	-	-	-	-	-	51	(D)	-	-
Montana	1,943	405,174	63	17,131	-	-	56	3,870	1,930	384,173	-	-
Nebraska	19	610	18	(D)	-	-	-	-	1	(D)	-	-
Nevada	224	134,030	3	605	-	-	25	15,665	158	113,175	47	4,585
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	548	59,254	-	-	-	-	295	18,110	248	40,169	5	975
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota	15	1,333	2	(D)	-	-	-	-	13	(D)	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	34	3,920	14	1,140	-	-	18	(D)	2	(D)	-	-
Oregon	910	242,728	114	7,212	8	(D)	17	9,767	886	224,958	3	(D)
Pennsylvania	3	(D)	3	(D)	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	2	(D)	-	-	2	(D)	-	-	-	-	2	(D)
South Dakota	137	24,518	29	2,372	26	1,998	3	(D)	104	18,176	5	(D)
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	996	54,728	816	24,988	-	-	-	-	79	22,950	101	6,790
Utah	2,056	109,014	163	1,869	-	-	20	2,912	1,875	102,473	24	1,760
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	351	25,892	7	2,652	45	7,290	6	705	296	15,245	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	1,410	473,163	223	13,700	10	1,408	18	6,739	1,302	450,066	25	1,250
Water Resources Areas												
WRA 01 New England	2	(D)	-	-	-	-	-	-	2	(D)	-	-
WRA 02 Mid-Atlantic	3	15	3	15	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	509	19,076	-	-	2	(D)	-	-	507	18,956	2	(D)
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	7	(D)	7	(D)	-	-	-	-	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
WRA 08 Lower Mississippi	131	6,516	1	(D)	24	1,206	-	-	52	(D)	55	3,900
WRA 09 Souris-Red-Rainy	1	(D)	-	-	-	-	-	-	1	(D)	-	-
WRA 10 Missouri	3,284	753,298	345	33,933	36	3,406	69	8,306	3,108	705,250	30	2,403
WRA 11 Arkansas-White-Red	880	64,481	465	5,758	-	-	265	32,975	167	25,748	-	-
WRA 12 Texas-Gulf	562	52,460	382	22,920	-	-	-	-	79	22,750	101	6,790
WRA 13 Rio Grande	242	60,995	-	-	-	-	33	5,472	213	55,523	-	-
WRA 14 Upper Colorado	2,129	393,656	10	(D)	-	-	59	(D)	2,067	387,012	5	975
WRA 15 Lower Colorado	204	21,081	-	-	3	2,556	11	532	178	15,908	29	2,085
WRA 16 Great Basin	2,107	214,985	160	2,315	-	-	36	17,952	1,882	190,458	42	4,260
WRA 17 Pacific Northwest	3,743	438,614	154	12,431	53	(D)	36	26,189	3,552	391,913	3	(D)
WRA 18 California	1,893	270,487	91	11,480	344	5,160	6	4,173	704	232,340	814	17,334
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	3	(D)	-	-	-	-	2	(D)	1	(D)	-	-

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Table 7. **Land Irrigated with Gravity Flow by Field Water Delivery System: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Other gravity											
	Farms	Acres irrigated	Above ground pipe (except poly tubing)		Poly tubing (or other single year use, lay flat tubing)		Open surface ditches				Underground pipe	
							Lined		Unlined			
			Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	3,631	255,699	395	29,577	1,378	42,804	59	13,463	942	141,309	968	28,546
1998 . .	5,500	1,501,852	(NA)	(NA)	(NA)	(NA)	98	32,767	3,021	965,002	524	302,877
2003 DATA												
Alabama	6	356	-	-	-	-	-	-	2	(D)	4	(D)
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	1	(D)	-	-	-	-	-	-	-	-	1	(D)
Arkansas	5	2,675	-	-	-	-	-	-	5	2,675	-	-
California	1,758	95,210	4	1,000	1,271	38,032	3	2,400	130	39,108	350	14,670
Colorado	67	13,130	60	4,380	-	-	-	-	10	6,895	53	1,855
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	55	9,570	-	-	38	1,102	-	-	17	7,366	38	1,102
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	18	34	10	18	8	16	-	-	-	-	-	-
Idaho	96	24,208	75	14,730	-	-	-	-	7	6,160	14	3,318
Illinois	28	56	-	-	28	56	-	-	-	-	-	-
Indiana	5	(D)	-	-	-	-	3	(D)	2	(D)	-	-
Iowa	8	24	-	-	8	24	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	7	7	-	-	7	7	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	2	(D)	-	-	-	-	-	-	-	-	2	(D)
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	6	90	-	-	-	-	-	-	-	-	6	90
Michigan	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota	1	(D)	-	-	-	-	-	-	1	(D)	1	(D)
Mississippi	3	(D)	-	-	3	(D)	-	-	-	-	-	-
Missouri	1	(D)	-	-	-	-	-	-	1	(D)	-	-
Montana	39	11,939	-	-	-	-	-	-	38	(D)	1	(D)
Nebraska	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	12	25,476	-	-	-	-	-	-	8	23,660	4	1,816
New Hampshire	6	65	3	50	3	15	-	-	-	-	-	-
New Jersey	1	(D)	-	-	-	-	-	-	1	(D)	-	-
New Mexico	7	4,060	-	-	-	-	-	-	5	(D)	2	(D)
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota	10	508	-	-	-	-	4	400	6	108	-	-
Ohio	14	(D)	14	(D)	-	-	-	-	-	-	-	-
Oklahoma	-	-	-	-	-	-	-	-	-	-	-	-
Oregon	253	16,999	132	1,452	-	-	-	-	110	14,227	11	1,320
Pennsylvania	3	42	-	-	3	42	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	36	36	36	36	-	-	-	-	-	-	-	-
Texas	411	9,873	-	-	4	(D)	25	8,125	382	(D)	-	-
Utah	98	6,297	2	(D)	-	-	-	-	98	(D)	-	-
Vermont	5	(D)	-	-	5	(D)	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	499	3,490	-	-	-	-	17	778	3	1,035	479	1,677
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	170	24,937	59	7,725	-	-	7	(D)	116	15,012	2	(D)
Water Resources Areas												
WRA 01 New England	14	195	3	50	3	(D)	-	-	-	-	8	(D)
WRA 02 Mid-Atlantic	9	(D)	-	-	8	57	-	-	1	(D)	-	-
WRA 03 South Atlantic-Gulf	61	9,926	-	-	38	(D)	-	-	19	7,516	42	(D)
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	24	(D)	14	(D)	7	7	3	(D)	-	-	-	-
WRA 06 Tennessee	18	(D)	18	(D)	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	30	256	-	-	28	(D)	-	-	2	(D)	-	-
WRA 08 Lower Mississippi	26	5,968	18	18	3	3,275	-	-	5	2,675	-	-
WRA 09 Souris-Red-Rainy	1	(D)	-	-	-	-	-	-	1	(D)	1	(D)
WRA 10 Missouri	221	28,608	59	7,725	8	24	11	(D)	154	18,088	3	(D)
WRA 11 Arkansas-White-Red	59	11,453	56	3,463	-	-	-	-	4	5,075	55	2,915
WRA 12 Texas-Gulf	29	8,345	-	-	4	220	25	8,125	-	-	-	-
WRA 13 Rio Grande	382	1,528	-	-	-	-	-	-	382	1,528	-	-
WRA 14 Upper Colorado	89	13,917	6	1,033	-	-	-	-	85	12,884	-	-
WRA 15 Lower Colorado	6	3,103	-	-	-	-	-	-	5	(D)	1	(D)
WRA 16 Great Basin	34	29,093	-	-	-	-	-	-	30	27,277	4	1,816
WRA 17 Pacific Northwest	813	43,937	207	16,182	-	-	17	778	85	20,662	504	6,315
WRA 18 California	1,797	96,770	4	1,000	1,271	38,032	3	2,400	169	40,668	350	14,670
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	18	34	10	18	8	16	-	-	-	-	-	-

Table 8. **Estimated Quantity of Water Applied Using Only One Method of Distribution: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Water applied by all methods			Only sprinkler systems			Only gravity flow systems		
	Acres irrigated	Acre-feet applied	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre
U.S. TOTAL . . . . . 2003 . .	52,583,431	86,894,031	1.7	78,309	18,329,192	1.3	73,780	15,756,554	2.0
1998 . .	54,249,965	97,335,291	1.8	69,006	16,273,162	1.3	88,249	19,009,932	2.2
2003 DATA									
Alabama	52,722	35,630	0.7	302	46,544	0.7	22	296	0.7
Alaska	2,252	1,917	0.9	53	2,164	0.9	1	(D)	(D)
Arizona	836,587	3,751,834	4.5	101	67,281	3.4	1,869	565,004	4.5
Arkansas	3,944,867	4,266,308	1.1	662	136,638	0.5	3,216	2,784,090	1.2
California	8,471,936	24,847,229	2.9	5,259	686,274	2.3	16,736	3,528,845	3.3
Colorado	2,562,329	3,984,941	1.6	2,717	895,528	1.5	7,062	1,025,669	1.6
Connecticut	2,213	923	0.4	102	1,163	0.4	-	-	-
Delaware	69,088	27,813	0.4	188	58,935	0.4	-	-	-
Florida	1,497,653	1,851,324	1.2	2,187	140,056	1.0	465	354,435	1.4
Georgia	710,893	313,531	0.4	1,782	531,927	0.4	21	25,000	0.3
Hawaii	78,538	310,335	4.0	436	2,022	1.4	77	2,202	1.0
Idaho	3,126,857	6,063,947	1.9	5,830	1,713,560	1.9	6,223	533,411	1.9
Illinois	374,919	236,796	0.6	1,060	360,337	0.6	46	3,147	0.6
Indiana	276,294	131,684	0.5	856	257,829	0.5	32	1,196	0.7
Iowa	134,164	62,667	0.5	497	105,533	0.4	73	2,821	0.6
Kansas	2,543,950	3,145,502	1.2	3,062	1,674,257	1.2	892	103,036	1.2
Kentucky	20,685	9,465	0.5	705	16,711	0.4	17	1,147	1.0
Louisiana	838,717	925,547	1.1	194	27,386	0.5	1,739	642,531	1.3
Maine	18,163	11,094	0.6	288	13,406	0.5	2	(D)	(D)
Maryland	53,734	21,222	0.4	249	45,533	0.4	24	120	(D)
Massachusetts	16,151	89,887	5.6	613	14,143	5.8	69	962	6.2
Michigan	432,665	218,245	0.5	1,644	385,237	0.5	-	-	-
Minnesota	434,500	293,661	0.7	1,453	415,542	0.6	21	12,577	1.4
Mississippi	1,169,793	957,070	0.8	467	83,625	0.6	421	464,698	1.1
Missouri	1,020,728	684,862	0.7	840	242,705	0.5	625	423,666	0.8
Montana	2,131,955	2,823,919	1.3	2,191	366,564	1.3	5,017	936,961	1.3
Nebraska	7,516,171	8,450,468	1.1	7,171	3,046,106	1.1	2,850	659,127	1.2
Nevada	639,310	1,590,900	2.5	309	160,118	3.0	1,084	304,983	2.2
New Hampshire	818	542	0.7	72	383	0.6	5	25	(D)
New Jersey	46,679	35,229	0.8	435	18,380	0.5	33	408	1.3
New Mexico	769,787	1,818,471	2.4	1,055	310,193	2.1	5,383	313,248	2.6
New York	48,545	18,016	0.4	691	25,681	0.2	-	-	-
North Carolina	101,055	55,007	0.5	1,694	87,249	0.4	5	1,550	0.8
North Dakota	207,772	203,998	1.0	395	166,107	0.9	98	24,920	1.7
Ohio	14,476	15,883	1.1	308	7,580	1.5	16	550	1.2
Oklahoma	508,842	608,374	1.2	1,240	398,683	1.2	262	47,952	1.4
Oregon	1,731,660	3,286,305	1.9	9,558	810,468	1.6	2,546	407,099	2.0
Pennsylvania	19,633	8,563	0.4	702	9,636	0.4	9	(D)	0.9
Rhode Island	648	593	0.9	20	316	0.3	4	(D)	3.0
South Carolina	52,046	30,332	0.6	392	36,724	0.5	17	570	1.2
South Dakota	390,406	981,405	2.5	832	252,485	0.9	448	87,956	8.0
Tennessee	34,429	17,150	0.5	460	27,639	0.4	60	908	1.0
Texas	4,947,745	5,954,825	1.2	5,786	2,694,858	1.1	5,715	1,005,018	1.4
Utah	1,082,213	2,298,490	2.1	3,004	274,933	2.1	5,417	411,039	1.9
Vermont	825	510	0.6	69	359	0.3	-	-	-
Virginia	33,635	12,886	0.4	492	27,467	0.4	-	-	-
Washington	1,806,782	3,904,571	2.2	7,644	1,176,109	2.0	1,925	147,626	2.9
West Virginia	801	875	1.1	48	458	1.3	-	-	-
Wisconsin	391,763	356,564	0.9	1,299	388,206	0.9	17	1,258	7.0
Wyoming	1,415,037	2,176,722	1.5	895	118,154	1.5	3,216	930,358	1.5
Water Resources Areas									
WRA 01 New England	38,410	103,240	2.7	1,137	29,620	3.1	80	1,039	5.9
WRA 02 Mid-Atlantic	233,602	111,546	0.5	1,980	160,930	0.4	63	585	1.0
WRA 03 South Atlantic-Gulf	2,410,814	2,284,613	0.9	6,846	841,847	0.6	532	382,887	1.3
WRA 04 Great Lakes	611,881	312,299	0.5	2,596	547,547	0.5	-	-	-
WRA 05 Ohio	220,290	116,127	0.5	1,851	195,901	0.5	83	1,774	0.8
WRA 06 Tennessee	31,065	19,278	0.6	387	23,374	0.6	18	(D)	(D)
WRA 07 Upper Mississippi	1,145,841	816,816	0.7	3,779	1,104,437	0.7	113	16,688	1.2
WRA 08 Lower Mississippi	6,199,006	6,007,394	1.0	1,003	353,007	0.6	5,177	3,857,723	1.1
WRA 09 Souris-Red-Rainy	183,590	146,513	0.8	458	165,837	0.7	28	11,988	1.4
WRA 10 Missouri	12,922,399	16,653,067	1.3	12,647	4,769,659	1.1	12,787	2,588,862	1.7
WRA 11 Arkansas-White-Red	5,285,088	6,577,931	1.2	5,211	3,107,751	1.2	3,875	1,024,748	1.3
WRA 12 Texas-Gulf	3,284,293	3,887,363	1.2	4,847	1,598,199	1.1	4,020	773,644	1.5
WRA 13 Rio Grande	799,492	1,819,442	2.3	740	309,927	1.9	5,774	270,128	2.5
WRA 14 Upper Colorado	1,366,203	2,045,980	1.5	2,691	195,939	1.6	4,862	842,149	1.4
WRA 15 Lower Colorado	897,445	3,932,196	4.4	343	91,290	3.3	2,089	586,512	4.5
WRA 16 Great Basin	1,516,775	3,409,906	2.2	2,359	400,842	2.4	6,068	641,066	2.1
WRA 17 Pacific Northwest	6,679,626	13,056,086	2.0	23,069	3,679,866	1.9	11,219	1,173,668	1.9
WRA 18 California	8,676,821	25,281,982	2.9	5,876	749,033	2.2	16,914	3,580,843	3.3
WRA 19 Alaska	2,252	1,917	0.9	53	2,164	0.9	1	(D)	(D)
WRA 20 Hawaii	78,538	310,335	4.0	436	2,022	1.4	77	2,202	1.0

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Table 8. **Estimated Quantity of Water Applied Using Only One Method of Distribution: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Only drip, trickle, or low-flow micro sprinkler systems			Only subirrigation		
	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre
U.S. TOTAL . . . . . 2003 . .	33,352	1,730,792	1.7	47	67,435	1.2
1998 . .	28,112	1,380,659	1.8	4,510	241,427	2.3
2003 DATA						
Alabama	233	2,526	1.2	-	-	-
Alaska	19	58	0.7	-	-	-
Arizona	645	13,695	3.4	-	-	-
Arkansas	200	1,200	1.3	-	-	-
California	16,746	957,984	2.3	-	-	-
Colorado	-	-	-	-	-	-
Connecticut	116	658	0.5	-	-	-
Delaware	4	108	0.2	-	-	-
Florida	4,410	518,833	1.1	41	65,593	1.2
Georgia	819	54,126	0.4	-	-	-
Hawaii	621	16,063	2.5	-	-	-
Idaho	251	502	0.6	-	-	-
Illinois	54	960	0.9	-	-	-
Indiana	234	1,561	0.4	-	-	-
Iowa	77	238	1.1	-	-	-
Kansas	-	-	-	-	-	-
Kentucky	176	918	0.7	-	-	-
Louisiana	180	3,741	0.7	-	-	-
Maine	136	(D)	(D)	-	-	-
Maryland	185	1,794	0.6	-	-	-
Massachusetts	110	374	(D)	2	(D)	(D)
Michigan	527	8,781	0.3	-	-	-
Minnesota	113	2,030	0.4	2	(D)	(D)
Mississippi	333	333	0.1	-	-	-
Missouri	87	4,852	0.2	-	-	-
Montana	162	648	0.8	-	-	-
Nebraska	91	182	0.1	-	-	-
Nevada	40	40	0.5	2	(D)	(D)
New Hampshire	61	230	0.7	-	-	-
New Jersey	192	5,103	0.7	-	-	-
New Mexico	99	2,959	1.0	-	-	-
New York	535	12,113	0.4	-	-	-
North Carolina	421	9,693	1.3	-	-	-
North Dakota	6	12	0.5	-	-	-
Ohio	251	1,693	0.4	-	-	-
Oklahoma	109	109	1.0	-	-	-
Oregon	867	3,999	2.3	-	-	-
Pennsylvania	720	4,076	0.5	-	-	-
Rhode Island	32	(D)	0.8	-	-	-
South Carolina	393	6,890	0.9	-	-	-
South Dakota	46	736	1.0	-	-	-
Tennessee	174	2,804	0.9	-	-	-
Texas	1,291	48,101	1.0	-	-	-
Utah	74	4,440	3.0	-	-	-
Vermont	99	313	0.7	-	-	-
Virginia	403	5,348	0.4	-	-	-
Washington	891	24,383	1.5	-	-	-
West Virginia	49	297	0.4	-	-	-
Wisconsin	70	1,184	0.7	-	-	-
Wyoming	-	-	-	-	-	-
Water Resources Areas						
WRA 01 New England	515	5,548	0.9	2	(D)	(D)
WRA 02 Mid-Atlantic	1,664	20,437	0.6	-	-	-
WRA 03 South Atlantic-Gulf	6,470	589,778	1.1	41	65,593	1.2
WRA 04 Great Lakes	814	18,191	0.3	-	-	-
WRA 05 Ohio	844	3,385	0.5	-	-	-
WRA 06 Tennessee	350	5,347	0.7	-	-	-
WRA 07 Upper Mississippi	323	5,679	0.5	-	-	-
WRA 08 Lower Mississippi	166	2,914	0.6	-	-	-
WRA 09 Souris-Red-Rainy	-	-	-	2	(D)	(D)
WRA 10 Missouri	217	3,882	0.3	-	-	-
WRA 11 Arkansas-White-Red	284	2,778	0.9	-	-	-
WRA 12 Texas-Gulf	1,291	48,101	1.0	-	-	-
WRA 13 Rio Grande	49	1,225	1.0	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-
WRA 15 Lower Colorado	768	19,850	3.1	2	(D)	(D)
WRA 16 Great Basin	40	40	0.5	-	-	-
WRA 17 Pacific Northwest	2,171	29,532	1.6	-	-	-
WRA 18 California	16,746	957,984	2.3	-	-	-
WRA 19 Alaska	19	58	0.7	-	-	-
WRA 20 Hawaii	621	16,063	2.5	-	-	-

Table 9. **Estimated Quantity of Water Applied Using Only Sprinkler Systems to Distribute Water: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Only center pivot systems											
	All pressures [1]			Only low pressure under 30 psi			Only medium pressure 30 to 59 psi			Only high pressure 60 psi or more		
	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre
U.S. TOTAL . . . . . 2003 . .	27,300	12,750,324	1.2	12,098	5,600,517	1.2	10,037	5,098,583	1.2	3,620	822,867	0.9
1998 . .	69,006	16,273,162	1.3	8,893	4,499,415	1.3	9,451	3,534,442	1.1	2,563	700,261	0.8
2003 DATA												
Alabama	103	33,912	0.8	23	10,493	1.0	61	19,606	0.7	17	3,413	0.5
Alaska	7	1,028	0.5	5	(D)	(D)	2	(D)	(D)	-	-	-
Arizona	77	54,661	3.1	59	38,542	3.1	18	16,119	3.0	-	-	-
Arkansas	230	106,612	0.5	132	13,092	0.5	87	84,000	0.5	11	9,520	0.5
California	1,054	87,854	2.0	1,047	41,764	2.0	7	46,090	2.1	-	-	-
Colorado	1,609	799,144	1.5	696	361,223	1.4	800	390,176	1.6	72	12,764	1.3
Connecticut	29	65	0.4	11	29	0.2	9	18	0.1	-	-	-
Delaware	128	48,929	0.3	37	12,063	0.2	79	28,636	0.4	8	5,989	0.5
Florida	198	60,393	0.9	137	36,246	1.0	36	21,287	0.7	25	2,860	1.3
Georgia	993	384,568	0.4	179	73,243	0.4	515	210,609	0.5	202	54,328	0.3
Hawaii	76	(D)	1.6	51	445	1.3	11	84	3.6	14	105	1.5
Idaho	381	368,477	2.1	133	163,238	2.2	130	160,945	2.0	114	39,620	1.9
Illinois	825	332,080	0.6	219	96,446	0.6	420	156,533	0.6	109	23,356	0.6
Indiana	570	198,315	0.5	156	59,014	0.5	290	102,865	0.5	90	18,393	0.4
Iowa	330	97,446	0.5	77	23,334	0.5	126	33,735	0.5	87	14,618	0.5
Kansas	2,663	1,579,695	1.2	1,638	1,005,674	1.2	859	478,491	1.1	108	29,578	0.7
Kentucky	60	8,398	0.5	12	2,132	0.5	27	4,624	0.5	18	512	0.3
Louisiana	25	11,478	0.6	7	3,630	0.9	12	6,086	0.4	6	1,762	0.4
Maine	69	1,062	1.5	34	665	(D)	34	272	3.0	1	(D)	(D)
Maryland	132	38,850	0.3	63	9,931	0.3	53	20,851	0.4	6	1,472	(D)
Massachusetts	69	1,639	4.2	-	-	-	69	1,639	4.2	-	-	-
Michigan	328	139,235	0.5	78	20,737	0.5	148	69,705	0.5	81	17,146	0.5
Minnesota	954	343,743	0.6	255	100,210	0.7	379	127,212	0.6	234	44,071	0.5
Mississippi	128	77,201	0.6	28	23,195	0.7	86	42,896	0.5	12	10,160	0.6
Missouri	581	221,086	0.5	281	87,916	0.5	191	87,350	0.5	76	18,028	0.4
Montana	394	124,880	1.3	229	73,840	1.2	138	35,250	1.6	3	3,000	1.5
Nebraska	6,536	2,926,833	1.1	857	424,698	1.2	3,495	1,835,771	1.1	1,499	300,470	1.1
Nevada	97	101,061	2.9	47	38,490	2.8	44	44,493	3.1	1	(D)	(D)
New Hampshire	5	13	0.3	-	-	-	3	3	1.0	2	(D)	(D)
New Jersey	43	2,979	0.6	33	1,775	0.3	6	188	0.1	4	1,016	1.4
New Mexico	665	288,192	2.1	631	234,513	2.0	30	51,879	2.3	-	-	-
New York	57	984	(D)	54	(D)	(D)	-	-	-	3	552	0.2
North Carolina	157	12,566	0.4	122	5,486	0.4	33	5,210	0.4	-	-	-
North Dakota	361	159,705	0.8	111	46,016	0.9	186	85,672	0.9	38	15,349	0.5
Ohio	37	3,286	3.1	20	1,532	6.0	16	(D)	(D)	1	(D)	(D)
Oklahoma	688	336,808	1.2	383	223,746	1.1	242	101,176	1.5	51	5,090	0.7
Oregon	533	182,743	2.3	404	83,776	2.4	101	89,937	2.2	28	9,030	2.2
Pennsylvania	3	1,000	0.3	-	-	-	3	1,000	0.3	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	188	22,153	0.4	131	7,116	0.6	31	10,328	0.3	24	3,709	0.5
South Dakota	766	238,742	0.9	199	59,907	0.8	333	116,695	1.1	173	34,463	0.7
Tennessee	122	23,148	0.5	35	5,301	0.4	63	16,635	0.4	24	1,212	0.5
Texas	3,597	2,544,154	1.2	3,138	2,030,496	1.1	277	202,352	1.4	55	28,830	0.9
Utah	110	37,008	2.3	20	4,470	2.3	89	30,138	2.4	1	(D)	(D)
Vermont	5	10	0.5	-	-	-	5	10	0.5	-	-	-
Virginia	38	11,326	0.5	17	3,775	0.5	17	4,451	0.5	-	-	-
Washington	675	413,469	2.1	128	112,654	2.0	248	230,786	2.2	286	46,430	1.9
West Virginia	1	(D)	(D)	-	-	-	-	-	-	1	(D)	(D)
Wisconsin	402	264,181	0.8	40	26,229	1.0	168	98,643	0.9	135	61,266	0.6
Wyoming	201	58,438	1.3	141	32,745	1.3	60	25,693	1.3	-	-	-
Water Resources Areas												
WRA 01 New England	177	2,789	3.0	45	694	(D)	120	1,942	3.9	3	(D)	(D)
WRA 02 Mid-Atlantic	339	102,202	0.4	150	27,544	0.3	153	54,244	0.4	18	8,477	0.6
WRA 03 South Atlantic-Gulf	1,639	507,435	0.5	596	132,434	0.6	685	264,096	0.5	255	61,247	0.3
WRA 04 Great Lakes	567	231,155	0.6	174	34,182	0.5	196	98,030	0.5	149	36,281	0.5
WRA 05 Ohio	483	151,956	0.6	138	53,473	0.7	257	74,562	0.5	68	11,416	0.5
WRA 06 Tennessee	103	(D)	0.7	29	(D)	(D)	40	(D)	(D)	34	3,911	(D)
WRA 07 Upper Mississippi	2,285	898,122	0.7	585	216,937	0.7	988	383,634	0.7	505	125,133	0.5
WRA 08 Lower Mississippi	624	314,104	0.6	280	87,578	0.6	285	187,415	0.5	44	23,862	0.5
WRA 09 Souris-Red-Rainy	385	158,423	0.7	93	49,373	0.7	189	69,073	0.7	73	18,197	0.6
WRA 10 Missouri	10,066	4,390,009	1.1	2,594	1,131,736	1.2	4,778	2,404,551	1.2	1,823	376,597	1.0
WRA 11 Arkansas-White-Red	3,969	2,949,545	1.2	2,618	1,927,033	1.2	1,032	655,102	1.3	139	28,796	0.7
WRA 12 Texas-Gulf	2,564	1,439,915	1.1	2,297	1,271,343	1.1	191	122,702	1.4	55	28,830	0.9
WRA 13 Rio Grande	543	296,346	1.8	294	161,253	2.0	248	130,093	1.7	-	-	-
WRA 14 Upper Colorado	598	45,122	1.5	315	11,721	1.3	272	30,601	1.6	11	(D)	1.5
WRA 15 Lower Colorado	81	67,194	3.1	60	40,375	3.1	20	24,819	3.0	1	(D)	(D)
WRA 16 Great Basin	136	116,784	2.9	50	41,090	2.8	81	59,616	3.0	-	-	-
WRA 17 Pacific Northwest	1,601	967,949	2.1	674	360,828	2.1	482	483,768	2.1	428	95,080	1.9
WRA 18 California	1,057	94,054	2.1	1,050	47,964	2.0	7	46,090	2.1	-	-	-
WRA 19 Alaska	7	1,028	0.5	5	(D)	(D)	2	(D)	(D)	-	-	-
WRA 20 Hawaii	76	(D)	1.6	51	445	1.3	11	84	3.6	14	105	1.5

See footnote(s) at end of table.

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Table 9. **Estimated Quantity of Water Applied Using Only Sprinkler Systems to Distribute Water: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Only linear move tower systems								
	All pressures [1]			Only low pressure under 30 psi			Only medium to high pressure 30 psi or more		
	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre
U.S. TOTAL . . . . . 2003 . .	732	88,469	1.2	164	37,177	1.2	566	51,124	1.2
1998 . .	406	19,496	1.8	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA									
Alabama	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-
Arkansas	-	-	-	-	-	-	-	-	-
California	-	-	-	-	-	-	-	-	-
Colorado	-	-	-	-	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-
Florida	2	(D)	(D)	-	-	-	2	(D)	(D)
Georgia	-	-	-	-	-	-	-	-	-
Hawaii	10	(D)	1.0	2	(D)	(D)	8	8	3.1
Idaho	73	5,840	1.0	73	(D)	(D)	-	-	-
Illinois	5	550	0.8	5	(D)	(D)	-	-	-
Indiana	-	-	-	-	-	-	-	-	-
Iowa	4	312	0.3	-	-	-	2	(D)	(D)
Kansas	20	33,497	1.5	7	20,497	1.2	13	13,000	2.0
Kentucky	-	-	-	-	-	-	-	-	-
Louisiana	5	3,400	0.8	3	600	1.0	2	(D)	(D)
Maine	3	(D)	(D)	1	(D)	(D)	2	(D)	(D)
Maryland	-	-	-	-	-	-	-	-	-
Massachusetts	7	545	5.6	-	-	-	7	545	5.6
Michigan	20	2,480	0.2	-	-	-	20	2,480	0.2
Minnesota	7	1,040	0.9	-	-	-	7	1,040	0.9
Mississippi	-	-	-	-	-	-	-	-	-
Missouri	14	1,932	0.2	-	-	-	14	1,932	0.2
Montana	3	480	0.3	-	-	-	3	480	0.3
Nebraska	-	-	-	-	-	-	-	-	-
Nevada	2	(D)	(D)	-	-	-	2	(D)	(D)
New Hampshire	-	-	-	-	-	-	-	-	-
New Jersey	31	1,600	0.3	4	1,300	0.3	27	300	0.4
New Mexico	87	7,570	2.0	66	5,040	1.8	21	2,530	2.3
New York	-	-	-	-	-	-	-	-	-
North Carolina	15	2,250	0.3	-	-	-	15	2,250	0.3
North Dakota	1	(D)	(D)	1	(D)	(D)	-	-	-
Ohio	-	-	-	-	-	-	-	-	-
Oklahoma	-	-	-	-	-	-	-	-	-
Oregon	266	11,550	1.1	2	(D)	(D)	264	10,560	1.1
Pennsylvania	4	64	0.1	-	-	-	4	64	0.1
Rhode Island	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-
Tennessee	-	-	-	-	-	-	-	-	-
Texas	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-
Vermont	2	(D)	(D)	-	-	-	2	(D)	(D)
Virginia	-	-	-	-	-	-	-	-	-
Washington	133	9,177	1.0	-	-	-	133	9,177	1.0
West Virginia	1	(D)	(D)	-	-	-	1	(D)	(D)
Wisconsin	17	34	0.3	-	-	-	17	34	0.3
Wyoming	-	-	-	-	-	-	-	-	-
Water Resources Areas									
WRA 01 New England	12	1,065	3.1	1	(D)	(D)	11	865	3.6
WRA 02 Mid-Atlantic	36	1,864	0.4	4	1,300	0.3	32	564	0.8
WRA 03 South Atlantic-Gulf	17	4,230	0.5	-	-	-	17	4,230	0.5
WRA 04 Great Lakes	20	2,480	0.2	-	-	-	20	2,480	0.2
WRA 05 Ohio	5	550	0.8	5	(D)	(D)	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	42	3,318	0.4	-	-	-	40	3,150	0.4
WRA 08 Lower Mississippi	5	3,400	0.8	3	600	1.0	2	(D)	(D)
WRA 09 Souris-Red-Rainy	1	(D)	(D)	1	(D)	(D)	-	-	-
WRA 10 Missouri	3	480	0.3	-	-	-	3	480	0.3
WRA 11 Arkansas-White-Red	20	33,497	1.5	7	20,497	1.2	13	13,000	2.0
WRA 12 Texas-Gulf	18	2,160	1.0	18	2,160	1.0	-	-	-
WRA 13 Rio Grande	69	5,410	2.3	48	2,880	2.4	21	2,530	2.3
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	2	(D)	(D)	-	-	-	2	(D)	(D)
WRA 17 Pacific Northwest	472	26,567	1.0	75	6,830	1.1	397	19,737	1.0
WRA 18 California	-	-	-	-	-	-	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	10	(D)	1.0	2	(D)	(D)	8	8	3.1

See footnote(s) at end of table.

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Table 9. **Estimated Quantity of Water Applied Using Only Sprinkler Systems to Distribute Water: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Only solid set and permanent systems								
	All pressures [1]			Only low pressure under 30 psi			Only medium to high pressure 30 psi or more		
	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre
U.S. TOTAL . . . . . 2003 . .	11,377	487,132	2.3	3,508	73,483	1.4	7,866	412,528	2.5
1998 . .	11,810	510,255	2.1	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA									
Alabama	20	345	0.1	-	-	-	20	345	(D)
Alaska	-	-	-	-	-	-	-	-	-
Arizona	1	(D)	(D)	1	(D)	(D)	-	-	-
Arkansas	-	-	-	-	-	-	-	-	-
California	2,055	208,925	2.3	656	15,748	1.5	1,399	193,177	2.4
Colorado	-	-	-	-	-	-	-	-	-
Connecticut	4	452	0.4	-	-	-	4	452	0.4
Delaware	4	160	2.5	-	-	-	4	160	2.5
Florida	1,779	50,096	1.4	973	39,648	1.5	806	10,448	1.0
Georgia	122	7,754	0.9	112	1,344	0.6	10	6,410	1.0
Hawaii	77	243	1.1	11	36	1.1	65	178	1.3
Idaho	251	1,004	3.5	-	-	-	251	1,004	3.5
Illinois	27	96	0.8	-	-	-	27	96	0.8
Indiana	38	551	0.2	-	-	-	38	551	0.2
Iowa	43	372	0.2	9	9	0.2	34	363	0.2
Kansas	-	-	-	-	-	-	-	-	-
Kentucky	28	77	0.8	14	21	0.7	14	56	0.9
Louisiana	70	2,739	0.6	4	1,563	(D)	66	1,176	0.4
Maine	8	261	1.0	1	(D)	(D)	7	181	1.3
Maryland	3	159	1.0	3	159	1.0	-	-	-
Massachusetts	299	9,722	7.4	6	(D)	(D)	293	9,545	7.4
Michigan	273	6,387	0.9	52	104	0.4	221	6,283	0.9
Minnesota	48	722	0.5	2	(D)	(D)	46	322	0.2
Mississippi	-	-	-	-	-	-	-	-	-
Missouri	-	-	-	-	-	-	-	-	-
Montana	-	-	-	-	-	-	-	-	-
Nebraska	91	91	0.5	91	91	0.5	-	-	-
Nevada	-	-	-	-	-	-	-	-	-
New Hampshire	11	93	0.6	3	3	0.5	8	90	0.6
New Jersey	80	2,324	1.2	28	132	1.8	52	2,192	1.2
New Mexico	1	(D)	(D)	-	-	-	1	(D)	(D)
New York	11	565	0.2	-	-	-	11	565	0.2
North Carolina	230	9,285	0.5	31	1,210	0.5	199	8,075	0.5
North Dakota	-	-	-	-	-	-	-	-	-
Ohio	32	201	0.5	13	39	0.4	19	162	0.5
Oklahoma	-	-	-	-	-	-	-	-	-
Oregon	2,050	29,755	1.7	1,102	6,247	0.5	948	23,508	2.1
Pennsylvania	49	515	(D)	2	(D)	(D)	47	365	0.6
Rhode Island	5	(D)	(D)	-	-	-	5	(D)	(D)
South Carolina	153	1,403	2.0	123	173	0.5	30	1,230	2.2
South Dakota	10	1,400	1.3	-	-	-	10	1,400	1.3
Tennessee	19	(D)	0.3	-	-	-	19	(D)	0.3
Texas	382	1,910	2.2	-	-	-	382	1,910	2.2
Utah	-	-	-	-	-	-	-	-	-
Vermont	1	(D)	(D)	-	-	-	1	(D)	(D)
Virginia	-	-	-	-	-	-	-	-	-
Washington	2,811	127,664	2.8	271	5,549	1.6	2,538	121,023	2.9
West Virginia	-	-	-	-	-	-	-	-	-
Wisconsin	291	19,432	3.5	-	-	-	291	19,432	3.5
Wyoming	-	-	-	-	-	-	-	-	-
Water Resources Areas									
WRA 01 New England	327	10,557	6.9	10	260	(D)	317	10,297	6.9
WRA 02 Mid-Atlantic	136	3,406	1.1	33	441	1.0	103	2,965	1.1
WRA 03 South Atlantic-Gulf	2,304	68,883	1.2	1,239	42,375	1.4	1,065	26,508	0.9
WRA 04 Great Lakes	371	7,708	0.8	65	143	0.4	306	7,565	0.8
WRA 05 Ohio	85	792	0.3	14	21	0.7	71	(D)	0.3
WRA 06 Tennessee	1	(D)	(D)	-	-	-	1	(D)	(D)
WRA 07 Upper Mississippi	322	19,186	3.5	9	9	0.2	313	19,177	3.5
WRA 08 Lower Mississippi	77	2,788	0.7	4	1,563	(D)	73	1,225	0.4
WRA 09 Souris-Red-Rainy	25	(D)	0.7	2	(D)	(D)	23	138	(D)
WRA 10 Missouri	101	1,491	1.3	91	91	0.5	10	1,400	1.3
WRA 11 Arkansas-White-Red	1	(D)	(D)	-	-	-	1	(D)	(D)
WRA 12 Texas-Gulf	382	1,910	2.2	-	-	-	382	1,910	2.2
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	1	(D)	(D)	1	(D)	(D)	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	4,980	155,783	2.6	1,373	11,796	1.0	3,605	142,895	2.8
WRA 18 California	2,187	211,565	2.3	656	15,748	1.5	1,531	195,817	2.4
WRA 19 Alaska	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	77	243	1.1	11	36	1.1	65	178	1.3

See footnote(s) at end of table.

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Table 9. **Estimated Quantity of Water Applied Using Only Sprinkler Systems to Distribute Water: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Hand move systems			Big gun or traveller systems			Side roll, wheel move, or other mechanical move systems		
	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre
U.S. TOTAL . . . . . 2003 . .	19,420	523,544	1.4	4,478	305,038	1.2	4,582	409,509	1.7
1998 . .	15,377	555,713	2.0	4,678	366,189	0.7	3,702	430,518	1.7
2003 DATA									
Alabama	74	184	0.9	56	2,704	0.3	15	336	1.0
Alaska	37	190	4.6	1	(D)	(D)	4	405	0.2
Arizona	1	(D)	(D)	18	1,620	1.0	3	1,800	5.0
Arkansas	122	(D)	0.3	141	7,950	0.2	120	8,841	0.6
California	1,611	139,611	2.1	104	18,096	10.0	23	12,036	3.3
Colorado	497	6,144	(D)	-	-	-	487	40,542	1.4
Connecticut	58	238	0.3	1	(D)	(D)	-	-	-
Delaware	30	180	0.6	-	-	-	3	246	0.1
Florida	-	-	-	182	7,852	0.5	-	-	-
Georgia	56	336	0.2	283	8,213	0.3	3	240	1.0
Hawaii	268	677	1.0	5	400	2.1	-	-	-
Idaho	2,499	71,678	1.0	-	-	-	409	74,149	2.2
Illinois	124	192	0.7	36	3,180	0.5	-	-	-
Indiana	98	1,175	0.2	41	4,641	0.2	9	770	0.5
Iowa	78	227	0.3	9	810	0.3	-	-	-
Kansas	222	3,108	0.5	75	2,850	0.9	-	-	-
Kentucky	320	2,311	0.4	284	4,585	0.3	8	445	0.4
Louisiana	50	50	0.1	19	2,880	0.3	17	1,541	0.2
Maine	172	334	0.5	20	1,711	0.5	-	-	-
Maryland	75	115	0.4	18	1,282	0.2	6	766	0.9
Massachusetts	201	871	0.5	20	758	0.3	12	108	1.4
Michigan	346	3,080	0.3	219	18,194	0.4	-	-	-
Minnesota	135	709	0.4	146	10,991	0.5	28	819	0.3
Mississippi	-	-	-	333	3,330	1.3	2	(D)	(D)
Missouri	52	52	1.0	112	6,605	0.3	4	740	0.5
Montana	731	15,813	1.1	-	-	-	538	44,294	1.0
Nebraska	92	276	0.5	296	30,987	0.8	-	-	-
Nevada	42	440	2.0	-	-	-	71	6,550	2.7
New Hampshire	50	177	0.8	5	40	(D)	-	-	-
New Jersey	211	2,490	0.4	46	3,758	0.5	3	367	0.5
New Mexico	73	692	0.6	-	-	-	129	4,166	4.2
New York	442	2,983	0.3	94	9,425	0.2	4	1,840	0.1
North Carolina	649	3,055	0.5	456	33,583	0.4	34	1,156	0.1
North Dakota	6	60	0.5	15	1,276	0.6	-	-	-
Ohio	212	433	0.3	11	1,032	0.2	-	-	-
Oklahoma	176	6,050	0.9	51	5,625	0.4	144	6,915	0.9
Oregon	4,083	115,333	1.0	356	39,925	1.4	789	68,220	1.9
Pennsylvania	540	2,461	0.8	88	3,670	0.4	3	66	0.2
Rhode Island	14	(D)	0.1	1	(D)	(D)	-	-	-
South Carolina	20	260	0.4	11	275	0.4	6	1,517	0.5
South Dakota	23	138	1.0	-	-	-	26	4,913	0.4
Tennessee	225	706	0.4	87	1,563	0.3	2	(D)	(D)
Texas	864	23,432	0.9	152	13,630	0.9	572	28,130	0.7
Utah	1,251	18,915	2.0	223	1,783	0.5	503	70,775	1.9
Vermont	54	(D)	0.7	1	(D)	(D)	-	-	-
Virginia	318	3,858	0.4	99	3,308	0.4	22	685	0.4
Washington	1,657	75,428	1.4	178	38,020	0.5	435	15,079	2.4
West Virginia	44	(D)	0.7	2	(D)	(D)	-	-	-
Wisconsin	247	2,400	0.7	100	6,266	0.4	5	2,012	0.6
Wyoming	270	8,088	1.3	83	1,800	0.2	143	7,800	0.9
Water Resources Areas									
WRA 01 New England	529	1,748	0.5	48	2,761	0.4	12	108	1.4
WRA 02 Mid-Atlantic	1,072	6,671	0.6	265	14,439	0.4	25	1,545	0.6
WRA 03 South Atlantic-Gulf	941	7,073	0.4	1,320	55,178	0.4	70	3,834	0.4
WRA 04 Great Lakes	679	6,517	0.4	333	29,694	0.3	4	1,840	0.1
WRA 05 Ohio	901	4,438	0.3	298	8,754	0.3	11	705	0.4
WRA 06 Tennessee	180	420	0.4	97	2,872	0.3	-	-	-
WRA 07 Upper Mississippi	443	1,726	0.5	253	18,161	0.4	40	3,181	0.5
WRA 08 Lower Mississippi	67	316	0.5	166	7,845	0.2	39	9,762	0.6
WRA 09 Souris-Red-Rainy	28	192	0.4	5	(D)	(D)	-	-	-
WRA 10 Missouri	744	10,666	1.1	555	40,749	0.8	472	31,918	1.1
WRA 11 Arkansas-White-Red	498	7,110	0.8	101	10,493	0.3	293	9,415	0.8
WRA 12 Texas-Gulf	864	23,432	0.9	152	13,630	0.9	572	28,130	0.7
WRA 13 Rio Grande	25	500	0.1	-	-	-	79	3,550	4.6
WRA 14 Upper Colorado	881	9,373	1.0	74	740	0.9	821	69,959	1.3
WRA 15 Lower Colorado	82	9,474	5.5	18	1,620	1.0	3	1,800	5.0
WRA 16 Great Basin	1,013	19,660	1.6	149	1,043	0.3	278	58,743	2.1
WRA 17 Pacific Northwest	8,189	262,710	1.2	534	77,945	1.0	1,796	156,872	2.0
WRA 18 California	1,979	150,651	2.0	104	18,096	10.0	63	27,742	2.5
WRA 19 Alaska	37	190	4.6	1	(D)	(D)	4	405	0.2
WRA 20 Hawaii	268	677	1.0	5	400	2.1	-	-	-

[1] Farms reporting more than one pressure in a system are only included in the "All pressure" columns.

Table 10. **Estimated Quantity of Water Applied Using Only Gravity Flow Systems to Distribute Water: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Total			Down rows or furrows			Controlled flooding (between borders or within basins)		
	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre
U.S. TOTAL . . . . . 2003 . .	73,780	15,756,554	2.0	25,056	4,890,559	1.9	30,539	4,768,616	2.3
1998 . .	88,249	19,009,932	2.2	31,147	6,458,396	1.9	25,099	4,927,694	2.7
2003 DATA									
Alabama	22	296	0.7	20	146	1.0	-	-	-
Alaska	1	(D)	(D)	1	(D)	(D)	-	-	-
Arizona	1,869	565,004	4.5	470	181,886	4.1	1,132	147,940	5.6
Arkansas	3,216	2,784,090	1.2	572	341,885	1.0	1,327	883,851	1.2
California	16,736	3,528,845	3.3	5,312	1,038,937	3.2	8,777	1,206,232	3.4
Colorado	7,062	1,025,669	1.6	2,752	301,123	1.6	2,190	246,968	1.9
Connecticut	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-
Florida	465	354,435	1.4	103	217,759	2.0	103	45,340	1.0
Georgia	21	25,000	0.3	21	25,000	0.3	-	-	-
Hawaii	77	2,202	1.0	30	469	0.7	36	158	2.3
Idaho	6,223	533,411	1.9	2,615	270,492	2.2	1,703	109,393	1.5
Illinois	46	3,147	0.6	29	1,220	0.5	1	(D)	(D)
Indiana	32	1,196	0.7	26	341	0.6	3	495	0.8
Iowa	73	2,821	0.6	46	1,407	0.8	2	(D)	(D)
Kansas	892	103,036	1.2	856	97,276	1.2	36	5,760	0.9
Kentucky	17	1,147	1.0	2	(D)	(D)	1	(D)	(D)
Louisiana	1,739	642,531	1.3	598	174,669	0.7	978	410,997	1.6
Maine	2	(D)	(D)	-	-	-	-	-	-
Maryland	24	120	(D)	24	120	0.1	-	-	-
Massachusetts	69	962	6.2	31	31	0.5	38	931	6.4
Michigan	-	-	-	-	-	-	-	-	-
Minnesota	21	12,577	1.4	9	3,988	(D)	11	6,590	1.2
Mississippi	421	464,698	1.1	166	115,511	0.8	127	110,265	1.4
Missouri	625	423,666	0.8	362	234,135	0.6	52	26,422	1.1
Montana	5,017	936,961	1.3	652	92,321	1.4	2,531	367,015	1.3
Nebraska	2,850	659,127	1.2	2,832	649,047	1.2	-	-	-
Nevada	1,084	304,983	2.2	95	17,911	3.2	809	158,288	2.3
New Hampshire	5	25	(D)	-	-	-	-	-	-
New Jersey	33	408	1.3	28	144	0.7	5	264	1.5
New Mexico	5,383	313,248	2.6	1,488	130,817	2.7	3,023	86,222	2.7
New York	-	-	-	-	-	-	-	-	-
North Carolina	5	1,550	0.8	3	300	0.2	2	(D)	(D)
North Dakota	98	24,920	1.7	14	7,101	1.1	42	5,431	0.8
Ohio	16	550	1.2	14	490	1.3	2	(D)	(D)
Oklahoma	262	47,952	1.4	236	43,428	1.4	4	560	1.1
Oregon	2,546	407,099	2.0	1,036	97,490	2.5	878	134,238	1.6
Pennsylvania	9	(D)	0.9	-	-	-	3	6	2.0
Rhode Island	4	(D)	3.0	4	12	3.0	-	-	-
South Carolina	17	570	1.2	5	350	0.7	10	100	2.0
South Dakota	448	87,956	8.0	51	9,533	1.2	234	33,803	18.9
Tennessee	60	908	1.0	40	690	0.8	2	(D)	(D)
Texas	5,715	1,005,018	1.4	1,808	501,583	1.2	2,509	322,690	2.1
Utah	5,417	411,039	1.9	743	60,866	1.8	2,791	198,399	2.0
Vermont	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-
Washington	1,925	147,626	2.9	1,340	103,272	3.0	6	9,400	2.0
West Virginia	-	-	-	-	-	-	-	-	-
Wisconsin	17	1,258	7.0	-	-	-	17	1,258	7.0
Wyoming	3,216	930,358	1.5	622	168,279	2.3	1,154	247,050	1.4
Water Resources Areas									
WRA 01 New England	80	1,039	5.9	35	43	1.2	38	931	6.4
WRA 02 Mid-Atlantic	63	585	1.0	52	(D)	0.4	5	264	1.5
WRA 03 South Atlantic-Gulf	532	382,887	1.3	154	244,591	1.8	115	46,690	1.0
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	83	1,774	0.8	61	1,236	(D)	5	66	1.1
WRA 06 Tennessee	18	(D)	(D)	-	-	-	-	-	-
WRA 07 Upper Mississippi	113	16,688	1.2	63	6,601	0.5	25	7,555	2.0
WRA 08 Lower Mississippi	5,177	3,857,723	1.1	1,597	830,910	0.8	2,012	1,224,311	1.3
WRA 09 Souris-Red-Rainy	28	11,988	1.4	9	3,988	(D)	17	5,401	1.0
WRA 10 Missouri	12,787	2,588,862	1.7	4,922	1,007,823	1.4	4,337	577,354	2.6
WRA 11 Arkansas-White-Red	3,875	1,024,748	1.3	1,799	448,903	1.2	1,071	251,766	1.3
WRA 12 Texas-Gulf	4,020	773,644	1.5	990	299,936	1.3	2,408	313,662	2.1
WRA 13 Rio Grande	5,774	270,128	2.5	1,881	81,664	2.5	2,988	91,860	2.7
WRA 14 Upper Colorado	4,862	842,149	1.4	1,824	199,714	2.1	1,332	238,004	1.5
WRA 15 Lower Colorado	2,089	586,512	4.5	514	191,330	4.1	1,261	149,916	5.6
WRA 16 Great Basin	6,068	641,066	2.1	682	55,486	2.0	3,400	332,433	2.2
WRA 17 Pacific Northwest	11,219	1,173,668	1.9	5,128	476,234	2.4	2,561	296,639	1.4
WRA 18 California	16,914	3,580,843	3.3	5,314	1,041,337	3.2	8,928	1,231,606	3.4
WRA 19 Alaska	1	(D)	(D)	1	(D)	(D)	-	-	-
WRA 20 Hawaii	77	2,202	1.0	30	469	0.7	36	158	2.3

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Table 10. **Estimated Quantity of Water Applied Using Only Gravity Flow Systems to Distribute Water: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Uncontrolled flooding (rangeland, pastureland, etc.)			Other gravity		
	Farms	Acres irrigated	Average acre-feet per acre	Farms	Acres irrigated	Average acre-feet per acre
U.S. TOTAL . . . . . 2003 . .	9,188	1,197,437	1.5	1,114	110,313	2.2
1998 . .	14,825	1,849,005	1.6	3,370	970,948	2.3
2003 DATA						
Alabama	-	-	-	2	(D)	(D)
Alaska	-	-	-	-	-	-
Arizona	11	8,568	1.6	-	-	-
Arkansas	22	1,100	0.2	-	-	-
California	1,394	103,306	1.8	112	34,188	3.3
Colorado	1,312	153,221	1.8	6	6,903	1.8
Connecticut	-	-	-	-	-	-
Delaware	-	-	-	-	-	-
Florida	251	6,910	0.4	6	5,166	1.2
Georgia	-	-	-	-	-	-
Hawaii	3	(D)	(D)	8	8	0.7
Idaho	1,154	51,277	1.7	7	6,160	1.0
Illinois	-	-	-	14	42	0.2
Indiana	-	-	-	3	(D)	0.5
Iowa	8	280	0.2	8	24	0.2
Kansas	-	-	-	-	-	-
Kentucky	7	(D)	0.1	7	7	1.5
Louisiana	105	3,410	1.2	-	-	-
Maine	-	-	-	2	(D)	(D)
Maryland	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-
Michigan	-	-	-	-	-	-
Minnesota	-	-	-	1	(D)	(D)
Mississippi	-	-	-	-	-	-
Missouri	51	255	0.5	-	-	-
Montana	1,004	184,282	1.3	17	3,400	0.6
Nebraska	-	-	-	-	-	-
Nevada	101	70,472	1.5	6	4,356	3.0
New Hampshire	-	-	-	5	(D)	(D)
New Jersey	-	-	-	-	-	-
New Mexico	421	40,198	1.6	5	3,000	2.0
New York	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-
North Dakota	8	831	(D)	6	108	1.0
Ohio	-	-	-	-	-	-
Oklahoma	20	2,780	1.3	-	-	-
Oregon	532	116,971	2.1	55	7,143	1.1
Pennsylvania	3	15	2.0	3	42	0.3
Rhode Island	-	-	-	-	-	-
South Carolina	2	(D)	(D)	-	-	-
South Dakota	74	14,810	1.0	-	-	-
Tennessee	-	-	-	18	18	0.2
Texas	486	27,115	0.9	407	9,653	3.0
Utah	1,085	33,166	1.4	10	2,640	(D)
Vermont	-	-	-	-	-	-
Virginia	-	-	-	-	-	-
Washington	316	18,889	1.8	240	960	3.5
West Virginia	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-
Wyoming	818	357,789	1.2	166	23,921	1.7
Water Resources Areas						
WRA 01 New England	-	-	-	7	65	0.7
WRA 02 Mid-Atlantic	3	15	2.0	3	42	0.3
WRA 03 South Atlantic-Gulf	253	7,030	(D)	8	5,316	1.2
WRA 04 Great Lakes	-	-	-	-	-	-
WRA 05 Ohio	7	(D)	0.1	10	(D)	0.5
WRA 06 Tennessee	-	-	-	18	18	0.2
WRA 07 Upper Mississippi	-	-	-	14	42	0.2
WRA 08 Lower Mississippi	127	4,510	0.9	-	-	-
WRA 09 Souris-Red-Rainy	1	(D)	(D)	1	(D)	(D)
WRA 10 Missouri	1,785	441,588	1.5	195	19,453	1.6
WRA 11 Arkansas-White-Red	706	49,940	1.3	3	6,183	1.9
WRA 12 Texas-Gulf	104	26,500	1.0	25	8,125	3.3
WRA 13 Rio Grande	101	20,187	1.6	382	1,528	(D)
WRA 14 Upper Colorado	1,114	202,972	1.1	7	9,920	1.4
WRA 15 Lower Colorado	51	13,608	1.6	5	3,000	2.0
WRA 16 Great Basin	1,221	100,734	1.5	14	5,796	2.3
WRA 17 Pacific Northwest	2,300	208,575	1.8	302	14,263	1.2
WRA 18 California	1,412	119,506	1.9	112	34,188	3.3
WRA 19 Alaska	-	-	-	-	-	-
WRA 20 Hawaii	3	(D)	(D)	8	8	0.7

Table 11. **Quantity of Water Applied by Source or Supplier: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Water applied from all sources			Wells					
				Total			Only source		
	Acres irrigated	Acre-feet applied	Average acre-feet per acre	Farms	Acres irrigated	Acre-feet applied	Farms	Acres irrigated	Average acre-feet per acre
U.S. TOTAL . . . . . 2003 . .	52,583,431	86,894,031	1.7	104,776	32,342,820	43,473,978	87,377	25,985,966	1.2
1998 . .	54,249,965	97,335,291	1.8	100,783	32,222,665	43,838,526	80,051	25,548,410	1.3
2003 DATA									
Alabama	52,722	35,630	0.7	292	24,451	21,526	253	17,538	1.0
Alaska	2,252	1,917	0.9	54	2,128	1,103	54	2,128	0.5
Arizona	836,587	3,751,834	4.5	1,018	291,025	1,157,995	871	180,058	4.1
Arkansas	3,944,867	4,266,308	1.1	3,912	3,421,365	3,520,455	2,995	2,580,730	1.0
California	8,471,936	24,847,229	2.9	25,765	3,823,115	9,659,305	20,631	2,017,743	2.4
Colorado	2,562,329	3,984,941	1.6	2,331	1,095,601	1,543,515	1,754	925,558	1.4
Connecticut	2,213	923	0.4	102	290	153	71	162	0.5
Delaware	69,088	27,813	0.4	177	64,840	25,590	160	56,652	0.4
Florida	1,497,653	1,851,324	1.2	7,216	772,907	894,452	7,016	646,492	1.1
Georgia	710,893	313,531	0.4	1,839	518,239	235,945	1,546	416,603	0.4
Hawaii	78,538	310,335	4.0	84	33,938	127,489	70	4,628	1.2
Idaho	3,126,857	6,063,947	1.9	2,528	1,202,870	2,106,693	1,473	549,075	1.8
Illinois	374,919	236,796	0.6	1,019	360,740	229,748	985	347,477	0.6
Indiana	276,294	131,684	0.5	918	227,750	109,363	815	194,155	0.5
Iowa	134,164	62,667	0.5	531	127,128	59,150	513	121,957	0.5
Kansas	2,543,950	3,145,502	1.2	4,400	2,430,557	3,027,608	4,167	2,343,311	1.3
Kentucky	20,685	9,465	0.5	149	10,264	5,253	126	9,828	0.5
Louisiana	838,717	925,547	1.1	1,738	633,455	636,022	1,402	513,641	1.0
Maine	18,163	11,094	0.6	342	1,480	1,428	333	1,246	0.8
Maryland	53,734	21,222	0.4	290	40,131	15,394	240	26,725	0.3
Massachusetts	16,151	89,887	5.6	215	1,289	8,538	160	857	8.7
Michigan	432,665	218,245	0.5	1,612	286,450	151,684	1,227	130,407	0.5
Minnesota	434,500	293,661	0.7	1,409	400,925	257,164	1,344	387,172	0.6
Mississippi	1,169,793	957,070	0.8	1,188	1,115,676	898,301	1,085	977,896	0.8
Missouri	1,020,728	684,862	0.7	1,584	961,231	657,685	1,444	943,175	0.7
Montana	2,131,955	2,823,919	1.3	1,022	96,469	130,799	856	45,471	1.1
Nebraska	7,516,171	8,450,468	1.1	15,637	6,974,942	7,851,006	13,202	5,991,090	1.1
Nevada	639,310	1,590,900	2.5	616	259,721	750,837	415	201,516	3.1
New Hampshire	818	542	0.7	81	162	120	61	109	0.6
New Jersey	46,679	35,229	0.8	486	26,487	19,053	407	18,526	0.8
New Mexico	769,787	1,818,471	2.4	2,500	502,021	1,160,772	1,993	455,407	2.2
New York	48,545	18,016	0.4	563	12,289	4,466	473	8,794	0.3
North Carolina	101,055	55,007	0.5	564	14,559	6,916	528	7,319	0.6
North Dakota	207,772	203,998	1.0	336	152,714	131,043	306	140,913	0.9
Ohio	14,476	15,883	1.1	266	6,995	8,070	241	5,056	0.4
Oklahoma	508,842	608,374	1.2	1,288	413,067	507,329	1,198	394,985	1.2
Oregon	1,731,660	3,286,305	1.9	3,666	421,642	718,209	2,662	225,705	1.8
Pennsylvania	19,633	8,563	0.4	746	5,230	2,897	568	3,139	0.7
Rhode Island	648	593	0.9	20	52	29	20	52	0.6
South Carolina	52,046	30,332	0.6	702	31,157	18,041	641	18,020	0.6
South Dakota	390,406	981,405	2.5	793	233,600	200,251	769	228,058	0.9
Tennessee	34,429	17,150	0.5	223	25,636	11,500	209	24,346	0.4
Texas	4,947,745	5,954,825	1.2	8,693	4,174,840	4,822,676	8,288	4,072,749	1.1
Utah	1,082,213	2,298,490	2.1	1,128	191,842	487,233	350	85,814	2.8
Vermont	825	510	0.6	103	208	118	95	186	0.6
Virginia	33,635	12,886	0.4	468	6,619	2,801	444	2,641	0.5
Washington	1,806,782	3,904,571	2.2	2,857	484,392	866,460	1,924	295,975	1.6
West Virginia	801	875	1.1	43	247	132	43	247	0.5
Wisconsin	391,763	356,564	0.9	903	345,408	261,743	767	300,987	0.7
Wyoming	1,415,037	2,176,722	1.5	359	114,676	159,899	182	63,647	1.3
Water Resources Areas									
WRA 01 New England	38,410	103,240	2.7	830	3,399	10,336	707	2,530	3.5
WRA 02 Mid-Atlantic	233,602	111,546	0.5	2,537	151,669	68,819	2,120	114,929	0.5
WRA 03 South Atlantic-Gulf	2,410,814	2,284,613	0.9	10,970	1,357,881	1,171,667	10,347	1,104,258	0.9
WRA 04 Great Lakes	611,881	312,299	0.5	2,221	413,750	224,075	1,703	228,512	0.5
WRA 05 Ohio	220,290	116,127	0.5	1,007	188,038	99,586	972	179,824	0.5
WRA 06 Tennessee	31,065	19,278	0.6	215	9,168	6,715	182	6,208	0.8
WRA 07 Upper Mississippi	1,145,841	816,816	0.7	3,476	1,033,198	688,137	3,248	961,690	0.7
WRA 08 Lower Mississippi	6,199,006	6,007,394	1.0	6,879	5,544,318	5,094,989	5,656	4,547,208	0.9
WRA 09 Souris-Red-Rainy	183,590	146,513	0.8	358	155,776	113,026	340	148,553	0.7
WRA 10 Missouri	12,922,399	16,653,067	1.3	20,893	8,903,020	10,151,649	17,609	7,694,488	1.1
WRA 11 Arkansas-White-Red	5,285,088	6,577,931	1.2	7,504	4,671,455	5,738,770	6,930	4,447,926	1.2
WRA 12 Texas-Gulf	3,284,293	3,887,363	1.2	6,977	2,584,161	2,882,905	6,603	2,500,752	1.1
WRA 13 Rio Grande	799,492	1,819,442	2.3	2,287	570,192	1,288,023	1,648	453,945	2.3
WRA 14 Upper Colorado	1,366,203	2,045,980	1.5	471	13,559	18,902	225	4,605	1.4
WRA 15 Lower Colorado	897,445	3,932,196	4.4	1,331	323,513	1,245,144	951	203,536	4.0
WRA 16 Great Basin	1,516,775	3,409,906	2.2	1,387	450,163	1,198,054	827	278,692	2.9
WRA 17 Pacific Northwest	6,679,626	13,056,086	2.0	9,424	2,068,529	3,580,861	6,536	1,068,641	1.7
WRA 18 California	8,676,821	25,281,982	2.9	25,871	3,864,965	9,763,721	20,649	2,032,913	2.4
WRA 19 Alaska	2,252	1,917	0.9	54	2,128	1,103	54	2,128	0.5
WRA 20 Hawaii	78,538	310,335	4.0	84	33,938	127,489	70	4,628	1.2

See footnote(s) at end of table.

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Table 11. **Quantity of Water Applied by Source or Supplier: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	On-farm surface source					
	Total			Only source		
	Farms	Acres irrigated	Acre-feet applied	Farms	Acres irrigated	Average acre-feet per acre
U.S. TOTAL . . . . . 2003 . .	48,232	7,277,527	11,781,586	38,343	4,904,036	1.6
1998 . .	44,685	7,402,653	11,912,818	32,465	4,511,720	1.6
2003 DATA						
Alabama	230	26,994	13,364	183	21,504	0.5
Alaska	8	113	(D)	8	113	7.1
Arizona	193	72,213	261,043	152	54,339	3.7
Arkansas	1,808	509,914	699,967	892	93,571	1.2
California	4,308	1,045,025	2,998,094	2,915	545,778	3.1
Colorado	3,454	694,262	1,076,371	3,125	524,376	1.6
Connecticut	108	1,523	642	84	1,080	0.4
Delaware	48	4,803	1,733	32	890	0.3
Florida	1,109	418,190	661,443	926	338,768	1.6
Georgia	1,245	194,926	77,580	952	125,335	0.4
Hawaii	242	17,036	69,532	231	3,778	1.1
Idaho	1,874	352,666	597,043	1,576	242,579	1.6
Illinois	133	12,905	5,752	114	7,131	0.4
Indiana	358	48,533	(D)	256	25,820	0.4
Iowa	134	4,909	2,370	125	3,580	0.4
Kansas	422	75,062	61,235	256	38,656	0.7
Kentucky	663	10,386	4,082	640	9,768	0.4
Louisiana	644	186,544	247,413	327	97,455	1.4
Maine	160	15,278	9,312	148	14,583	0.6
Maryland	191	13,124	5,509	143	6,405	0.5
Massachusetts	481	13,972	77,400	415	11,499	5.5
Michigan	1,046	140,338	64,174	647	58,349	0.4
Minnesota	239	23,335	22,765	184	18,985	1.1
Mississippi	465	46,834	50,862	375	15,901	0.9
Missouri	508	55,341	23,806	368	45,691	0.4
Montana	3,020	724,542	837,205	2,856	630,207	1.1
Nebraska	1,378	121,860	111,166	148	50,608	0.9
Nevada	688	241,713	473,600	527	170,315	1.7
New Hampshire	86	592	397	65	489	0.6
New Jersey	347	21,219	16,063	272	13,668	0.9
New Mexico	1,852	89,790	165,378	1,571	79,699	1.8
New York	564	33,598	12,223	398	25,050	0.3
North Carolina	1,511	85,237	47,070	1,468	77,187	0.6
North Dakota	150	25,381	26,058	123	18,504	1.0
Ohio	230	5,126	6,578	202	2,761	0.4
Oklahoma	560	62,572	60,376	476	45,329	0.8
Oregon	6,058	629,850	1,117,532	5,128	461,449	1.8
Pennsylvania	765	13,103	5,223	622	11,022	0.4
Rhode Island	17	567	538	17	567	0.9
South Carolina	306	22,017	12,243	247	10,862	0.5
South Dakota	202	39,400	41,043	168	33,655	1.1
Tennessee	392	9,119	5,084	378	7,592	0.6
Texas	3,018	184,173	215,422	2,765	133,870	0.9
Utah	1,361	104,527	207,089	1,024	73,100	1.9
Vermont	59	509	358	57	495	0.7
Virginia	459	28,077	9,943	433	20,177	0.4
Washington	2,872	292,208	573,999	2,311	228,572	1.9
West Virginia	35	532	732	35	532	1.4
Wisconsin	551	45,436	94,408	422	30,020	2.4
Wyoming	1,680	512,153	687,263	1,556	472,372	1.3
Water Resources Areas						
WRA 01 New England	876	32,176	88,410	751	28,448	2.6
WRA 02 Mid-Atlantic	1,647	82,329	41,103	1,270	54,276	0.6
WRA 03 South Atlantic-Gulf	4,654	748,216	816,011	4,042	575,143	1.1
WRA 04 Great Lakes	1,637	188,774	84,250	1,029	87,847	0.4
WRA 05 Ohio	1,360	29,789	15,361	1,327	25,651	0.4
WRA 06 Tennessee	623	21,781	(D)	583	19,710	0.6
WRA 07 Upper Mississippi	920	105,710	124,600	729	67,737	1.3
WRA 08 Lower Mississippi	1,938	621,741	837,531	748	140,538	1.2
WRA 09 Souris-Red-Rainy	131	17,335	17,871	114	15,370	1.1
WRA 10 Missouri	6,581	1,484,303	1,988,048	4,787	1,170,323	1.3
WRA 11 Arkansas-White-Red	2,217	328,802	380,860	1,732	206,315	1.2
WRA 12 Texas-Gulf	3,002	181,152	217,589	2,763	132,973	0.9
WRA 13 Rio Grande	1,846	117,573	197,057	1,499	67,194	1.9
WRA 14 Upper Colorado	2,383	448,173	534,629	2,268	416,008	1.2
WRA 15 Lower Colorado	492	87,173	295,287	220	63,169	3.6
WRA 16 Great Basin	1,538	319,763	611,061	1,308	232,550	1.7
WRA 17 Pacific Northwest	11,742	1,344,057	2,319,845	9,984	1,013,299	1.7
WRA 18 California	4,395	1,101,531	3,129,579	2,950	583,594	3.0
WRA 19 Alaska	8	113	(D)	8	113	7.1
WRA 20 Hawaii	242	17,036	69,532	231	3,778	1.1

See footnote(s) at end of table.

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Table 11. **Quantity of Water Applied by Source or Supplier: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Off-farm surface water suppliers					
	Total			Only source		
	Farms	Acres irrigated	Acre-feet applied	Farms	Acres irrigated	Average acre-feet per acre
U.S. TOTAL . . . . . 2003 . .	86,405	13,867,438	31,638,466	75,776	10,170,469	2.3
1998 . .	103,525	16,408,547	41,583,947	87,786	11,358,510	2.6
2003 DATA						
Alabama	103	1,333	739	95	946	0.7
Alaska	11	11	(D)	11	11	0.6
Arizona	1,726	516,422	2,332,794	1,601	397,087	4.6
Arkansas	58	26,793	45,885	25	15,375	1.8
California	22,558	4,166,854	12,189,829	17,810	2,383,051	3.2
Colorado	6,476	810,713	1,365,054	6,034	676,181	1.7
Connecticut	58	409	126	46	175	0.4
Delaware	5	375	489	4	160	2.5
Florida	221	319,598	295,428	187	260,496	0.9
Georgia	56	56	5	56	56	0.1
Hawaii	910	50,999	113,313	891	11,696	1.0
Idaho	11,059	1,609,148	3,360,209	10,123	1,159,032	2.2
Illinois	79	1,274	1,295	60	550	1.1
Indiana	20	129	(D)	19	19	0.1
Iowa	62	2,147	1,146	53	1,877	0.5
Kansas	315	60,901	56,658	204	30,554	0.9
Kentucky	154	280	129	154	280	0.5
Louisiana	236	23,596	42,110	213	16,145	1.5
Maine	17	1,405	353	14	1,243	0.2
Maryland	78	891	318	76	711	0.4
Massachusetts	214	954	3,948	201	598	2.5
Michigan	111	6,533	2,386	89	557	0.5
Minnesota	56	10,240	13,731	46	9,376	1.4
Mississippi	19	9,213	7,906	4	4,378	0.9
Missouri	14	4,156	3,370	14	4,156	0.8
Montana	4,861	1,313,763	1,855,914	4,637	1,211,250	1.4
Nebraska	1,736	443,354	488,295	493	197,822	1.0
Nevada	623	145,684	366,462	576	97,238	2.6
New Hampshire	15	64	24	14	34	0.3
New Jersey	53	289	111	49	261	0.4
New Mexico	2,944	206,658	492,319	2,670	178,546	2.4
New York	323	2,712	1,326	247	880	0.6
North Carolina	249	3,109	1,020	242	2,059	0.3
North Dakota	90	30,400	46,896	79	26,632	1.6
Ohio	203	2,355	1,234	198	637	0.4
Oklahoma	64	36,513	40,667	55	27,481	1.1
Oregon	5,615	720,621	1,450,562	5,306	548,155	2.0
Pennsylvania	260	1,594	442	217	1,460	0.3
Rhode Island	21	29	25	21	29	0.9
South Carolina	4	232	47	2	(D)	(D)
South Dakota	491	117,406	740,110	465	109,780	6.7
Tennessee	158	574	564	158	574	1.0
Texas	4,208	588,932	916,726	3,911	501,965	1.4
Utah	8,429	790,434	1,604,166	7,856	704,474	2.0
Vermont	50	108	34	44	102	0.3
Virginia	4	496	140	2	(D)	(D)
Washington	8,271	1,041,882	2,464,110	7,517	842,209	2.4
West Virginia	22	22	9	22	22	0.4
Wisconsin	96	1,279	412	89	721	0.2
Wyoming	2,999	794,498	1,329,558	2,876	743,246	1.7
Water Resources Areas						
WRA 01 New England	354	2,908	4,492	319	2,120	0.9
WRA 02 Mid-Atlantic	381	3,459	1,623	329	2,580	0.5
WRA 03 South Atlantic-Gulf	585	324,005	296,933	541	263,249	0.9
WRA 04 Great Lakes	452	10,013	3,973	346	1,567	0.5
WRA 05 Ohio	596	2,561	1,179	594	1,251	0.3
WRA 06 Tennessee	93	570	(D)	86	563	0.7
WRA 07 Upper Mississippi	193	7,313	4,077	152	5,017	0.5
WRA 08 Lower Mississippi	242	46,962	74,873	183	26,436	1.5
WRA 09 Souris-Red-Rainy	20	11,069	15,615	19	11,009	1.4
WRA 10 Missouri	10,884	2,585,699	4,513,368	8,952	2,088,185	1.9
WRA 11 Arkansas-White-Red	1,673	322,138	458,299	1,569	270,448	1.4
WRA 12 Texas-Gulf	2,907	519,180	786,868	2,627	438,730	1.4
WRA 13 Rio Grande	3,416	155,334	334,361	3,058	109,794	2.2
WRA 14 Upper Colorado	6,570	904,621	1,492,449	6,222	877,103	1.6
WRA 15 Lower Colorado	1,965	531,096	2,391,763	1,834	409,849	4.6
WRA 16 Great Basin	7,484	760,981	1,600,790	7,104	614,304	2.1
WRA 17 Pacific Northwest	24,156	3,354,776	7,155,378	22,242	2,569,039	2.2
WRA 18 California	23,513	4,273,743	12,388,681	18,697	2,467,518	3.1
WRA 19 Alaska	11	11	(D)	11	11	0.6
WRA 20 Hawaii	910	50,999	113,313	891	11,696	1.0

See footnote(s) at end of table.

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Table 11. **Quantity of Water Applied by Source or Supplier: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	For all farms using any off-farm water						For all farms using only off-farm water					
	Farms	Acres irrigated with off-farm water	Quantity of off-farm water (acre-feet)	Supplier of off-farm water [1]			Farms	Acres irrigated with off-farm water	Quantity of off-farm water (acre-feet)	Supplier of off-farm water [1]		
				Bureau of Reclamation	Other Federal agencies	All other suppliers				Bureau of Reclamation	Other Federal agencies	All other suppliers
U.S. TOTAL . . . . . 2003 . .	86,405	13,867,438	31,638,466	31,210	3,832	31,255	75,776	10,170,469	23,283,147	26,294	2,998	27,589
1998 . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	103	1,333	739	-	1	28	95	946	687	-	1	20
Alaska	11	11	(D)	-	-	-	11	11	6	-	-	-
Arizona	1,726	516,422	2,332,795	619	91	568	1,601	397,087	1,835,249	551	66	532
Arkansas	58	26,793	45,886	-	7	28	25	15,375	27,876	-	7	13
California	22,558	4,166,854	12,189,829	6,737	1,541	10,491	17,810	2,383,051	7,563,592	4,802	1,215	8,625
Colorado	6,476	810,713	1,365,054	1,684	99	3,004	6,034	676,181	1,172,001	1,567	61	2,752
Connecticut	58	409	127	-	-	13	46	175	65	-	-	2
Delaware	5	375	490	-	-	1	4	160	400	-	-	-
Florida	221	319,598	295,428	-	15	156	187	260,496	225,852	-	8	131
Georgia	56	56	6	-	-	-	56	56	6	-	-	-
Hawaii	910	50,999	113,313	-	11	400	891	11,696	11,127	-	11	390
Idaho	11,059	1,609,148	3,360,210	4,884	520	3,193	10,123	1,159,032	2,510,827	4,425	394	2,924
Illinois	79	1,274	1,295	-	-	2	60	550	589	-	-	-
Indiana	20	129	(D)	-	-	-	19	19	2	-	-	-
Iowa	62	2,147	1,147	-	-	27	53	1,877	958	-	-	27
Kansas	315	60,901	56,658	114	16	43	204	30,554	26,836	62	-	-
Kentucky	154	280	130	-	-	63	154	280	130	-	-	63
Louisiana	236	23,596	42,111	-	1	120	213	16,145	24,909	-	-	108
Maine	17	1,405	354	-	-	7	14	1,243	306	-	-	4
Maryland	78	891	318	-	-	49	76	711	264	-	-	47
Massachusetts	214	954	3,948	-	-	144	201	598	1,503	-	-	137
Michigan	111	6,533	2,386	-	2	42	89	557	301	-	-	38
Minnesota	56	10,240	13,731	-	4	13	46	9,376	13,498	-	4	3
Mississippi	19	9,213	7,907	-	-	3	4	4,378	4,140	-	-	-
Missouri	14	4,156	3,370	-	-	14	14	4,156	3,370	-	-	14
Montana	4,861	1,313,763	1,855,914	1,886	419	821	4,637	1,211,250	1,696,914	1,772	406	762
Nebraska	1,736	443,354	488,295	1,268	19	451	493	197,822	193,616	277	-	173
Nevada	623	145,684	366,463	249	-	168	576	97,238	256,905	233	-	146
New Hampshire	15	64	25	-	-	4	14	34	10	-	-	3
New Jersey	53	289	112	-	-	1	49	261	109	-	-	1
New Mexico	2,944	206,658	492,319	1,692	4	776	2,670	178,546	433,484	1,490	4	707
New York	323	2,712	1,326	-	-	91	247	880	551	-	-	75
North Carolina	249	3,109	1,020	-	-	-	242	2,059	705	-	-	-
North Dakota	90	30,400	46,896	46	22	16	79	26,632	43,352	36	20	14
Ohio	203	2,355	1,234	16	1	36	198	637	258	16	-	33
Oklahoma	64	36,513	40,668	46	2	9	55	27,481	29,431	44	-	5
Oregon	5,615	720,621	1,450,562	2,552	173	1,602	5,306	548,155	1,074,139	2,350	151	1,510
Pennsylvania	260	1,594	443	-	-	11	217	1,460	423	-	-	4
Rhode Island	21	29	25	-	-	8	21	29	25	-	-	8
South Carolina	4	232	47	-	2	-	2	(D)	(D)	-	-	-
South Dakota	491	117,406	740,110	302	40	90	465	109,780	732,712	282	38	84
Tennessee	158	574	565	-	-	78	158	574	565	-	-	78
Texas	4,208	588,932	916,727	1,474	33	1,342	3,911	501,965	711,220	1,423	33	1,190
Utah	8,429	790,434	1,604,167	1,381	549	4,596	7,856	704,474	1,410,309	1,339	393	4,379
Vermont	50	108	34	-	-	15	44	102	34	-	-	15
Virginia	4	496	141	-	-	2	2	(D)	(D)	-	-	-
Washington	8,271	1,041,882	2,464,111	5,185	139	1,692	7,517	842,209	2,024,760	4,584	69	1,601
West Virginia	22	22	10	-	-	-	22	22	10	-	-	-
Wisconsin	96	1,279	412	-	-	6	89	721	116	-	-	-
Wyoming	2,999	794,498	1,329,559	1,075	121	1,031	2,876	743,246	1,248,919	1,041	117	971
Water Resources Areas												
WRA 01 New England	354	2,908	4,493	-	-	176	319	2,120	1,922	-	-	154
WRA 02 Mid-Atlantic	381	3,459	1,624	-	-	79	329	2,580	1,404	-	-	67
WRA 03 South Atlantic-Gulf	585	324,005	296,934	-	17	170	541	263,249	226,959	-	8	144
WRA 04 Great Lakes	452	10,013	3,974	2	3	171	346	1,567	822	2	-	144
WRA 05 Ohio	596	2,561	1,180	14	-	120	594	1,251	416	14	-	120
WRA 06 Tennessee	93	570	(D)	-	1	35	86	563	400	-	1	28
WRA 07 Upper Mississippi	193	7,313	4,078	-	1	25	152	5,017	2,689	-	1	11
WRA 08 Lower Mississippi	242	46,962	74,874	-	1	97	183	26,436	40,446	-	-	72
WRA 09 Souris-Red-Rainy	20	11,069	15,616	-	5	4	19	11,009	15,550	-	5	4
WRA 10 Missouri	10,884	2,585,699	4,513,369	4,475	376	3,595	8,952	2,088,185	3,865,177	3,189	288	3,018
WRA 11 Arkansas-White-Red	1,673	322,138	458,300	548	54	378	1,569	270,448	387,633	533	51	320
WRA 12 Texas-Gulf	2,907	519,180	786,869	953	33	1,318	2,627	438,730	596,348	919	33	1,166
WRA 13 Rio Grande	3,416	155,334	334,361	1,662	5	672	3,058	109,794	245,798	1,440	4	556
WRA 14 Upper Colorado	6,570	904,621	1,492,449	1,972	480	2,513	6,222	877,103	1,442,151	1,927	327	2,454
WRA 15 Lower Colorado	1,965	531,096	2,391,764	621	91	613	1,834	409,849	1,880,035	553	66	573
WRA 16 Great Basin	7,484	760,981	1,600,791	1,392	167	4,086	7,104	614,304	1,307,815	1,322	156	3,895
WRA 17 Pacific Northwest	24,156	3,354,776	7,155,378	12,049	1,043	6,288	22,242	2,569,039	5,549,711	10,859	831	5,840
WRA 18 California	23,513	4,273,743	12,388,681	7,522	1,544	10,515	18,697	2,467,518	7,706,738	5,536	1,216	8,633
WRA 19 Alaska	11	11	(D)	-	-	-	11	11	6	-	-	-
WRA 20 Hawaii	910	50,999	113,313	-	11	400	891	11,696	11,127	-	11	390

[1] Counts only include those reporting some or all of their water from a given source. Those reporting an unknown water supplier are excluded.

Table 12. **Irrigation by Quantity of Estimated Water Applied: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Total			Less than 100 acre-feet			100 to 199 acre-feet			200 to 499 acre-feet		
	Farms	Acres irrigated	Acre-feet of water applied	Farms	Acres irrigated	Water applied	Farms	Acres irrigated	Water applied	Farms	Acres irrigated	Water applied
U.S. TOTAL . . . . . 2003 . .	220,163	52,583,431	86,894,031	133,651	4,270,229	3,260,507	25,168	3,731,200	3,690,036	24,930	7,345,712	8,150,570
1998 . .	223,932	54,249,965	97,335,291	129,167	4,574,665	3,392,640	25,534	3,677,930	3,758,738	27,738	7,762,019	9,072,081
2003 DATA												
Alabama	578	52,722	35,630	527	18,836	5,897	11	1,870	1,585	25	13,546	7,300
Alaska	73	2,252	1,917	65	(D)	(D)	6	(D)	1,077	2	(D)	(D)
Arizona	2,777	836,587	3,751,834	1,867	24,026	68,358	86	3,660	13,216	125	14,332	42,718
Arkansas	4,834	3,944,867	4,266,308	1,427	96,669	45,381	349	120,792	52,035	854	432,790	288,896
California	46,841	8,471,936	24,847,229	29,012	544,224	793,112	5,361	396,227	800,236	3,865	516,103	1,238,241
Colorado	11,567	2,562,329	3,984,941	5,813	198,172	157,257	2,102	232,286	308,697	1,878	518,127	599,429
Connecticut	234	2,213	923	233	(D)	(D)	1	(D)	(D)	-	-	-
Delaware	213	69,088	27,813	159	24,809	4,543	25	11,694	3,947	13	12,792	4,612
Florida	8,335	1,497,653	1,851,324	7,100	153,335	106,771	429	66,932	66,563	375	118,786	111,771
Georgia	2,847	710,893	313,531	2,184	184,486	38,716	295	127,278	44,635	243	188,377	76,828
Hawaii	1,214	78,538	310,335	1,187	7,667	7,201	9	(D)	(D)	5	776	1,426
Idaho	14,303	3,126,857	6,063,947	9,275	286,318	288,957	1,388	159,525	186,745	1,255	284,356	430,044
Illinois	1,195	374,919	236,796	678	56,077	24,367	204	58,527	29,641	197	108,850	64,294
Indiana	1,193	276,294	131,684	855	75,848	18,088	151	52,116	21,465	144	80,476	44,652
Iowa	709	134,164	62,667	530	34,846	12,230	92	32,882	13,581	73	41,701	23,401
Kansas	4,878	2,543,950	3,145,502	1,170	63,420	32,925	1,003	174,608	147,173	976	325,899	307,910
Kentucky	943	20,685	9,465	923	11,767	4,022	11	2,545	1,610	6	4,028	1,870
Louisiana	2,280	838,717	925,547	996	85,429	26,404	330	71,554	50,006	437	207,349	143,789
Maine	507	18,163	11,094	496	(D)	(D)	3	1,230	(D)	5	5,955	(D)
Maryland	509	53,734	21,222	449	19,767	4,585	37	14,870	5,175	16	12,629	4,982
Massachusetts	842	16,151	89,887	737	5,926	11,217	33	(D)	4,755	43	(D)	12,172
Michigan	2,366	432,665	218,245	1,949	99,884	29,645	163	49,902	23,068	143	82,315	44,779
Minnesota	1,639	434,500	293,661	1,128	84,557	37,048	230	56,907	32,614	164	82,030	53,002
Mississippi	1,567	1,169,793	957,070	772	31,629	9,734	117	56,075	17,750	206	147,487	67,997
Missouri	1,966	1,020,728	684,862	985	86,824	27,205	255	92,184	37,943	304	211,072	106,959
Montana	8,625	2,131,955	2,823,919	4,749	245,474	125,186	815	154,755	123,914	1,580	413,372	527,122
Nebraska	16,278	7,516,171	8,450,468	2,946	256,788	148,880	3,887	723,596	560,344	4,357	1,473,236	1,395,512
Nevada	1,722	639,310	1,590,900	763	18,912	33,550	176	17,319	23,635	278	50,331	90,789
New Hampshire	161	818	542	161	818	542	-	-	-	-	-	-
New Jersey	807	46,679	35,229	727	21,096	7,968	45	11,829	6,174	22	7,270	7,251
New Mexico	6,741	769,787	1,818,471	4,966	69,033	91,525	745	60,763	108,143	400	55,024	128,377
New York	1,284	48,545	18,016	1,243	27,316	7,349	19	6,453	2,758	19	8,276	5,958
North Carolina	2,281	101,055	55,007	2,200	64,192	24,420	35	12,245	4,557	36	14,033	9,943
North Dakota	541	207,772	203,998	209	21,584	9,282	114	22,943	16,750	112	48,862	35,773
Ohio	670	14,476	15,883	661	6,668	2,978	2	(D)	(D)	3	3,103	(D)
Oklahoma	1,819	508,842	608,374	1,071	72,743	35,289	247	40,849	37,495	194	77,089	65,768
Oregon	14,205	1,731,660	3,286,305	10,197	250,425	229,742	1,770	155,089	246,308	963	199,166	310,336
Pennsylvania	1,589	19,633	8,563	1,572	16,824	5,524	12	2,070	1,784	5	739	1,256
Rhode Island	58	648	593	57	(D)	(D)	-	-	-	1	(D)	(D)
South Carolina	951	52,046	30,332	900	18,490	6,283	19	(D)	(D)	19	12,469	6,633
South Dakota	1,444	390,406	981,405	622	58,946	32,956	278	61,506	42,177	361	120,708	113,768
Tennessee	759	34,429	17,150	720	11,717	3,624	15	3,930	2,263	19	10,250	6,056
Texas	15,441	4,947,745	5,954,825	8,910	358,692	200,334	1,475	284,289	217,194	1,827	731,150	617,930
Utah	10,070	1,082,213	2,298,490	7,160	181,581	200,752	908	94,111	146,640	905	172,641	290,054
Vermont	204	825	510	204	825	510	-	-	-	-	-	-
Virginia	905	33,635	12,886	871	14,452	5,160	18	(D)	(D)	15	8,824	4,305
Washington	12,862	1,806,782	3,904,571	8,835	169,989	200,322	1,041	121,716	157,298	1,545	239,568	534,021
West Virginia	100	801	875	97	(D)	(D)	1	(D)	(D)	2	(D)	(D)
Wisconsin	1,414	391,763	356,564	881	45,285	20,602	230	43,831	32,421	139	58,296	42,871
Wyoming	4,822	1,415,037	2,176,722	2,412	133,974	109,841	625	112,136	88,342	774	228,094	275,765
Water Resources Areas												
WRA 01 New England	1,917	38,410	103,240	1,799	15,641	15,603	37	2,393	5,402	49	8,424	14,141
WRA 02 Mid-Atlantic	4,142	233,602	111,546	3,877	101,778	29,217	152	54,558	21,893	75	43,021	23,861
WRA 03 South Atlantic-Gulf	15,567	2,410,814	2,284,613	13,495	444,690	186,232	786	213,977	120,158	695	343,479	211,435
WRA 04 Great Lakes	3,694	611,881	312,299	3,106	147,566	42,970	223	67,742	30,926	216	123,845	67,035
WRA 05 Ohio	2,928	220,290	116,127	2,663	59,166	18,496	106	38,236	15,868	125	70,098	38,923
WRA 06 Tennessee	891	31,065	19,278	861	(D)	(D)	9	(D)	(D)	13	(D)	(D)
WRA 07 Upper Mississippi	4,359	1,145,841	816,816	2,824	211,195	85,533	685	167,342	98,326	491	245,509	157,828
WRA 08 Lower Mississippi	7,817	6,199,006	6,007,394	2,186	231,446	71,095	854	287,647	129,853	1,617	906,974	541,306
WRA 09 Souris-Red-Rainy	491	183,590	146,513	278	25,748	11,675	66	16,078	8,928	87	44,712	28,178
WRA 10 Missouri	34,813	12,922,399	16,653,067	11,606	719,785	441,221	6,491	1,189,853	950,744	7,905	2,478,304	2,566,344
WRA 11 Arkansas-White-Red	10,805	5,285,088	6,577,931	4,092	211,338	106,139	1,623	286,332	237,595	1,806	668,703	600,483
WRA 12 Texas-Gulf	12,439	3,284,293	3,887,363	7,581	309,388	182,280	1,238	221,324	182,857	1,387	568,822	472,783
WRA 13 Rio Grande	6,844	799,492	1,819,442	5,096	62,346	78,766	521	47,304	75,878	474	80,732	145,548
WRA 14 Upper Colorado	9,068	1,366,203	2,045,980	5,396	207,268	170,974	1,679	187,079	241,714	1,113	269,922	353,410
WRA 15 Lower Colorado	3,393	897,445	3,932,196	2,308	36,397	84,152	169	8,882	28,158	156	17,902	50,868
WRA 16 Great Basin	9,821	1,516,775	3,409,906	6,717	159,977	196,369	752	78,179	116,912	968	189,694	320,979
WRA 17 Pacific Northwest	42,003	6,679,626	13,056,086	28,804	735,098	715,591	4,351	458,726	611,429	3,786	740,290	1,275,162
WRA 18 California	47,884	8,676,821	25,281,982	29,710	570,180	811,973	5,411	402,784	809,672	3,960	535,663	1,276,056
WRA 19 Alaska	73	2,252	1,917	65	(D)	(D)	6	(D)	1,077	2	(D)	(D)
WRA 20 Hawaii	1,214	78,538	310,335	1,187	7,667	7,201	9	(D)	(D)	5	776	1,426

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Table 12. **Irrigation by Quantity of Estimated Water Applied: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	500 to 999 acre-feet			1,000 to 1,999 acre-feet			2,000 acre-feet or more		
	Farms	Acres irrigated	Water applied	Farms	Acres irrigated	Water applied	Farms	Acres irrigated	Water applied
U.S. TOTAL . . . . . 2003 . .	16,473	8,988,871	11,589,636	11,204	9,906,630	15,571,805	8,737	18,340,789	44,631,476
1998 . .	18,970	9,568,773	13,372,248	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA									
Alabama	6	4,260	3,840	6	9,950	8,954	3	4,260	8,053
Alaska	-	-	-	-	-	-	-	-	-
Arizona	119	19,859	85,134	139	58,287	205,950	441	716,423	3,336,458
Arkansas	899	814,783	633,849	644	831,087	897,154	661	1,648,746	2,348,993
California	3,570	1,038,132	2,458,259	2,325	1,086,340	3,247,647	2,708	4,890,910	16,309,734
Colorado	860	456,437	615,484	493	462,587	701,142	421	694,720	1,602,931
Connecticut	-	-	-	-	-	-	-	-	-
Delaware	10	12,014	6,242	6	7,779	8,469	-	-	-
Florida	201	141,740	144,666	111	139,581	158,245	119	877,279	1,263,307
Georgia	78	98,566	53,438	31	58,755	44,926	16	53,431	54,988
Hawaii	2	(D)	(D)	6	10,150	9,038	5	58,411	289,724
Idaho	999	412,997	725,492	634	455,402	883,900	752	1,528,259	3,548,808
Illinois	70	65,973	51,472	41	70,383	52,044	5	15,109	14,979
Indiana	27	32,384	19,084	13	22,920	19,276	3	12,550	9,120
Iowa	9	14,858	6,064	4	(D)	(D)	1	(D)	(D)
Kansas	826	555,078	613,337	602	642,905	854,458	301	782,040	1,189,698
Kentucky	3	2,345	1,964	-	-	-	-	-	-
Louisiana	254	181,711	182,661	177	151,651	250,250	86	141,023	272,438
Maine	1	(D)	(D)	1	(D)	(D)	1	(D)	(D)
Maryland	6	(D)	(D)	-	-	-	1	(D)	(D)
Massachusetts	10	(D)	(D)	12	(D)	(D)	7	(D)	(D)
Michigan	82	106,475	58,568	19	42,506	26,986	10	51,583	35,199
Minnesota	53	53,744	37,990	41	78,137	57,053	23	79,125	75,954
Mississippi	200	208,160	138,933	147	279,211	207,379	125	447,231	515,278
Missouri	248	277,248	173,031	123	212,355	178,861	51	141,045	160,864
Montana	784	417,564	551,407	489	408,256	658,279	208	492,534	838,012
Nebraska	2,452	1,596,724	1,716,599	2,182	2,381,392	2,956,093	454	1,084,435	1,673,040
Nevada	148	47,420	107,225	154	106,787	232,004	203	398,541	1,103,697
New Hampshire	-	-	-	-	-	-	-	-	-
New Jersey	10	4,588	7,602	-	-	-	3	1,896	6,234
New Mexico	234	90,480	175,268	194	119,647	271,017	202	374,840	1,044,141
New York	3	6,500	1,950	-	-	-	-	-	-
North Carolina	6	3,210	3,970	-	-	-	4	7,375	12,117
North Dakota	66	48,061	45,605	25	32,680	37,977	15	33,642	58,611
Ohio	1	(D)	(D)	1	(D)	(D)	2	(D)	(D)
Oklahoma	154	86,751	108,549	94	94,530	134,404	59	136,880	226,869
Oregon	578	249,505	412,788	383	278,124	549,520	314	599,351	1,537,612
Pennsylvania	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-
South Carolina	6	5,867	(D)	6	(D)	8,160	1	(D)	(D)
South Dakota	140	85,807	93,522	30	28,656	36,316	13	34,783	662,666
Tennessee	3	(D)	(D)	1	(D)	(D)	1	(D)	(D)
Texas	1,638	1,132,438	1,153,477	970	1,012,912	1,309,604	621	1,428,264	2,456,286
Utah	527	195,225	375,285	364	192,028	505,685	206	246,627	780,074
Vermont	-	-	-	-	-	-	-	-	-
Virginia	1	(D)	(D)	-	-	-	-	-	-
Washington	593	206,120	403,110	435	315,701	617,064	413	753,688	1,992,756
West Virginia	-	-	-	-	-	-	-	-	-
Wisconsin	94	60,266	65,138	39	59,625	51,754	31	124,460	143,778
Wyoming	502	243,398	337,366	262	235,014	365,007	247	462,421	1,000,401
Water Resources Areas									
WRA 01 New England	11	1,415	7,973	13	2,938	19,177	8	7,599	40,944
WRA 02 Mid-Atlantic	28	22,830	19,698	6	(D)	(D)	4	(D)	(D)
WRA 03 South Atlantic-Gulf	295	251,419	207,987	154	213,336	221,281	142	943,913	1,337,520
WRA 04 Great Lakes	101	132,456	71,769	31	63,817	43,969	17	76,455	55,630
WRA 05 Ohio	17	16,816	11,996	13	21,758	15,750	4	14,216	15,094
WRA 06 Tennessee	5	(D)	(D)	2	(D)	(D)	1	(D)	(D)
WRA 07 Upper Mississippi	209	173,608	147,395	106	179,305	143,173	44	168,882	184,561
WRA 08 Lower Mississippi	1,412	1,343,322	996,482	942	1,308,069	1,329,161	806	2,121,548	2,939,497
WRA 09 Souris-Red-Rainy	29	27,807	21,192	16	28,864	21,479	15	40,381	55,060
WRA 10 Missouri	4,374	2,685,009	3,090,324	3,242	3,329,455	4,432,590	1,195	2,519,993	5,171,843
WRA 11 Arkansas-White-Red	1,426	901,479	1,010,670	1,067	1,168,151	1,483,973	791	2,049,085	3,139,072
WRA 12 Texas-Gulf	1,228	866,465	870,979	686	718,118	952,853	319	600,176	1,225,610
WRA 13 Rio Grande	259	89,091	193,002	272	179,822	364,837	222	340,197	961,412
WRA 14 Upper Colorado	537	276,868	365,814	210	163,294	282,219	133	261,772	631,849
WRA 15 Lower Colorado	135	25,049	97,663	160	68,819	231,976	465	740,396	3,439,379
WRA 16 Great Basin	553	208,355	401,603	465	288,859	664,554	366	591,711	1,709,488
WRA 17 Pacific Northwest	2,202	894,073	1,546,147	1,422	1,020,260	2,008,332	1,438	2,831,179	6,899,424
WRA 18 California	3,650	1,067,769	2,523,955	2,391	1,130,186	3,336,368	2,762	4,970,239	16,523,958
WRA 19 Alaska	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	2	(D)	(D)	6	10,150	9,038	5	58,411	289,724

Table 13. **Number of Farms That Rent or Lease Water and the Sources and Uses of Water Transfers: 2003**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Number of farms transferring water (renting or leasing) to -						Quantity of water transferred to others by water source		
	Other agricultural producers	Municipal or industrial users	Environmental uses	Transfer use unknown			On-farm source		Off-farm source (acre-feet)
				Total	Pooled for multiple uses	Transferred by irrigation district	Well water (acre-feet)	Surface water (acre-feet)	
U.S. TOTAL . . . . . 2003 . .	1,102	321	80	388	111	277	180,879	63,966	207,976
1998 . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA									
Alabama	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-
Arizona	8	5	-	-	-	-	1,100	135	21,100
Arkansas	1	-	-	-	-	-	-	(D)	-
California	520	139	5	60	49	11	77,010	15,445	100,276
Colorado	3	110	-	17	-	17	-	29,340	4,546
Connecticut	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-
Florida	11	-	-	-	-	-	2,038	(D)	-
Georgia	-	-	-	-	-	-	-	-	-
Hawaii	3	-	-	-	-	-	331	-	-
Idaho	8	-	4	66	62	4	450	-	18,947
Illinois	20	-	-	1	-	1	446	-	(D)
Indiana	5	-	-	-	-	-	(D)	120	-
Iowa	-	-	-	-	-	-	-	-	-
Kansas	18	-	-	-	-	-	4,500	-	-
Kentucky	-	-	-	-	-	-	-	-	-
Louisiana	20	-	-	4	-	4	461	-	1,440
Maine	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-
Michigan	2	-	-	-	-	-	(D)	-	-
Minnesota	10	-	-	2	-	2	1,522	-	-
Mississippi	4	-	-	-	-	-	1,600	-	-
Missouri	1	-	-	-	-	-	(D)	-	-
Montana	6	-	17	4	-	4	225	1,700	2,260
Nebraska	38	-	-	-	-	-	764	-	-
Nevada	40	2	2	-	-	-	(D)	-	6,370
New Hampshire	-	-	-	-	-	-	-	-	-
New Jersey	-	-	3	-	-	-	-	829	-
New Mexico	86	1	8	221	-	221	21,724	290	5,289
New York	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-
North Dakota	2	-	-	-	-	-	(D)	-	-
Ohio	2	-	-	-	-	-	-	(D)	-
Oklahoma	1	-	-	-	-	-	-	-	(D)
Oregon	55	-	36	-	-	-	31,191	1,275	18,817
Pennsylvania	3	-	3	-	-	-	6	32	-
Rhode Island	-	-	-	-	-	-	-	-	-
South Carolina	2	-	-	-	-	-	(D)	-	-
South Dakota	21	-	-	-	-	-	-	(D)	3,020
Tennessee	-	-	-	-	-	-	-	-	-
Texas	1	8	-	13	-	13	12,908	-	400
Utah	130	52	-	-	-	-	(D)	514	13,045
Vermont	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-
Washington	7	-	2	-	-	-	1,328	(D)	885
West Virginia	-	-	-	-	-	-	-	-	-
Wisconsin	5	-	-	-	-	-	106	-	-
Wyoming	69	4	-	-	-	-	7,002	5,600	11,000
Water Resources Areas									
WRA 01 New England	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	3	-	3	-	-	-	-	861	-
WRA 03 South Atlantic-Gulf	13	-	-	-	-	-	2,838	(D)	-
WRA 04 Great Lakes	11	-	-	-	-	-	126	120	-
WRA 05 Ohio	5	-	3	-	-	-	61	(D)	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	26	-	-	1	-	1	1,240	-	511
WRA 08 Lower Mississippi	26	-	-	4	-	4	3,061	(D)	1,440
WRA 09 Souris-Red-Rainy	4	-	-	2	-	2	820	-	-
WRA 10 Missouri	137	114	17	-	-	-	7,991	(D)	20,171
WRA 11 Arkansas-White-Red	69	-	-	-	-	-	12,480	(D)	694
WRA 12 Texas-Gulf	1	8	-	13	-	13	12,908	-	400
WRA 13 Rio Grande	36	1	8	221	-	221	13,744	250	4,665
WRA 14 Upper Colorado	-	50	-	17	-	17	-	-	805
WRA 15 Lower Colorado	8	5	-	-	-	-	1,100	505	21,100
WRA 16 Great Basin	170	4	2	-	-	-	14,200	144	18,865
WRA 17 Pacific Northwest	70	-	17	70	62	8	32,969	(D)	29,072
WRA 18 California	520	139	30	60	49	11	77,010	15,895	110,253
WRA 19 Alaska	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	3	-	-	-	-	-	331	-	-

Table 14. **Irrigation Wells on Farms: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Wells capable of being used		Wells used							
					With meters			With backflow prevention devices		
	Farms	Number	Farms	Number	Farms	Number	Acres irrigated	Farms	Number	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	104,776	401,193	104,776	379,674	19,063	61,259	6,712,236	62,051	215,955	18,829,398
1998 . .	110,164	418,696	102,291	374,956	21,901	64,712	(NA)	61,608	253,354	(NA)
2003 DATA										
Alabama	292	528	292	477	30	48	1,932	150	226	10,328
Alaska	54	62	54	57	5	5	(D)	17	19	934
Arizona	1,018	5,149	1,018	4,424	189	631	81,727	439	2,408	91,629
Arkansas	3,912	37,776	3,912	35,574	252	674	144,936	1,716	10,633	1,093,172
California	25,765	67,637	25,765	64,423	4,831	11,488	1,006,732	16,791	38,020	2,284,076
Colorado	2,331	11,793	2,331	10,646	685	2,899	285,397	1,666	7,403	800,857
Connecticut	102	158	102	146	1	(D)	(D)	46	64	77
Delaware	177	797	177	709	24	96	8,866	130	468	40,625
Florida	7,216	17,150	7,216	16,376	1,027	3,711	330,132	4,636	10,591	490,587
Georgia	1,839	5,533	1,839	5,083	175	371	47,126	1,280	3,453	299,652
Hawaii	84	129	84	127	26	32	10,378	30	47	22,964
Idaho	2,528	6,924	2,528	6,796	412	1,339	269,115	1,201	4,608	925,148
Illinois	1,019	3,261	1,019	3,204	53	122	15,351	687	2,581	286,126
Indiana	918	2,372	918	2,318	47	131	12,551	522	1,317	135,576
Iowa	531	1,341	531	1,223	46	76	8,912	313	758	81,436
Kansas	4,400	19,526	4,400	19,124	2,680	11,786	1,520,672	3,056	13,343	1,672,892
Kentucky	149	244	149	231	3	4	310	68	111	6,056
Louisiana	1,738	7,714	1,738	6,276	26	131	9,157	631	2,166	244,771
Maine	342	490	342	420	33	33	33	73	108	262
Maryland	290	613	290	588	6	9	887	126	350	26,979
Massachusetts	215	350	215	315	6	6	96	107	157	532
Michigan	1,612	4,217	1,612	4,031	114	255	28,048	1,025	2,755	238,298
Minnesota	1,409	3,920	1,409	3,797	514	1,330	138,268	1,065	2,939	291,659
Mississippi	1,188	9,053	1,188	8,518	19	54	13,538	610	2,052	208,779
Missouri	1,584	11,449	1,584	10,913	100	307	30,550	621	3,623	315,161
Montana	1,022	1,810	1,022	1,732	339	412	31,107	455	801	51,564
Nebraska	15,637	71,506	15,637	69,583	3,713	14,092	1,542,327	9,048	35,406	4,098,470
Nevada	616	1,986	616	1,805	262	607	77,725	274	946	137,096
New Hampshire	81	112	81	97	3	(D)	(D)	50	58	79
New Jersey	486	977	486	844	86	115	3,851	283	538	17,806
New Mexico	2,500	8,430	2,500	8,061	638	1,761	116,975	868	3,890	270,578
New York	563	998	563	704	21	37	1,403	228	293	5,678
North Carolina	564	870	564	835	10	37	2,249	296	441	10,758
North Dakota	336	1,734	336	1,636	189	775	77,237	273	1,372	118,921
Ohio	266	407	266	375	16	16	264	122	174	3,368
Oklahoma	1,288	4,540	1,288	4,192	49	125	16,168	543	2,341	238,588
Oregon	3,666	7,855	3,666	7,590	693	1,128	121,579	2,234	3,586	201,079
Pennsylvania	746	1,279	746	961	53	61	600	349	432	2,389
Rhode Island	20	36	20	36	4	8	16	4	8	16
South Carolina	702	1,239	702	1,090	16	20	2,150	210	534	18,262
South Dakota	793	1,872	793	1,838	31	44	3,927	460	1,068	138,137
Tennessee	223	344	223	320	6	21	3,680	56	109	13,421
Texas	8,693	63,602	8,693	59,955	898	4,530	437,265	6,017	46,089	3,113,295
Utah	1,128	2,632	1,128	2,316	91	223	29,281	557	1,136	119,497
Vermont	103	123	103	119	10	10	15	34	34	55
Virginia	468	911	468	704	18	52	1,760	202	361	3,589
Washington	2,857	5,626	2,857	5,070	540	1,312	230,564	1,668	3,354	371,701
West Virginia	43	77	43	49	-	-	-	32	32	102
Wisconsin	903	3,056	903	3,002	40	263	32,844	615	2,313	265,509
Wyoming	359	985	359	964	33	68	14,060	167	439	60,864
Water Resources Areas										
WRA 01 New England	830	1,236	830	1,100	52	56	172	309	424	1,016
WRA 02 Mid-Atlantic	2,537	5,137	2,537	4,242	207	354	16,991	1,206	2,321	96,703
WRA 03 South Atlantic-Gulf	10,970	25,652	10,970	24,193	1,248	4,165	382,809	6,878	15,533	826,312
WRA 04 Great Lakes	2,221	5,673	2,221	5,338	167	381	39,979	1,382	3,559	320,604
WRA 05 Ohio	1,007	2,294	1,007	2,155	33	54	11,241	577	1,338	135,472
WRA 06 Tennessee	215	286	215	257	13	(D)	1,910	59	81	4,573
WRA 07 Upper Mississippi	3,476	10,278	3,476	10,023	581	1,584	160,873	2,373	7,463	763,912
WRA 08 Lower Mississippi	6,879	56,976	6,879	53,235	318	1,011	181,009	2,795	15,970	1,696,394
WRA 09 Souris-Red-Rainy	358	1,692	358	1,618	144	590	56,153	267	1,308	108,541
WRA 10 Missouri	20,893	89,393	20,893	86,654	5,164	18,399	2,032,447	12,381	47,281	5,438,688
WRA 11 Arkansas-White-Red	7,504	45,416	7,504	42,663	2,545	11,764	1,495,818	4,761	27,448	3,148,189
WRA 12 Texas-Gulf	6,977	49,010	6,977	46,483	756	3,854	322,279	4,657	35,138	1,826,276
WRA 13 Rio Grande	2,287	8,591	2,287	7,553	778	2,245	179,988	933	3,442	291,506
WRA 14 Upper Colorado	471	533	471	532	2	(D)	(D)	5	12	1,700
WRA 15 Lower Colorado	1,331	5,834	1,331	4,953	202	708	92,203	614	2,696	108,220
WRA 16 Great Basin	1,387	4,029	1,387	3,684	356	772	102,138	774	2,005	256,575
WRA 17 Pacific Northwest	9,424	21,137	9,424	20,192	1,586	3,697	605,342	5,192	11,766	1,482,263
WRA 18 California	25,871	67,835	25,871	64,615	4,880	11,560	1,019,748	16,841	38,104	2,298,556
WRA 19 Alaska	54	62	54	57	5	5	(D)	17	19	934
WRA 20 Hawaii	84	129	84	127	26	32	10,378	30	47	22,964

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Table 14. **Irrigation Wells on Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms by number of wells used									
	1 well	2 wells	3 wells	4 wells	5 wells	6 wells	7 to 9 wells	10 to 14 wells	15 to 19 wells	20 wells or more
U.S. TOTAL . . . . . 2003 . .	51,589	17,502	8,262	5,356	3,449	2,981	6,556	4,586	2,015	2,480
1998 . .	46,526	18,276	8,910	5,306	4,569	4,095	6,103	(NA)	(NA)	(NA)
2003 DATA										
Alabama	214	53	6	8	2	-	2	6	1	-
Alaska	52	1	1	-	-	-	-	-	-	-
Arizona	589	112	55	35	33	20	35	32	14	93
Arkansas	461	447	307	259	319	271	574	549	294	431
California	16,515	3,274	1,667	1,022	352	506	1,355	581	308	185
Colorado	677	341	291	199	214	136	194	168	47	64
Connecticut	92	-	2	-	-	8	-	-	-	-
Delaware	40	46	24	11	13	11	18	9	4	1
Florida	4,459	1,394	496	388	138	80	66	87	44	64
Georgia	1,007	340	152	80	54	51	58	54	20	23
Hawaii	63	10	10	-	-	-	-	1	-	-
Idaho	1,472	444	158	117	89	35	104	68	12	29
Illinois	473	188	104	54	45	34	54	40	17	10
Indiana	477	193	78	59	27	24	38	10	2	10
Iowa	285	101	44	47	29	1	7	13	4	-
Kansas	1,360	674	485	448	329	177	495	276	73	83
Kentucky	108	22	13	-	1	1	4	-	-	-
Louisiana	621	273	232	190	129	50	131	66	31	15
Maine	271	68	-	2	1	-	-	-	-	-
Maryland	196	40	15	13	5	4	7	9	1	-
Massachusetts	144	65	-	-	3	1	-	2	-	-
Michigan	982	295	90	52	34	37	68	33	6	15
Minnesota	803	262	121	58	26	19	50	33	18	19
Mississippi	404	59	100	69	61	78	116	132	63	106
Missouri	537	137	157	77	59	57	164	185	81	130
Montana	557	361	48	25	1	23	3	4	-	-
Nebraska	4,476	3,337	1,880	922	728	664	1,891	1,105	322	312
Nevada	313	145	25	21	39	14	28	15	9	7
New Hampshire	65	16	-	-	-	-	-	-	-	-
New Jersey	349	53	39	19	7	4	11	4	-	-
New Mexico	1,388	516	93	77	94	45	114	87	32	54
New York	490	36	20	6	8	3	-	-	-	-
North Carolina	487	21	39	-	3	2	6	4	-	2
North Dakota	103	74	41	28	11	8	29	14	12	16
Ohio	202	36	23	-	-	4	1	-	-	-
Oklahoma	655	259	97	76	42	24	44	38	20	33
Oregon	2,057	1,090	189	112	40	42	73	29	13	21
Pennsylvania	601	101	38	2	-	2	1	-	1	-
Rhode Island	12	4	-	4	-	-	-	-	-	-
South Carolina	492	157	18	9	4	13	5	2	-	2
South Dakota	407	208	51	27	19	42	21	15	2	1
Tennessee	196	9	5	7	2	1	-	2	-	1
Texas	2,546	1,268	700	598	373	426	696	831	544	711
Utah	770	100	77	83	52	9	16	16	3	2
Vermont	87	16	-	-	-	-	-	-	-	-
Virginia	266	197	-	-	1	3	-	-	-	1
Washington	2,020	411	191	101	36	24	29	30	4	11
West Virginia	37	6	-	-	-	-	-	-	-	-
Wisconsin	527	140	63	47	22	18	31	24	6	25
Wyoming	184	102	17	4	4	9	17	12	7	3
Water Resources Areas										
WRA 01 New England	638	169	2	6	4	9	-	2	-	-
WRA 02 Mid-Atlantic	1,804	429	128	51	34	24	37	22	6	2
WRA 03 South Atlantic-Gulf	7,025	1,962	708	485	199	146	136	153	65	91
WRA 04 Great Lakes	1,415	370	126	66	43	46	84	39	10	22
WRA 05 Ohio	618	180	76	37	20	32	26	8	6	4
WRA 06 Tennessee	191	16	5	-	2	-	1	-	-	-
WRA 07 Upper Mississippi	1,843	683	295	163	105	70	141	94	34	48
WRA 08 Lower Mississippi	1,336	736	662	535	534	404	828	827	428	589
WRA 09 Souris-Red-Rainy	156	50	29	34	11	9	30	16	7	16
WRA 10 Missouri	6,794	4,237	2,488	1,234	1,004	859	2,227	1,288	388	374
WRA 11 Arkansas-White-Red	1,911	1,284	629	859	426	394	659	677	323	342
WRA 12 Texas-Gulf	2,365	983	577	320	348	244	604	581	354	601
WRA 13 Rio Grande	1,133	486	143	75	73	66	139	99	30	43
WRA 14 Upper Colorado	454	6	-	-	-	11	-	-	-	-
WRA 15 Lower Colorado	862	125	55	35	48	20	43	33	15	95
WRA 16 Great Basin	746	232	102	104	81	23	50	30	12	7
WRA 17 Pacific Northwest	5,610	2,237	555	321	165	117	194	135	29	61
WRA 18 California	16,573	3,306	1,671	1,031	352	507	1,357	581	308	185
WRA 19 Alaska	52	1	1	-	-	-	-	-	-	-
WRA 20 Hawaii	63	10	10	-	-	-	-	1	-	-

Table 15. **Irrigation Wells Used on Farms: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	All wells used		Flowing or artesian wells used		Change in average depth to water [1]			
					Increasing		Decreasing	
	Farms	Number	Farms	Number	Farms	Number of wells	Farms	Number of wells
U.S. TOTAL . . . . . 2003 . .	104,776	379,674	1,895	3,823	13,228	64,821	12,171	72,085
1998 . .	102,291	374,956	3,120	6,010	(NA)	(NA)	(NA)	(NA)
2003 DATA								
Alabama	292	477	-	-	7	7	11	13
Alaska	54	57	-	-	8	8	-	-
Arizona	1,018	4,424	3	9	485	1,275	67	466
Arkansas	3,912	35,574	12	19	561	5,812	613	6,204
California	25,765	64,423	1,281	2,582	3,860	12,083	1,477	4,847
Colorado	2,331	10,646	68	154	759	3,848	614	3,201
Connecticut	102	146	8	24	-	-	26	26
Delaware	177	709	-	-	2	(D)	5	22
Florida	7,216	16,376	104	339	167	769	264	637
Georgia	1,839	5,083	2	(D)	86	208	97	212
Hawaii	84	127	-	-	9	9	8	16
Idaho	2,528	6,796	27	52	994	2,579	336	1,234
Illinois	1,019	3,204	18	23	9	23	8	55
Indiana	918	2,318	2	(D)	12	40	5	8
Iowa	531	1,223	4	4	14	83	14	36
Kansas	4,400	19,124	-	-	964	4,348	1,151	5,358
Kentucky	149	231	-	-	-	-	7	21
Louisiana	1,738	6,276	-	-	81	295	66	396
Maine	342	420	35	37	-	-	-	-
Maryland	290	588	-	-	10	42	2	(D)
Massachusetts	215	315	32	32	-	-	-	-
Michigan	1,612	4,031	9	11	9	79	28	63
Minnesota	1,409	3,797	18	23	24	56	41	126
Mississippi	1,188	8,518	19	66	60	777	68	663
Missouri	1,584	10,913	-	-	33	433	81	384
Montana	1,022	1,732	17	34	5	12	71	101
Nebraska	15,637	69,583	-	-	2,188	10,972	3,238	17,491
Nevada	616	1,805	2	(D)	130	411	153	464
New Hampshire	81	97	6	6	-	-	3	3
New Jersey	486	844	-	-	7	45	19	70
New Mexico	2,500	8,061	39	97	345	2,029	313	1,943
New York	563	704	6	6	-	-	5	(D)
North Carolina	564	835	-	-	-	-	-	-
North Dakota	336	1,636	-	-	23	103	34	443
Ohio	266	375	3	3	-	-	13	13
Oklahoma	1,288	4,192	-	-	131	425	201	835
Oregon	3,666	7,590	32	74	78	217	79	247
Pennsylvania	746	961	-	-	46	89	8	10
Rhode Island	20	36	4	8	-	-	-	-
South Carolina	702	1,090	2	(D)	2	(D)	3	19
South Dakota	793	1,838	-	-	12	42	66	111
Tennessee	223	320	-	-	2	(D)	-	-
Texas	8,693	59,955	1	(D)	1,380	15,782	2,444	25,276
Utah	1,128	2,316	51	105	230	870	351	500
Vermont	103	119	16	16	5	10	-	-
Virginia	468	704	58	58	-	-	58	58
Washington	2,857	5,070	-	-	437	784	62	223
West Virginia	43	49	-	-	8	8	-	-
Wisconsin	903	3,002	-	-	8	88	8	114
Wyoming	359	964	16	30	37	142	53	167
Water Resources Areas								
WRA 01 New England	830	1,100	101	123	5	10	29	29
WRA 02 Mid-Atlantic	2,537	4,242	64	64	34	118	89	161
WRA 03 South Atlantic-Gulf	10,970	24,193	108	343	262	992	375	881
WRA 04 Great Lakes	2,221	5,338	12	14	13	145	51	95
WRA 05 Ohio	1,007	2,155	6	10	40	(D)	6	9
WRA 06 Tennessee	215	257	-	-	-	-	-	-
WRA 07 Upper Mississippi	3,476	10,023	29	30	50	155	52	259
WRA 08 Lower Mississippi	6,879	53,235	26	80	622	6,367	686	6,651
WRA 09 Souris-Red-Rainy	358	1,618	7	12	17	78	25	381
WRA 10 Missouri	20,893	86,654	16	30	2,932	14,213	4,081	21,357
WRA 11 Arkansas-White-Red	7,504	42,663	9	14	1,630	9,660	1,995	13,275
WRA 12 Texas-Gulf	6,977	46,483	-	-	861	12,146	1,914	19,662
WRA 13 Rio Grande	2,287	7,553	104	245	526	2,618	268	1,261
WRA 14 Upper Colorado	471	532	-	-	1	(D)	76	76
WRA 15 Lower Colorado	1,331	4,953	3	9	490	1,300	219	680
WRA 16 Great Basin	1,387	3,684	60	128	376	1,277	281	697
WRA 17 Pacific Northwest	9,424	20,192	67	137	1,488	3,559	528	1,737
WRA 18 California	25,871	64,615	1,283	2,584	3,864	12,087	1,488	4,858
WRA 19 Alaska	54	57	-	-	8	8	-	-
WRA 20 Hawaii	84	127	-	-	9	9	8	16

See footnote(s) at end of table.

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Table 15. **Irrigation Wells Used on Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	All pumped wells [2]								
	Farms	Number	Average well depth (feet)	Average depth to water [3] (feet)	Average pumping depth [4] (feet)	Average pumping capcity (gpm)	Average operating pressure (psi)	Average engine size (hp)	Average hours of operation (hours)
U.S. TOTAL . . . . . 2003 . .	104,776	375,851	238	97	158	819	37	78	1,039
1998 . .	102,291	368,946	238	93	148	844	37	(NA)	(NA)
2003 DATA									
Alabama	292	477	155	48	108	431	47	43	477
Alaska	54	57	130	85	106	287	59	20	173
Arizona	1,018	4,415	604	237	355	1,008	33	138	3,024
Arkansas	3,912	35,555	121	47	79	1,335	33	65	691
California	25,765	61,841	328	106	182	895	37	64	1,016
Colorado	2,331	10,492	178	78	120	738	35	63	1,472
Connecticut	102	122	135	69	104	125	35	8	241
Delaware	177	709	127	40	79	725	44	85	175
Florida	7,216	16,037	365	91	152	716	39	71	487
Georgia	1,839	(D)	305	91	153	716	51	90	368
Hawaii	84	127	228	135	180	1,418	50	107	1,188
Idaho	2,528	6,744	295	151	198	1,360	59	167	1,582
Illinois	1,019	3,181	111	34	68	873	43	72	459
Indiana	918	(D)	83	27	56	671	47	67	374
Iowa	531	1,219	115	30	70	738	43	57	318
Kansas	4,400	19,124	222	110	187	680	29	108	1,431
Kentucky	149	231	129	71	98	488	40	36	194
Louisiana	1,738	6,276	134	45	94	1,523	22	90	513
Maine	342	383	193	79	124	531	42	16	194
Maryland	290	588	134	46	84	490	42	52	214
Massachusetts	215	283	64	32	50	210	41	11	292
Michigan	1,612	4,020	121	41	86	556	67	66	467
Minnesota	1,409	3,774	130	37	77	635	49	61	539
Mississippi	1,188	8,452	115	41	68	1,663	35	78	501
Missouri	1,584	10,913	125	24	69	1,175	26	67	356
Montana	1,022	1,698	138	41	90	347	57	38	1,421
Nebraska	15,637	69,583	199	80	143	839	42	88	774
Nevada	616	(D)	344	97	176	1,213	39	119	2,044
New Hampshire	81	91	287	65	170	152	45	6	159
New Jersey	486	844	128	43	77	413	64	50	321
New Mexico	2,500	7,964	253	114	170	718	30	58	1,741
New York	563	698	88	40	62	243	56	37	188
North Carolina	564	835	156	64	112	121	40	10	574
North Dakota	336	1,636	93	36	69	640	46	54	619
Ohio	266	372	123	59	91	244	48	18	459
Oklahoma	1,288	4,192	220	113	182	611	33	130	1,527
Oregon	3,666	7,516	247	108	174	550	58	45	1,152
Pennsylvania	746	961	245	107	172	68	46	5	311
Rhode Island	20	28	213	127	181	22	23	3	1,019
South Carolina	702	(D)	175	49	97	327	41	21	216
South Dakota	793	1,838	132	41	90	713	51	61	786
Tennessee	223	320	158	52	99	760	39	51	181
Texas	8,693	(D)	292	173	244	358	25	80	1,678
Utah	1,128	2,211	317	87	166	904	42	70	1,590
Vermont	103	103	145	58	92	79	38	2	251
Virginia	468	646	256	98	178	155	57	5	161
Washington	2,857	5,070	298	117	207	681	63	88	1,497
West Virginia	43	49	276	68	201	108	48	2	417
Wisconsin	903	3,002	155	44	96	844	62	84	631
Wyoming	359	934	257	99	186	865	41	81	1,220
Water Resources Areas									
WRA 01 New England	830	977	152	63	104	305	41	11	252
WRA 02 Mid-Atlantic	2,537	4,178	169	65	113	343	52	38	248
WRA 03 South Atlantic-Gulf	10,970	23,850	328	86	145	661	42	69	446
WRA 04 Great Lakes	2,221	5,324	123	42	86	575	65	67	457
WRA 05 Ohio	1,007	2,145	102	37	69	667	47	61	360
WRA 06 Tennessee	215	257	147	63	101	394	42	27	423
WRA 07 Upper Mississippi	3,476	9,993	132	39	80	742	49	68	502
WRA 08 Lower Mississippi	6,879	53,155	121	42	78	1,416	31	73	578
WRA 09 Souris-Red-Rainy	358	1,606	93	28	63	646	47	54	632
WRA 10 Missouri	20,893	86,624	196	81	143	812	41	86	878
WRA 11 Arkansas-White-Red	7,504	42,649	264	149	225	661	28	114	1,506
WRA 12 Texas-Gulf	6,977	46,483	257	146	206	328	26	55	1,636
WRA 13 Rio Grande	2,287	7,308	240	82	135	940	31	62	1,330
WRA 14 Upper Colorado	471	532	82	38	59	522	41	12	1,407
WRA 15 Lower Colorado	1,331	4,944	573	222	333	973	34	130	2,813
WRA 16 Great Basin	1,387	3,556	353	97	183	1,126	40	104	1,924
WRA 17 Pacific Northwest	9,424	20,055	266	120	184	819	59	94	1,388
WRA 18 California	25,871	62,031	328	106	182	897	37	64	1,019
WRA 19 Alaska	54	57	130	85	106	287	59	20	173
WRA 20 Hawaii	84	127	228	135	180	1,418	50	107	1,188

[1] Increases and decreases in depth are reported over a five year period.
[2] Data do not include flowing or artesian wells.
[3] Depth at the start of the irrigation season.
[4] Depth to bowls or impellers.

Table 16. **Average Well Characteristics for Irrigation Wells Used on Farms: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Average well depth [1]				Number of wells for farms with an average pumping depth of -					
	For all pumped wells (feet)	For farms with one well (feet)	For farms with two wells (feet)	For farms with three wells (feet)	Under 50 feet	50 to 99 feet	100 to 199 feet	200 to 299 feet	300 to 499 feet	500 feet or more
U.S. TOTAL . . . . . 2003 . .	238	259	251	253	14,819	51,353	138,403	69,959	71,238	30,079
1998 . .	238	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA										
Alabama	155	165	171	230	14	81	260	48	72	2
Alaska	130	138	30	55	10	15	24	-	8	-
Arizona	604	424	340	546	-	376	757	376	354	2,552
Arkansas	121	100	133	113	482	8,285	25,793	727	52	216
California	328	360	241	279	635	3,063	15,609	16,761	15,556	10,217
Colorado	178	148	189	220	1,136	2,293	3,467	1,167	2,239	190
Connecticut	135	164	-	44	59	8	35	8	1	11
Delaware	127	98	77	105	14	205	457	15	-	18
Florida	365	222	443	439	2,220	863	3,946	2,406	2,212	4,390
Georgia	305	407	381	319	80	67	1,796	986	1,266	886
Hawaii	228	177	395	232	14	-	53	39	13	8
Idaho	295	214	265	412	1	397	2,449	1,413	1,576	908
Illinois	111	143	107	107	115	1,412	1,467	76	82	29
Indiana	83	100	82	91	493	1,045	728	45	5	-
Iowa	115	179	118	94	119	421	563	66	30	20
Kansas	222	147	165	214	1,125	2,551	5,421	6,037	2,640	1,350
Kentucky	129	123	158	143	14	82	95	39	1	-
Louisiana	134	156	166	147	354	1,344	3,547	850	120	61
Maine	193	233	34	-	66	37	106	74	67	33
Maryland	134	170	190	92	43	307	142	44	22	30
Massachusetts	64	81	27	-	146	66	65	-	6	-
Michigan	121	130	122	109	507	1,246	1,770	376	105	16
Minnesota	130	165	119	118	269	1,486	1,440	234	314	31
Mississippi	115	94	131	103	176	1,387	6,765	44	43	37
Missouri	125	301	236	194	57	4,426	5,762	28	306	334
Montana	138	116	140	151	142	699	264	448	121	24
Nebraska	199	203	228	202	2,325	9,836	24,536	20,489	11,743	654
Nevada	344	249	300	389	-	94	224	246	814	425
New Hampshire	287	284	298	-	16	3	20	8	20	24
New Jersey	128	125	136	129	34	156	617	22	15	-
New Mexico	253	166	194	274	273	801	3,031	1,421	1,562	876
New York	88	86	87	90	96	356	225	12	9	-
North Carolina	156	140	161	229	-	320	344	11	160	-
North Dakota	93	119	113	107	264	663	683	20	6	-
Ohio	123	129	101	64	64	126	128	25	17	12
Oklahoma	220	174	241	255	510	623	1,059	575	1,267	158
Oregon	247	236	256	222	1,268	478	1,761	1,523	2,097	389
Pennsylvania	245	249	249	244	67	78	203	283	285	45
Rhode Island	213	223	205	-	4	-	4	16	4	-
South Carolina	175	125	202	290	119	259	195	385	112	18
South Dakota	132	144	140	108	285	482	702	174	139	56
Tennessee	158	149	141	199	-	74	155	52	31	8
Texas	292	323	352	435	213	2,641	18,699	10,374	23,533	4,492
Utah	317	244	444	254	3	326	316	497	605	464
Vermont	145	145	-	-	29	21	19	16	13	5
Virginia	256	250	283	-	-	89	129	197	134	97
Washington	298	244	437	312	772	668	1,039	774	949	868
West Virginia	276	304	190	-	6	5	19	5	-	14
Wisconsin	155	176	191	171	93	968	1,253	374	279	35
Wyoming	257	281	369	140	87	124	261	153	233	76
Water Resources Areas										
WRA 01 New England	152	181	77	44	320	125	237	116	111	68
WRA 02 Mid-Atlantic	169	187	198	153	231	1,032	1,747	579	386	203
WRA 03 South Atlantic-Gulf	328	227	403	399	2,433	1,972	6,492	3,834	3,823	5,296
WRA 04 Great Lakes	123	128	121	116	564	1,644	2,449	473	175	19
WRA 05 Ohio	102	115	136	78	336	1,127	495	44	120	23
WRA 06 Tennessee	147	137	187	146	-	50	146	37	24	-
WRA 07 Upper Mississippi	132	171	126	130	760	3,955	3,787	656	714	121
WRA 08 Lower Mississippi	121	132	148	124	882	12,172	37,764	1,705	254	378
WRA 09 Souris-Red-Rainy	93	109	108	98	241	712	621	26	6	-
WRA 10 Missouri	196	189	223	193	3,586	13,622	29,196	24,644	14,424	1,152
WRA 11 Arkansas-White-Red	264	208	251	272	2,217	5,204	10,781	5,816	14,904	3,727
WRA 12 Texas-Gulf	257	311	312	433	153	2,288	19,623	8,719	13,367	2,333
WRA 13 Rio Grande	240	195	184	309	52	1,521	2,621	1,324	944	846
WRA 14 Upper Colorado	82	64	360	-	221	151	138	8	12	2
WRA 15 Lower Colorado	573	391	319	546	-	542	818	417	535	2,632
WRA 16 Great Basin	353	303	378	283	3	120	410	812	1,272	939
WRA 17 Pacific Northwest	266	222	271	297	2,151	2,021	5,360	3,937	4,546	2,040
WRA 18 California	328	361	244	279	645	3,080	15,641	16,773	15,600	10,292
WRA 19 Alaska	130	138	30	55	10	15	24	-	8	-
WRA 20 Hawaii	228	177	395	232	14	-	53	39	13	8

See footnote(s) at end of table.

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Table 16. **Average Well Characteristics for Irrigation Wells Used on Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Average depth to water				Number of wells for farms with an average depth to water of -					
	For all pumped wells (feet)	For farms with one well (feet)	For farms with two wells (feet)	For farms with three wells (feet)	Under 50 feet	50 to 99 feet	100 to 199 feet	200 to 299 feet	300 to 499 feet	500 feet or more
U.S. TOTAL . . . . . 2003 . .	97	103	101	87	147,720	99,506	78,105	30,900	17,414	2,206
1998 . .	93	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA										
Alabama	48	57	41	81	343	90	28	14	2	-
Alaska	85	92	11	12	26	11	12	8	-	-
Arizona	237	264	127	161	567	944	538	678	1,541	147
Arkansas	47	37	44	46	23,145	10,485	1,697	40	118	70
California	106	148	74	80	15,492	25,807	13,119	2,899	3,322	1,202
Colorado	78	77	108	87	4,597	2,706	2,436	699	54	-
Connecticut	69	86	-	19	70	20	22	1	9	-
Delaware	40	35	38	41	490	198	3	-	18	-
Florida	91	90	122	104	8,730	3,169	1,967	383	1,584	204
Georgia	91	95	118	103	1,694	1,542	1,533	273	37	2
Hawaii	135	109	269	112	64	21	22	3	9	8
Idaho	151	92	119	191	1,505	1,542	1,730	1,046	831	90
Illinois	34	54	33	32	2,721	335	95	30	-	-
Indiana	27	39	24	22	2,084	200	32	-	-	-
Iowa	30	54	34	18	1,044	118	44	4	9	-
Kansas	110	67	89	90	6,662	3,473	5,739	2,621	629	-
Kentucky	71	68	105	76	108	73	36	14	-	-
Louisiana	45	55	62	54	4,279	1,330	632	35	-	-
Maine	79	95	16	-	144	136	33	70	-	-
Maryland	46	62	74	34	417	124	14	29	4	-
Massachusetts	32	43	15	-	218	33	32	-	-	-
Michigan	41	56	45	34	2,999	714	271	36	-	-
Minnesota	37	51	36	38	3,053	473	188	37	23	-
Mississippi	41	33	44	39	5,564	2,727	139	20	-	2
Missouri	24	102	36	34	10,176	225	406	34	21	51
Montana	41	48	33	23	1,415	114	82	87	-	-
Nebraska	80	81	102	85	25,401	21,905	19,391	2,886	-	-
Nevada	97	97	104	111	470	479	762	74	18	-
New Hampshire	65	74	33	-	55	13	17	3	3	-
New Jersey	43	58	69	37	559	209	63	13	-	-
New Mexico	114	69	107	110	1,769	2,784	1,903	998	510	-
New York	40	40	34	25	545	135	12	6	-	-
North Carolina	64	61	69	55	241	397	197	-	-	-
North Dakota	36	38	42	27	1,285	258	87	6	-	-
Ohio	59	62	59	34	221	84	40	27	-	-
Oklahoma	113	83	128	149	1,547	800	990	465	388	2
Oregon	108	93	163	77	3,873	1,083	1,217	511	796	36
Pennsylvania	107	129	69	80	276	287	219	140	6	33
Rhode Island	127	160	103	-	4	12	8	-	4	-
South Carolina	49	41	33	103	662	282	131	4	9	-
South Dakota	41	48	54	44	1,439	191	196	12	-	-
Tennessee	52	56	85	23	208	53	54	2	3	-
Texas	173	95	183	156	5,906	11,502	19,401	15,973	7,047	123
Utah	87	61	67	102	779	251	1,118	61	2	-
Vermont	58	58	-	-	72	2	22	6	1	-
Virginia	98	103	102	-	286	66	251	37	6	-
Washington	117	105	188	90	2,209	1,013	703	509	410	226
West Virginia	68	71	60	-	8	28	13	-	-	-
Wisconsin	44	55	35	51	1,990	802	174	32	-	4
Wyoming	99	96	135	83	308	260	286	74	-	6
Water Resources Areas										
WRA 01 New England	63	77	25	19	536	216	128	80	17	-
WRA 02 Mid-Atlantic	65	85	71	49	2,378	1,011	500	225	31	33
WRA 03 South Atlantic-Gulf	86	81	111	101	12,034	5,453	3,851	674	1,632	206
WRA 04 Great Lakes	42	52	46	32	3,956	993	339	36	-	-
WRA 05 Ohio	37	49	47	26	1,742	214	151	32	6	-
WRA 06 Tennessee	63	50	133	73	130	73	40	14	-	-
WRA 07 Upper Mississippi	39	56	33	39	7,761	1,536	550	94	48	4
WRA 08 Lower Mississippi	42	46	49	45	36,443	13,896	2,529	97	118	72
WRA 09 Souris-Red-Rainy	28	31	38	26	1,438	123	41	4	-	-
WRA 10 Missouri	81	76	99	82	33,141	24,922	24,383	4,151	21	6
WRA 11 Arkansas-White-Red	149	105	153	141	13,532	5,285	8,727	9,116	5,910	79
WRA 12 Texas-Gulf	146	84	137	122	5,510	11,897	16,424	10,036	2,519	97
WRA 13 Rio Grande	82	75	91	75	2,884	2,589	1,131	525	179	-
WRA 14 Upper Colorado	38	31	217	-	377	67	82	2	4	-
WRA 15 Lower Colorado	222	209	121	161	801	978	774	703	1,541	147
WRA 16 Great Basin	97	82	88	103	886	704	1,811	135	20	-
WRA 17 Pacific Northwest	120	94	141	111	8,510	3,655	3,439	2,062	2,037	352
WRA 18 California	106	148	74	80	15,571	25,862	13,171	2,903	3,322	1,202
WRA 19 Alaska	85	92	11	12	26	11	12	8	-	-
WRA 20 Hawaii	135	109	269	112	64	21	22	3	9	8

[1] Data do not include flowing or artesian wells.

Table 17. **Irrigation Pumps on Farms: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms	Total pumps [1]	Farms with -									
			1 pump	2 pumps	3 pumps	4 pumps	5 pumps	6 or 7 pumps	8 or 9 pumps	10 to 19 pumps	20 to 29 pumps	30 pumps or more
U.S. TOTAL . . . . . 2003 . .	152,443	525,570	74,429	29,530	12,512	8,191	4,788	6,582	4,528	8,491	2,001	1,391
1998 . .	140,435	505,448	63,888	26,983	12,443	7,898	5,829	7,587	4,638	(NA)	(NA)	(NA)
2003 DATA												
Alabama	474	867	310	88	28	21	11	5	1	10	-	-
Alaska	59	62	57	1	1	-	-	-	-	-	-	-
Arizona	1,095	5,838	548	156	50	79	34	30	28	71	21	78
Arkansas	4,620	42,237	625	495	434	383	302	530	367	935	320	229
California	31,423	88,887	18,065	5,153	2,840	1,266	749	908	527	1,509	248	158
Colorado	4,515	15,655	1,949	846	401	293	235	322	147	235	72	15
Connecticut	189	277	145	29	3	2	8	1	-	1	-	-
Delaware	213	792	64	52	27	9	13	22	12	12	2	-
Florida	8,155	18,824	4,914	1,683	569	455	143	141	49	134	26	41
Georgia	2,780	7,706	1,468	520	232	163	71	130	64	100	21	11
Hawaii	297	494	233	30	21	3	4	-	3	1	-	2
Idaho	8,112	21,950	4,513	2,048	322	343	156	190	155	287	46	52
Illinois	1,122	3,386	564	196	101	55	45	60	30	59	9	3
Indiana	1,169	2,900	582	281	88	82	36	53	23	14	7	3
Iowa	651	1,391	372	128	44	53	29	4	4	17	-	-
Kansas	4,705	21,741	1,266	822	620	428	327	387	380	375	62	38
Kentucky	789	1,059	609	141	14	11	9	3	2	-	-	-
Louisiana	2,106	10,075	696	323	212	202	145	187	118	151	15	57
Maine	471	686	330	120	7	3	5	3	-	3	-	-
Maryland	438	978	257	51	50	43	13	7	2	15	-	-
Massachusetts	648	1,726	332	172	36	38	20	25	-	14	6	5
Michigan	2,264	6,598	1,262	357	200	119	44	112	53	83	21	13
Minnesota	1,601	4,307	860	324	151	79	38	45	28	57	14	5
Mississippi	1,555	9,244	757	77	87	78	62	106	69	202	71	46
Missouri	1,962	11,707	688	307	177	92	58	115	123	271	77	54
Montana	3,876	8,276	1,891	1,130	249	277	164	87	35	39	2	2
Nebraska	16,104	76,912	4,117	3,680	1,624	1,367	459	1,284	1,380	1,788	276	129
Nevada	750	2,215	407	144	39	26	30	44	19	33	3	5
New Hampshire	141	214	95	29	7	10	-	-	-	-	-	-
New Jersey	706	1,494	427	120	72	28	17	16	16	7	2	1
New Mexico	2,522	8,369	1,174	748	88	87	102	83	67	115	34	24
New York	858	1,546	488	251	42	32	22	19	-	2	2	-
North Carolina	1,981	3,406	1,388	349	95	65	28	5	27	21	-	3
North Dakota	471	1,923	163	121	50	40	12	23	18	28	11	5
Ohio	455	654	353	60	26	3	7	2	3	1	-	-
Oklahoma	1,796	5,258	924	391	107	152	45	54	27	62	22	12
Oregon	10,777	22,709	6,236	2,753	483	252	461	331	78	131	23	29
Pennsylvania	1,375	2,258	879	260	145	77	4	3	4	3	-	-
Rhode Island	33	56	20	9	2	-	-	2	-	-	-	-
South Carolina	940	1,704	540	285	37	34	17	15	1	9	2	-
South Dakota	1,047	2,539	515	264	84	57	27	67	8	21	1	3
Tennessee	564	849	419	101	23	9	4	2	-	4	2	-
Texas	10,858	67,227	3,525	1,777	1,220	580	449	776	367	1,364	506	294
Utah	2,522	5,596	1,405	491	326	142	81	21	16	20	1	19
Vermont	134	159	110	23	1	-	-	-	-	-	-	-
Virginia	837	1,406	517	234	36	25	10	3	8	2	2	-
Washington	9,194	22,745	5,607	1,421	700	499	229	216	227	209	52	34
West Virginia	73	96	54	18	-	-	-	1	-	-	-	-
Wisconsin	1,330	5,294	670	216	87	73	51	107	34	55	16	21
Wyoming	1,686	3,278	1,039	255	254	56	12	35	8	21	6	-
Water Resources Areas												
WRA 01 New England	1,553	3,043	981	370	56	53	33	31	-	18	6	5
WRA 02 Mid-Atlantic	3,593	7,094	2,105	750	338	188	67	57	42	39	6	1
WRA 03 South Atlantic-Gulf	14,944	33,186	9,182	2,959	972	746	273	293	142	273	49	55
WRA 04 Great Lakes	3,334	8,971	1,903	590	246	179	65	143	64	100	28	16
WRA 05 Ohio	2,222	3,715	1,583	390	86	56	26	44	19	14	2	2
WRA 06 Tennessee	785	1,079	594	153	19	5	6	4	-	4	-	-
WRA 07 Upper Mississippi	4,205	12,997	2,126	845	353	207	142	213	101	157	36	25
WRA 08 Lower Mississippi	7,658	62,637	1,394	922	643	663	510	802	591	1,366	426	341
WRA 09 Souris-Red-Rainy	473	1,860	222	65	50	37	17	25	16	25	10	6
WRA 10 Missouri	26,095	106,688	8,608	5,630	2,809	2,058	950	1,775	1,672	2,085	347	161
WRA 11 Arkansas-White-Red	8,835	47,777	2,530	1,523	793	909	443	775	414	1,067	235	146
WRA 12 Texas-Gulf	9,144	52,961	3,344	1,525	1,106	337	398	515	316	937	421	245
WRA 13 Rio Grande	2,279	7,641	1,137	449	178	86	79	89	74	135	41	11
WRA 14 Upper Colorado	2,537	4,299	1,467	814	104	41	14	76	21	-	-	-
WRA 15 Lower Colorado	1,489	6,755	671	326	124	79	49	34	32	73	21	80
WRA 16 Great Basin	2,813	6,784	1,775	355	210	189	104	68	22	64	4	22
WRA 17 Pacific Northwest	27,817	66,973	15,832	6,573	1,503	1,066	830	708	458	611	121	115
WRA 18 California	32,311	90,554	18,685	5,260	2,900	1,289	778	930	541	1,522	248	158
WRA 19 Alaska	59	62	57	1	1	-	-	-	-	-	-	-
WRA 20 Hawaii	297	494	233	30	21	3	4	-	3	1	-	2

[1] Data include only well pumps for wells used.

Table 18. **Irrigation Pumps on Farms for Wells Used: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms	Pumps [1]	Average pumping capacity (discharge from well)				Number of well pumps for farms with an average pumping capacity of -						
			For all pumped wells (gpm)	For farms with one well (gpm)	For farms with two wells (gpm)	For farms with three wells (gpm)	Less than 499 gpm	500 to 749 gpm	750 to 999 gpm	1,000 to 1,499 gpm	1,500 to 1,999 gpm	2,000 or more gpm	
												Well pumps	Average gpm
U.S. TOTAL . . . . . 2003 . .	104,776	375,851	819	623	694	825	116,414	63,720	79,669	65,311	25,725	25,012	2,401
1998 . .	102,291	368,946	844	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA													
Alabama	292	477	431	262	180	611	317	43	24	65	23	5	2,000
Alaska	54	57	287	283	305	350	53	-	2	2	-	-	-
Arizona	1,018	4,415	1,008	740	802	838	527	1,613	506	1,016	236	517	2,511
Arkansas	3,912	35,555	1,335	1,633	1,528	1,458	3,982	1,617	4,087	11,115	7,888	6,866	2,380
California	25,765	61,841	895	772	619	734	19,297	4,961	11,144	16,780	4,166	5,493	2,183
Colorado	2,331	10,492	738	1,015	574	804	2,684	2,402	2,849	1,858	461	238	2,390
Connecticut	102	122	125	151	-	46	122	-	-	-	-	-	-
Delaware	177	709	725	664	419	862	128	179	346	50	-	6	2,700
Florida	7,216	16,037	716	395	663	638	5,971	4,827	1,488	1,637	862	1,252	2,580
Georgia	1,839	(D)	716	408	507	745	1,712	733	880	1,447	261	48	2,671
Hawaii	84	127	1,418	603	755	968	41	-	63	-	4	19	6,207
Idaho	2,528	6,744	1,360	780	1,246	1,584	1,233	268	454	2,125	1,140	1,524	2,470
Illinois	1,019	3,181	873	707	911	936	212	688	1,188	940	106	47	2,623
Indiana	918	(D)	671	570	742	701	570	620	678	428	12	8	2,275
Iowa	531	1,219	738	581	690	792	273	163	480	267	28	8	2,550
Kansas	4,400	19,124	680	547	673	697	5,927	5,677	5,116	1,561	778	65	2,500
Kentucky	149	231	488	368	276	290	128	39	28	29	-	7	3,000
Louisiana	1,738	6,276	1,523	1,410	1,730	1,868	662	497	860	1,238	1,003	2,016	2,647
Maine	342	383	531	617	134	-	308	-	-	5	4	66	2,000
Maryland	290	588	490	352	575	402	269	158	126	35	-	-	-
Massachusetts	215	283	210	94	60	-	232	12	19	20	-	-	-
Michigan	1,612	4,020	556	419	344	568	1,339	1,247	1,089	309	36	-	-
Minnesota	1,409	3,774	635	548	582	585	854	1,489	1,247	168	16	-	-
Mississippi	1,188	8,452	1,663	215	1,750	1,894	596	261	297	2,441	1,663	3,194	2,445
Missouri	1,584	10,913	1,175	608	1,194	997	702	516	2,991	4,136	1,366	1,202	2,507
Montana	1,022	1,698	347	451	145	461	1,266	132	98	159	12	31	2,661
Nebraska	15,637	69,583	839	825	774	834	4,420	17,390	33,862	10,496	3,340	75	2,496
Nevada	616	(D)	1,213	828	1,064	1,211	207	150	322	590	261	273	2,460
New Hampshire	81	91	152	193	8	-	82	3	6	-	-	-	-
New Jersey	486	844	413	336	484	400	481	299	32	27	3	2	3,700
New Mexico	2,500	7,964	718	430	654	1,306	3,147	2,531	475	629	728	454	2,368
New York	563	698	243	188	442	302	604	87	4	3	-	-	-
North Carolina	564	835	121	70	272	188	806	13	16	-	-	-	-
North Dakota	336	1,636	640	832	798	646	471	365	689	93	6	12	3,000
Ohio	266	372	244	243	133	103	309	42	8	12	1	-	-
Oklahoma	1,288	4,192	611	444	604	898	1,847	1,109	681	244	235	76	2,389
Oregon	3,666	7,516	550	236	498	705	4,222	1,146	479	1,295	261	113	2,416
Pennsylvania	746	961	68	46	63	95	937	24	-	-	-	-	-
Rhode Island	20	28	22	45	5	-	28	-	-	-	-	-	-
South Carolina	702	(D)	327	166	391	348	896	65	49	78	-	-	-
South Dakota	793	1,838	713	678	629	718	321	493	795	210	19	-	-
Tennessee	223	320	760	413	1,033	800	88	107	19	71	16	19	2,511
Texas	8,693	(D)	358	559	524	535	44,272	9,769	3,447	1,371	311	782	2,554
Utah	1,128	2,211	904	810	1,034	978	548	312	350	712	47	242	2,304
Vermont	103	103	79	79	-	-	103	-	-	-	-	-	-
Virginia	468	646	155	129	150	-	638	-	8	-	-	-	-
Washington	2,857	5,070	681	516	797	657	2,255	999	637	515	354	310	2,457
West Virginia	43	49	108	139	10	-	49	-	-	-	-	-	-
Wisconsin	903	3,002	844	618	820	883	219	432	1,292	1,020	33	6	2,000
Wyoming	359	934	865	817	687	1,217	59	242	438	114	45	36	2,000
Water Resources Areas													
WRA 01 New England	830	977	305	327	80	46	842	15	25	25	4	66	2,000
WRA 02 Mid-Atlantic	2,537	4,178	343	187	265	396	2,817	728	510	112	3	8	2,950
WRA 03 South Atlantic-Gulf	10,970	23,850	661	335	598	630	10,051	5,676	2,461	3,216	1,146	1,300	2,584
WRA 04 Great Lakes	2,221	5,324	575	410	402	578	1,759	1,461	1,488	564	48	4	2,200
WRA 05 Ohio	1,007	2,145	667	447	584	543	638	455	541	437	64	10	2,320
WRA 06 Tennessee	215	257	394	351	211	391	144	86	2	20	-	5	2,000
WRA 07 Upper Mississippi	3,476	9,993	742	598	724	773	1,770	2,489	3,509	2,053	95	77	2,571
WRA 08 Lower Mississippi	6,879	53,155	1,416	1,413	1,562	1,598	3,899	2,570	6,871	17,192	10,384	12,239	2,449
WRA 09 Souris-Red-Rainy	358	1,606	646	750	730	647	445	452	609	77	11	12	3,000
WRA 10 Missouri	20,893	86,624	812	789	752	799	9,063	21,574	38,806	13,054	3,894	233	2,501
WRA 11 Arkansas-White-Red	7,504	42,649	661	509	697	846	17,127	11,473	7,169	3,149	2,539	1,192	2,397
WRA 12 Texas-Gulf	6,977	46,483	328	530	535	489	37,179	4,665	2,490	1,047	487	615	2,531
WRA 13 Rio Grande	2,287	7,308	940	571	708	1,299	1,251	2,375	1,134	1,224	564	760	2,456
WRA 14 Upper Colorado	471	532	522	439	1,000	-	150	223	-	155	1	3	2,200
WRA 15 Lower Colorado	1,331	4,944	973	638	771	838	730	1,674	605	1,154	252	529	2,513
WRA 16 Great Basin	1,387	3,556	1,126	1,036	1,077	1,027	523	423	598	1,149	350	513	2,400
WRA 17 Pacific Northwest	9,424	20,055	819	448	613	913	8,613	2,420	1,637	3,842	1,661	1,882	2,454
WRA 18 California	25,871	62,031	897	775	633	736	19,319	4,961	11,149	16,839	4,218	5,545	2,187
WRA 19 Alaska	54	57	287	283	305	350	53	-	2	2	-	-	-
WRA 20 Hawaii	84	127	1,418	603	755	968	41	-	63	-	4	19	6,207

See footnote(s) at end of table.

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Table 18. **Irrigation Pumps on Farms for Wells Used: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms	Pumps [1]	Average operating pressure (at the well-head)				Number of well pumps for farms with an average operating pressure of -					
			For all pumped wells (psi)	For farms with one well (psi)	For farms with two wells (psi)	For farms with three wells (psi)	Under 30 psi	30 to 59 psi	60 to 79 psi	80 to 99 psi	100 or more psi	
											Well pumps	Average psi
U.S. TOTAL . . . . . 2003 . .	104,776	375,851	37	43	39	41	131,087	186,826	46,713	5,722	5,503	116
1998 . .	102,291	368,946	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	292	477	47	46	39	54	93	200	160	20	4	100
Alaska	54	57	59	60	50	50	5	30	8	6	8	130
Arizona	1,018	4,415	33	28	40	36	1,738	2,671	6	-	-	-
Arkansas	3,912	35,555	33	28	27	31	14,870	16,782	3,838	65	-	-
California	25,765	61,841	37	37	28	39	18,292	33,580	9,655	18	296	117
Colorado	2,331	10,492	35	40	35	37	3,099	6,437	886	70	-	-
Connecticut	102	122	35	35	-	36	77	32	10	3	-	-
Delaware	177	709	44	50	45	40	121	461	104	15	8	104
Florida	7,216	16,037	39	35	31	37	4,728	8,597	2,068	115	529	114
Georgia	1,839	(D)	51	47	47	53	528	2,526	1,462	427	138	113
Hawaii	84	127	50	46	44	46	13	85	4	16	9	119
Idaho	2,528	6,744	59	52	52	62	519	2,061	3,316	758	90	103
Illinois	1,019	3,181	43	50	46	45	523	2,091	503	44	20	127
Indiana	918	(D)	47	52	46	54	303	1,441	443	86	43	121
Iowa	531	1,219	43	50	41	41	255	741	155	51	17	134
Kansas	4,400	19,124	29	32	30	32	9,688	8,961	475	-	-	-
Kentucky	149	231	40	43	29	48	55	148	12	9	7	100
Louisiana	1,738	6,276	22	24	20	17	4,475	1,082	654	4	61	139
Maine	342	383	42	46	29	-	137	171	38	37	-	-
Maryland	290	588	42	42	44	34	147	304	125	6	6	143
Massachusetts	215	283	41	43	31	-	36	189	52	-	6	100
Michigan	1,612	4,020	67	60	53	70	278	1,585	960	460	737	119
Minnesota	1,409	3,774	49	57	51	54	419	2,261	692	195	207	110
Mississippi	1,188	8,452	35	56	36	41	2,917	4,047	1,399	17	72	164
Missouri	1,584	10,913	26	37	35	28	8,052	2,557	174	130	-	-
Montana	1,022	1,698	57	77	45	60	109	1,286	44	93	166	150
Nebraska	15,637	69,583	42	54	43	45	14,028	43,404	10,260	372	1,519	102
Nevada	616	(D)	39	37	37	38	373	1,188	208	34	-	-
New Hampshire	81	91	45	43	50	-	1	69	21	-	-	-
New Jersey	486	844	64	53	72	76	54	330	251	60	149	122
New Mexico	2,500	7,964	30	32	36	25	2,614	5,169	169	-	12	199
New York	563	698	56	50	81	57	18	456	118	25	81	105
North Carolina	564	835	40	35	40	40	295	319	211	-	10	127
North Dakota	336	1,636	46	44	50	46	248	1,044	168	174	2	105
Ohio	266	372	48	49	33	63	47	211	68	30	16	109
Oklahoma	1,288	4,192	33	41	29	33	1,663	2,334	133	39	23	112
Oregon	3,666	7,516	58	58	52	67	95	2,934	3,292	817	378	112
Pennsylvania	746	961	46	46	44	53	87	663	192	18	1	100
Rhode Island	20	28	23	18	26	-	16	12	-	-	-	-
South Carolina	702	(D)	41	40	35	74	35	930	91	32	-	-
South Dakota	793	1,838	51	56	56	49	222	990	301	290	35	102
Tennessee	223	320	39	40	37	34	36	257	4	20	3	150
Texas	8,693	(D)	25	38	28	34	38,821	19,898	969	151	113	154
Utah	1,128	2,211	42	50	30	36	272	1,620	319	-	-	-
Vermont	103	103	38	38	-	-	34	43	24	-	2	100
Virginia	468	646	57	57	60	-	2	382	245	4	13	100
Washington	2,857	5,070	63	59	55	56	297	2,310	1,428	643	392	137
West Virginia	43	49	48	48	50	-	-	41	6	2	-	-
Wisconsin	903	3,002	62	70	77	60	165	1,312	831	366	328	122
Wyoming	359	934	41	35	38	51	187	584	161	-	2	100
Water Resources Areas												
WRA 01 New England	830	977	41	42	32	36	289	500	140	40	8	100
WRA 02 Mid-Atlantic	2,537	4,178	52	49	56	55	432	2,408	987	127	224	117
WRA 03 South Atlantic-Gulf	10,970	23,850	42	39	35	42	5,677	12,559	4,339	594	681	114
WRA 04 Great Lakes	2,221	5,324	65	58	54	72	377	2,202	1,290	589	866	119
WRA 05 Ohio	1,007	2,145	47	51	43	58	284	1,311	434	68	48	114
WRA 06 Tennessee	215	257	42	38	45	57	38	167	40	9	3	150
WRA 07 Upper Mississippi	3,476	9,993	49	58	52	49	1,418	5,711	1,784	595	485	117
WRA 08 Lower Mississippi	6,879	53,155	31	26	26	28	26,168	21,700	5,015	139	133	153
WRA 09 Souris-Red-Rainy	358	1,606	47	44	50	50	166	1,027	254	151	8	106
WRA 10 Missouri	20,893	86,624	41	53	42	43	19,774	52,343	11,860	923	1,724	107
WRA 11 Arkansas-White-Red	7,504	42,649	28	34	29	30	23,779	17,640	1,117	40	73	118
WRA 12 Texas-Gulf	6,977	46,483	26	39	29	36	28,839	16,461	969	151	63	180
WRA 13 Rio Grande	2,287	7,308	31	30	35	30	2,211	4,966	119	-	12	199
WRA 14 Upper Colorado	471	532	41	42	17	-	8	372	150	-	2	100
WRA 15 Lower Colorado	1,331	4,944	34	36	38	36	1,792	3,097	55	-	-	-
WRA 16 Great Basin	1,387	3,556	40	43	35	37	605	2,485	432	34	-	-
WRA 17 Pacific Northwest	9,424	20,055	59	56	51	61	909	8,103	8,044	2,184	815	123
WRA 18 California	25,871	62,031	37	37	29	39	18,303	33,659	9,672	56	341	117
WRA 19 Alaska	54	57	59	60	50	50	5	30	8	6	8	130
WRA 20 Hawaii	84	127	50	46	44	46	13	85	4	16	9	119

[1] Data include only well pumps for wells used.

Table 19. **Irrigation Pumps on Farms Other Than for Wells: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Pumps to discharge water from tailwater pits											
						Pumps by discharge capacity						
	Farms	Pumps	Average pumping lift (feet)	Average operating pressure (psi)	Average discharge capacity (gpm)	Less than 500 gpm	500 to 999 gpm	1,000 to 1,499 gpm	1,500 to 1,999 gpm	2,000 to 2,999 gpm	3,000 or more gpm	
											Pumps	Average gpm
U.S. TOTAL . . . . . 2003 . .	11,557	21,618	13	30	813	7,323	8,348	3,395	581	1,240	731	4,550
1998 . .	9,702	21,933	(NA)	(NA)	892	9,169	7,948	2,546	626	481	1,163	6,255
2003 DATA												
Alabama	9	15	18	36	80	15	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	171	263	15	15	716	127	65	40	2	29	-	-
Arkansas	505	1,393	11	22	2,095	7	59	278	266	502	281	3,774
California	3,156	7,217	11	29	802	3,353	1,650	1,275	252	435	252	4,937
Colorado	826	936	13	34	435	448	488	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	48	150	9	29	3,284	4	34	-	4	89	19	15,262
Georgia	7	9	19	101	829	-	5	4	-	-	-	-
Hawaii	15	15	8	34	136	15	-	-	-	-	-	-
Idaho	1,786	1,938	15	29	504	208	1,680	46	-	4	-	-
Illinois	5	10	16	19	2,300	8	-	-	-	-	2	10,000
Indiana	13	16	10	29	400	16	-	-	-	-	-	-
Iowa	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Kansas	512	879	15	25	576	367	438	74	-	-	-	-
Kentucky	15	15	14	33	640	14	-	-	-	-	1	4,000
Louisiana	31	59	12	12	2,743	-	-	9	12	6	32	3,804
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	3	4	31	28	505	2	-	2	-	-	-	-
Massachusetts	51	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Michigan	5	9	15	60	567	-	9	-	-	-	-	-
Minnesota	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Mississippi	38	91	11	15	2,128	-	-	25	3	51	12	3,133
Missouri	36	65	12	18	2,549	-	42	10	-	-	13	10,000
Montana	121	250	11	37	985	64	8	148	6	21	3	5,000
Nebraska	2,101	4,153	14	23	542	1,193	2,688	269	-	3	-	-
Nevada	49	92	21	38	834	6	35	48	2	1	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	8	10	7	37	820	-	8	-	2	-	-	-
New Mexico	17	25	11	30	680	6	12	7	-	-	-	-
New York	57	60	10	47	29	60	-	-	-	-	-	-
North Carolina	16	16	8	40	600	-	16	-	-	-	-	-
North Dakota	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	49	96	17	15	719	14	54	28	-	-	-	-
Oregon	142	308	15	57	754	145	137	-	2	-	24	3,500
Pennsylvania	6	6	6	50	450	3	3	-	-	-	-	-
Rhode Island	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
South Carolina	12	12	7	70	738	2	9	1	-	-	-	-
South Dakota	13	24	15	107	667	2	22	-	-	-	-	-
Tennessee	3	11	3	11	56	11	-	-	-	-	-	-
Texas	607	1,117	15	22	692	589	374	45	8	26	75	3,200
Utah	238	401	11	49	710	95	302	2	-	2	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	693	1,103	27	51	805	442	104	512	-	45	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	22	571	11	79	975	14	5	552	-	-	-	-
Wyoming	164	175	6	39	531	68	89	-	14	4	-	-
Water Resources Areas												
WRA 01 New England	52	98	8	32	1,773	25	6	20	8	22	17	4,647
WRA 02 Mid-Atlantic	71	77	10	44	159	65	8	2	2	-	-	-
WRA 03 South Atlantic-Gulf	94	206	10	36	2,546	21	64	9	4	89	19	15,262
WRA 04 Great Lakes	5	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
WRA 05 Ohio	19	21	11	35	457	18	3	-	-	-	-	-
WRA 06 Tennessee	9	9	14	42	378	9	-	-	-	-	-	-
WRA 07 Upper Mississippi	45	600	11	77	1,188	27	6	552	-	-	15	10,000
WRA 08 Lower Mississippi	525	1,457	11	22	2,005	16	101	290	263	535	252	3,761
WRA 09 Souris-Red-Rainy	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
WRA 10 Missouri	2,851	5,149	14	26	564	1,448	3,232	421	18	27	3	5,000
WRA 11 Arkansas-White-Red	1,062	1,759	13	23	688	842	636	165	18	24	74	3,730
WRA 12 Texas-Gulf	284	509	13	19	845	308	122	4	-	-	75	3,200
WRA 13 Rio Grande	43	71	10	31	1,473	2	26	9	8	26	-	-
WRA 14 Upper Colorado	259	296	17	37	386	130	164	-	2	-	-	-
WRA 15 Lower Colorado	171	263	15	15	716	127	65	40	2	29	-	-
WRA 16 Great Basin	520	762	14	39	653	82	625	50	2	3	-	-
WRA 17 Pacific Northwest	2,311	2,984	19	38	636	804	1,546	558	2	50	24	3,500
WRA 18 California	3,220	7,332	11	30	799	3,384	1,734	1,275	252	435	252	4,937
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	15	15	8	34	136	15	-	-	-	-	-	-

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Table 19. **Irrigation Pumps on Farms Other Than for Wells: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Pumps to discharge water from ponds, lakes, reservoirs, and rivers											
	Farms	Pumps	Average pumping lift (feet)	Average operating pressure (psi)	Average discharge capacity (gpm)	Pumps by discharge capacity						
						Less than 500 gpm	500 to 999 gpm	1,000 to 1,499 gpm	1,500 to 1,999 gpm	2,000 to 2,999 gpm	3,000 or more gpm	
											Pumps	Average gpm
U.S. TOTAL . . . . . 2003 . .	47,763	97,378	19	49	988	37,459	28,335	11,866	4,898	9,709	5,111	5,149
1998 . .	36,531	70,034	(NA)	(NA)	946	28,769	19,885	10,186	3,374	3,751	4,069	5,404
2003 DATA												
Alabama	226	361	28	55	757	132	103	93	13	6	14	3,300
Alaska	5	5	10	62	1,380	-	1	-	4	-	-	-
Arizona	39	169	30	33	2,430	-	40	22	3	55	49	4,367
Arkansas	1,564	3,957	18	29	1,610	1,013	413	500	286	1,318	427	4,451
California	4,991	12,485	20	37	1,093	6,507	1,276	616	785	2,479	822	4,376
Colorado	1,399	2,915	25	44	860	1,029	802	658	227	157	42	4,119
Connecticut	116	178	33	52	384	126	24	24	4	-	-	-
Delaware	59	83	7	75	683	9	67	7	-	-	-	-
Florida	1,111	2,505	9	32	2,223	1,041	415	75	356	104	514	8,098
Georgia	1,234	2,586	18	67	831	593	1,197	427	198	171	-	-
Hawaii	145	194	14	40	315	159	18	9	8	-	-	-
Idaho	4,537	9,771	25	59	816	3,951	2,688	2,029	258	564	281	6,085
Illinois	153	198	12	65	611	61	90	45	-	2	-	-
Indiana	351	527	11	63	655	90	362	63	6	5	1	3,000
Iowa	123	152	13	48	315	104	48	-	-	-	-	-
Kansas	414	806	21	39	725	24	671	111	-	-	-	-
Kentucky	667	804	17	54	641	527	153	62	1	22	39	5,003
Louisiana	663	2,191	11	16	2,313	405	39	118	227	707	695	4,292
Maine	204	336	19	71	826	114	124	70	-	-	28	3,600
Maryland	201	382	16	65	371	280	78	24	-	-	-	-
Massachusetts	497	1,246	7	48	981	323	420	259	89	83	72	3,925
Michigan	1,078	2,352	13	81	747	547	1,233	220	310	33	9	5,167
Minnesota	291	517	13	46	791	302	125	4	10	10	66	3,367
Mississippi	459	663	12	69	931	340	38	72	73	124	16	5,250
Missouri	503	687	14	60	837	194	268	119	71	35	-	-
Montana	2,685	5,824	19	42	1,167	1,197	2,250	1,046	139	734	458	3,897
Nebraska	1,688	2,302	15	40	649	608	1,508	114	-	72	-	-
Nevada	102	163	10	55	792	82	11	40	25	-	5	3,900
New Hampshire	83	118	36	49	475	95	17	-	-	-	6	6,000
New Jersey	297	533	12	67	781	168	197	118	37	3	10	7,000
New Mexico	255	400	11	40	1,247	2	249	21	11	115	2	3,500
New York	436	733	13	68	476	390	289	25	17	8	4	7,006
North Carolina	1,400	2,395	10	62	598	1,390	373	455	62	97	18	5,000
North Dakota	150	250	27	37	1,165	63	79	46	21	28	13	3,892
Ohio	200	258	14	51	363	204	44	2	-	4	4	4,000
Oklahoma	499	872	15	44	549	556	137	33	43	103	-	-
Oregon	6,978	12,991	20	54	1,025	4,508	5,564	649	111	1,271	888	5,278
Pennsylvania	769	1,209	28	61	268	936	177	89	4	3	-	-
Rhode Island	17	34	11	64	930	17	8	2	3	-	4	4,270
South Carolina	307	595	23	69	461	372	149	49	-	25	-	-
South Dakota	254	478	33	49	1,104	109	123	120	85	25	16	4,969
Tennessee	336	464	13	58	484	360	81	7	-	-	16	4,463
Texas	2,464	4,469	12	30	903	2,065	550	847	416	487	104	5,642
Utah	1,231	2,389	12	45	980	660	513	911	28	261	16	6,171
Vermont	50	67	25	35	364	44	21	-	2	-	-	-
Virginia	446	812	22	76	522	511	168	61	45	27	-	-
Washington	4,295	10,556	25	56	766	4,093	3,930	1,234	647	409	243	5,978
West Virginia	30	47	9	35	198	45	-	2	-	-	-	-
Wisconsin	548	1,551	8	67	1,702	172	630	193	222	133	201	6,663
Wyoming	1,213	1,798	19	31	630	941	574	175	51	29	28	5,893
Water Resources Areas												
WRA 01 New England	942	1,942	13	53	859	694	602	355	98	83	110	3,968
WRA 02 Mid-Atlantic	1,498	2,701	20	65	462	1,576	771	257	81	6	10	7,000
WRA 03 South Atlantic-Gulf	4,525	8,781	14	58	1,103	3,958	2,238	1,001	622	430	532	7,993
WRA 04 Great Lakes	1,692	3,344	13	76	653	1,078	1,640	258	310	41	17	5,325
WRA 05 Ohio	1,233	1,485	19	54	537	929	343	134	23	21	35	5,003
WRA 06 Tennessee	602	795	12	56	521	503	111	146	11	-	24	3,775
WRA 07 Upper Mississippi	988	2,192	9	63	1,431	363	931	294	230	142	232	6,238
WRA 08 Lower Mississippi	1,889	5,438	15	24	1,899	1,168	255	625	529	1,886	975	4,330
WRA 09 Souris-Red-Rainy	139	254	15	46	1,025	139	49	7	8	10	41	3,337
WRA 10 Missouri	6,233	11,431	20	40	1,013	2,253	5,302	1,879	493	1,002	502	4,025
WRA 11 Arkansas-White-Red	1,398	2,598	16	40	1,088	979	732	118	153	443	173	4,580
WRA 12 Texas-Gulf	2,455	4,536	12	30	932	2,065	532	862	416	557	104	5,642
WRA 13 Rio Grande	116	346	12	38	1,265	19	117	143	-	45	22	3,500
WRA 14 Upper Colorado	1,449	2,238	22	42	560	1,357	547	240	42	16	36	4,756
WRA 15 Lower Colorado	272	557	14	46	1,113	236	42	172	3	55	49	4,367
WRA 16 Great Basin	925	2,001	13	47	1,112	338	542	787	49	270	15	6,003
WRA 17 Pacific Northwest	15,910	33,327	23	56	863	12,977	12,040	3,774	986	2,176	1,374	5,533
WRA 18 California	5,347	13,213	19	38	1,096	6,668	1,522	805	832	2,526	860	4,469
WRA 19 Alaska	5	5	10	62	1,380	-	1	-	4	-	-	-
WRA 20 Hawaii	145	194	14	40	315	159	18	9	8	-	-	-

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Table 19. **Irrigation Pumps on Farms Other Than for Wells: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Relifting or boosting water within systems											
						Pumps by discharge capacity						
	Farms	Pumps	Average pumping lift (feet)	Average operating pressure (psi)	Average discharge capacity (gpm)	Less than 500 gpm	500 to 999 gpm	1,000 to 1,499 gpm	1,500 to 1,999 gpm	2,000 to 2,999 gpm	3,000 or more gpm	
											Pumps	Average gpm
U.S. TOTAL . . . . . 2003 . .	14,858	34,546	19	45	1,313	10,160	7,761	4,865	2,553	5,927	3,280	4,771
1998 . .	22,585	50,545	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	6	14	28	96	871	2	2	10	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	119	1,000	35	51	1,303	100	18	735	2	89	56	5,141
Arkansas	682	1,351	15	17	1,732	149	193	223	132	503	151	4,338
California	4,475	9,926	19	41	1,330	2,127	1,919	1,698	1,628	2,126	428	5,277
Colorado	925	1,466	8	32	423	911	434	92	-	29	-	-
Connecticut	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	58	471	8	22	4,105	51	50	-	43	7	320	5,612
Georgia	26	32	22	97	1,226	7	4	19	-	-	2	7,000
Hawaii	73	158	42	38	1,268	77	25	39	-	-	17	7,000
Idaho	1,202	3,549	18	59	1,513	883	1,399	687	166	213	201	12,740
Illinois	8	20	7	35	3,058	-	4	-	-	-	16	3,625
Indiana	27	43	10	41	850	-	37	6	-	-	-	-
Iowa	12	22	103	38	127	20	-	2	-	-	-	-
Kansas	53	932	9	49	2,119	-	53	-	-	879	-	-
Kentucky	9	9	12	88	461	7	1	-	1	-	-	-
Louisiana	199	1,549	10	14	1,948	81	-	33	39	1,340	56	3,580
Maine	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Maryland	4	4	45	95	250	4	-	-	-	-	-	-
Massachusetts	54	133	18	30	755	68	-	48	-	8	9	3,000
Michigan	128	228	8	68	644	144	34	32	-	-	18	3,500
Minnesota	29	37	6	39	728	31	-	1	-	-	5	3,000
Mississippi	47	104	11	22	1,482	8	26	14	14	25	17	3,000
Missouri	37	42	34	57	581	19	10	13	-	-	-	-
Montana	265	538	25	41	1,152	101	193	149	30	41	24	4,800
Nebraska	418	874	17	31	763	-	874	-	-	-	-	-
Nevada	92	159	25	47	985	26	45	56	24	2	6	3,000
New Hampshire	8	11	11	30	437	3	8	-	-	-	-	-
New Jersey	42	107	20	50	896	28	11	40	28	-	-	-
New Mexico	36	77	31	34	1,028	20	12	30	1	12	2	3,000
New York	20	61	11	45	1,035	3	12	46	-	-	-	-
North Carolina	143	160	4	58	156	126	34	-	-	-	-	-
North Dakota	20	35	16	57	1,683	4	21	-	2	-	8	5,000
Ohio	19	27	11	64	864	2	8	17	-	-	-	-
Oklahoma	89	98	9	28	558	55	12	31	-	-	-	-
Oregon	1,094	1,968	26	60	793	956	743	61	32	16	160	4,256
Pennsylvania	80	82	22	32	207	75	3	-	4	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	5	11	10	47	655	-	10	1	-	-	-	-
South Dakota	92	199	40	52	962	76	68	3	4	48	-	-
Tennessee	36	54	2	27	127	54	-	-	-	-	-	-
Texas	803	1,692	11	46	800	935	176	221	179	161	20	4,400
Utah	510	700	26	45	449	528	108	36	8	5	15	3,040
Vermont	5	5	12	10	85	5	-	-	-	-	-	-
Virginia	4	6	7	30	362	2	4	-	-	-	-	-
Washington	2,575	6,016	26	57	1,475	2,385	838	475	196	397	1,725	3,684
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	89	170	26	41	1,835	19	91	23	6	7	24	8,083
Wyoming	236	401	18	43	772	65	281	24	12	19	-	-
Water Resources Areas												
WRA 01 New England	66	149	18	32	731	74	8	48	2	8	9	3,000
WRA 02 Mid-Atlantic	134	202	20	45	558	111	23	40	28	-	-	-
WRA 03 South Atlantic-Gulf	240	692	8	36	2,918	186	104	30	43	7	322	5,621
WRA 04 Great Lakes	164	308	8	63	738	149	50	91	-	-	18	3,500
WRA 05 Ohio	50	74	10	33	457	41	24	4	5	-	-	-
WRA 06 Tennessee	18	18	5	40	360	18	-	-	-	-	-	-
WRA 07 Upper Mississippi	135	242	23	41	1,643	55	104	30	6	7	40	6,300
WRA 08 Lower Mississippi	763	2,667	12	16	1,917	93	196	260	135	1,765	218	3,883
WRA 09 Souris-Red-Rainy	3	11	7	36	1,527	6	-	-	-	-	5	3,000
WRA 10 Missouri	1,367	3,514	17	41	1,184	459	1,743	248	36	996	32	4,850
WRA 11 Arkansas-White-Red	406	785	12	23	1,226	253	92	105	91	238	6	10,000
WRA 12 Texas-Gulf	716	1,433	12	49	648	902	168	162	138	43	20	4,400
WRA 13 Rio Grande	111	161	9	36	1,075	10	76	60	1	12	2	3,000
WRA 14 Upper Colorado	838	1,233	10	34	211	1,128	74	6	7	3	15	3,040
WRA 15 Lower Colorado	119	1,000	35	51	1,303	100	18	735	2	89	56	5,141
WRA 16 Great Basin	391	593	27	45	715	219	191	138	32	7	6	3,000
WRA 17 Pacific Northwest	4,311	10,744	23	58	1,438	3,698	2,788	1,153	399	626	2,080	4,601
WRA 18 California	4,953	10,562	19	43	1,276	2,581	2,077	1,716	1,628	2,126	434	5,266
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	73	158	42	38	1,268	77	25	39	-	-	17	7,000

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Table 19. **Irrigation Pumps on Farms Other Than for Wells: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Pumps by average operating pressure											
	For discharge from tailwater pits				For discharge from ponds, lakes, reservoirs, and rivers				For relifting or boosting water			
	Less than 15 psi	15 to 29 psi	30 to 59 psi	60 psi or more	Less than 15 psi	15 to 29 psi	30 to 59 psi	60 psi or more	Less than 15 psi	15 to 29 psi	30 to 59 psi	60 psi or more
U.S. TOTAL . . . . . 2003 . .	4,304	6,463	8,910	1,941	7,284	13,695	44,377	32,022	2,918	5,213	17,058	9,357
1998 . .	(NA)	(NA)	6,664	4,396	(NA)	(NA)	25,609	36,267	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	-	7	8	-	7	51	179	124	-	-	-	14
Alaska	-	-	-	-	-	-	-	5	-	-	-	-
Arizona	139	77	47	-	86	4	20	59	11	4	774	211
Arkansas	663	304	391	35	1,461	579	1,740	177	793	455	48	55
California	1,905	1,252	3,897	163	1,724	3,499	4,903	2,359	797	1,303	6,054	1,772
Colorado	13	227	696	-	27	370	2,363	155	214	208	1,044	-
Connecticut	-	-	-	-	9	24	85	60	(D)	(D)	(D)	(D)
Delaware	-	-	-	-	-	18	13	52	-	-	-	-
Florida	63	7	78	2	164	985	1,165	191	106	285	75	5
Georgia	3	-	-	6	22	49	805	1,710	-	-	4	28
Hawaii	-	6	9	-	34	-	130	30	-	38	108	12
Idaho	14	1,594	246	84	145	113	4,076	5,437	-	160	1,499	1,890
Illinois	-	10	-	-	2	29	64	103	-	11	6	3
Indiana	-	4	12	-	37	25	234	231	4	19	-	20
Iowa	(D)	(D)	(D)	(D)	44	10	30	68	-	2	20	-
Kansas	318	208	201	152	87	102	426	191	-	12	916	4
Kentucky	1	-	14	-	77	130	275	322	-	-	2	7
Louisiana	38	17	4	-	939	1,101	77	74	157	1,387	5	-
Maine	-	-	-	-	-	-	171	165	(D)	(D)	(D)	(D)
Maryland	-	2	2	-	-	87	102	193	-	-	-	4
Massachusetts	(D)	(D)	(D)	(D)	57	32	984	173	13	42	72	6
Michigan	-	-	-	9	50	36	415	1,851	8	42	4	174
Minnesota	(D)	(D)	(D)	(D)	28	45	272	172	6	-	26	5
Mississippi	28	51	11	1	50	53	221	339	16	63	25	-
Missouri	2	50	13	-	17	51	198	421	-	8	15	19
Montana	6	21	221	2	425	1,400	2,588	1,411	8	120	307	103
Nebraska	750	1,903	1,389	111	352	353	1,032	565	339	-	436	99
Nevada	2	17	72	1	-	4	62	97	-	5	112	42
New Hampshire	-	-	-	-	9	10	62	37	-	3	8	-
New Jersey	2	-	8	-	-	26	208	299	28	-	-	79
New Mexico	2	14	9	-	2	16	308	74	-	22	55	-
New York	-	-	54	6	54	23	281	375	-	46	3	12
North Carolina	-	-	16	-	123	69	1,069	1,134	-	-	109	51
North Dakota	(D)	(D)	(D)	(D)	20	78	101	51	2	16	2	15
Ohio	-	-	-	-	-	51	121	86	-	11	-	16
Oklahoma	58	10	28	-	3	274	447	148	-	55	43	-
Oregon	-	45	120	143	309	154	7,849	4,679	33	395	457	1,083
Pennsylvania	-	3	-	3	6	270	280	653	39	32	-	11
Rhode Island	(D)	(D)	(D)	(D)	-	4	19	11	-	-	-	-
South Carolina	-	-	2	10	-	55	73	467	-	1	10	-
South Dakota	-	2	-	22	17	92	223	146	-	-	134	65
Tennessee	9	-	2	-	8	34	231	191	-	36	18	-
Texas	225	477	415	-	530	2,289	1,304	346	300	310	536	546
Utah	-	7	394	-	115	93	1,964	217	-	23	596	81
Vermont	-	-	-	-	-	21	39	7	5	-	-	-
Virginia	-	-	-	-	-	69	109	634	2	-	4	-
Washington	27	21	452	603	16	201	5,956	4,383	2	83	3,143	2,788
West Virginia	-	-	-	-	6	-	40	1	-	-	-	-
Wisconsin	14	-	1	556	56	14	316	1,165	20	13	112	25
Wyoming	-	112	37	26	166	702	747	183	15	2	276	108
Water Resources Areas												
WRA 01 New England	22	14	58	4	75	82	1,338	447	13	46	80	10
WRA 02 Mid-Atlantic	2	5	64	6	12	399	828	1,462	71	32	-	99
WRA 03 South Atlantic-Gulf	66	18	104	18	233	1,202	3,188	4,158	106	286	202	98
WRA 04 Great Lakes	(D)	(D)	(D)	(D)	141	63	806	2,334	8	95	7	198
WRA 05 Ohio	-	4	14	3	77	262	581	565	3	59	2	10
WRA 06 Tennessee	-	-	9	-	91	36	306	362	-	-	18	-
WRA 07 Upper Mississippi	14	10	20	556	94	97	526	1,475	24	24	144	50
WRA 08 Lower Mississippi	677	351	393	36	2,052	1,543	1,636	207	734	1,810	80	43
WRA 09 Souris-Red-Rainy	(D)	(D)	(D)	(D)	29	16	126	83	6	-	-	5
WRA 10 Missouri	819	2,068	2,035	227	1,066	2,626	5,473	2,266	364	247	2,530	373
WRA 11 Arkansas-White-Red	423	748	502	86	440	547	1,055	556	241	268	250	26
WRA 12 Texas-Gulf	180	215	114	-	529	2,282	1,344	381	300	195	392	546
WRA 13 Rio Grande	14	10	47	-	8	26	287	25	-	32	129	-
WRA 14 Upper Colorado	-	3	291	2	25	480	1,547	186	205	99	908	21
WRA 15 Lower Colorado	139	77	47	-	86	6	406	59	11	4	774	211
WRA 16 Great Basin	2	272	487	1	98	41	1,525	337	-	21	470	102
WRA 17 Pacific Northwest	41	1,395	811	737	468	488	18,112	14,259	22	654	4,798	5,270
WRA 18 California	1,905	1,266	3,905	256	1,726	3,499	5,163	2,825	810	1,303	6,166	2,283
WRA 19 Alaska	-	-	-	-	-	-	-	5	-	-	-	-
WRA 20 Hawaii	-	6	9	-	34	-	130	30	-	38	108	12

Table 20. **Energy Expenses for On-Farm Pumping of Irrigation Water by Type of Energy: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Total energy expenses for pumping [1]													
	Farms	Pumps powered	Acres irrigated by water source		Expenses ($1,000)	Expenses per acre irrigated [2] (dollars)		Farms with energy expenses of -						
			Water from wells	Surface Water		Water from wells	Surface water	$1 to $999	$1,000 to $1,999	$2,000 to $4,999	$5,000 to $9,999	$10,000 to $19,999	$20,000 to $49,999	$50,000 or more
U.S. TOTAL . . . . . 2003 . .	153,117	497,443	32,336,547	10,561,455	1,551,847	39.50	26.39	61,040	16,938	29,301	15,569	11,726	11,582	6,961
1998 . .	141,769	508,727	(NA)	(NA)	1,323,123	(NA)	(NA)	55,562	16,641	24,449	17,165	12,602	(NA)	(NA)
2003 DATA														
Alabama	474	828	24,451	27,821	943	30.16	10.90	348	34	66	12	6	4	4
Alaska	59	62	2,128	110	24	10.73	11.05	51	4	4	-	-	-	-
Arizona	1,095	5,115	291,025	158,910	30,991	91.68	25.04	222	305	99	123	88	87	171
Arkansas	4,620	38,205	3,421,365	508,266	68,740	18.33	16.16	765	534	498	825	934	798	266
California	32,057	83,216	3,823,115	2,494,868	378,033	78.77	35.53	10,958	3,407	8,890	2,754	1,745	2,280	2,023
Colorado	4,532	15,633	1,095,601	396,995	58,755	44.38	28.25	1,158	335	1,034	574	694	424	313
Connecticut	189	282	290	1,814	109	67.60	53.62	175	7	5	1	-	1	-
Delaware	213	779	64,840	3,493	749	10.91	10.52	107	32	37	22	8	6	1
Florida	8,197	18,914	772,907	629,667	25,385	25.50	10.34	5,771	794	676	542	202	148	64
Georgia	2,780	7,531	518,239	187,043	10,905	15.13	15.30	1,289	452	493	287	142	95	22
Hawaii	289	449	33,938	46,527	2,325	176.27	39.33	252	4	18	6	-	-	9
Idaho	8,112	19,945	1,202,870	1,106,988	102,767	54.91	32.52	2,877	1,485	1,733	606	458	508	445
Illinois	1,139	3,373	360,740	13,509	5,344	14.41	15.89	372	177	309	156	68	52	5
Indiana	1,171	2,840	227,750	47,845	2,974	11.16	11.91	619	183	182	117	52	16	2
Iowa	655	1,361	127,128	5,264	1,168	8.59	12.10	331	128	154	26	14	2	-
Kansas	4,705	19,999	2,430,557	81,323	105,437	43.13	15.00	371	488	1,098	746	545	864	593
Kentucky	789	1,022	10,264	10,309	430	13.77	28.09	674	61	43	8	3	-	-
Louisiana	2,106	8,099	633,455	194,653	13,519	16.51	13.73	497	305	497	372	289	125	21
Maine	504	688	1,480	16,443	268	30.63	13.62	438	48	9	4	2	3	-
Maryland	438	951	40,131	13,637	489	7.07	13.01	331	57	33	12	3	-	2
Massachusetts	680	1,677	1,289	14,228	1,342	231.58	81.68	424	95	88	53	15	2	3
Michigan	2,264	5,779	286,074	143,501	7,639	18.70	16.98	1,449	152	341	143	98	64	17
Minnesota	1,616	4,237	400,925	33,552	6,797	15.82	11.08	630	265	427	155	62	63	14
Mississippi	1,561	9,154	1,115,676	43,964	15,447	12.98	27.40	734	63	147	201	206	134	76
Missouri	1,962	11,479	961,231	57,658	9,304	9.14	9.74	782	233	386	280	181	91	9
Montana	3,876	8,168	96,469	928,048	14,993	23.62	13.10	1,752	563	641	502	318	75	25
Nebraska	16,104	74,519	6,970,842	348,380	219,223	30.54	21.79	1,380	937	4,715	3,257	2,488	2,637	690
Nevada	750	2,136	259,721	59,028	16,954	59.44	28.52	194	105	102	65	92	88	104
New Hampshire	141	200	156	576	26	69.90	31.13	134	7	-	-	-	-	-
New Jersey	706	1,427	26,487	19,776	1,164	35.30	20.83	511	42	81	44	24	4	-
New Mexico	2,526	8,438	502,021	25,699	34,790	68.24	34.36	1,204	132	268	314	202	221	185
New York	810	1,380	12,127	33,745	1,086	30.62	25.15	652	46	54	40	7	9	2
North Carolina	1,981	3,251	14,559	79,869	2,010	22.02	22.37	1,485	203	212	62	14	4	1
North Dakota	471	1,900	152,714	27,921	4,049	23.57	16.75	99	64	133	68	61	32	14
Ohio	458	646	6,995	6,885	434	11.87	24.48	431	8	8	6	1	2	2
Oklahoma	1,796	5,189	413,067	76,076	16,853	38.18	13.77	538	185	527	224	139	117	66
Oregon	10,788	22,003	421,642	790,157	32,826	30.89	26.79	6,765	1,893	1,131	438	247	220	94
Pennsylvania	1,343	2,113	5,230	13,427	474	34.63	21.37	1,236	73	24	5	5	-	-
Rhode Island	37	64	52	567	16	34.62	25.65	34	1	1	1	-	-	-
South Carolina	940	1,643	31,157	21,499	1,117	24.00	16.89	781	24	83	34	10	3	5
South Dakota	1,047	2,404	233,600	75,046	6,552	19.46	28.32	140	212	336	189	129	29	12
Tennessee	545	820	25,617	8,083	441	12.02	15.18	475	15	43	8	3	-	1
Texas	10,859	64,383	4,174,840	269,323	246,769	57.75	20.86	3,586	775	1,187	738	1,448	1,776	1,349
Utah	2,557	4,637	191,842	170,101	14,247	54.15	26.51	1,102	393	479	247	158	142	36
Vermont	145	170	198	465	20	29.99	30.97	143	1	1	-	-	-	-
Virginia	895	1,456	6,619	27,306	643	56.78	17.09	787	41	48	11	4	4	-
Washington	9,060	21,165	484,392	1,073,520	70,692	53.52	40.63	4,936	929	1,286	938	385	323	263
West Virginia	73	96	247	527	12	23.14	11.55	72	-	1	-	-	-	-
Wisconsin	1,314	4,510	345,408	40,232	9,497	22.64	46.15	472	203	297	139	93	67	43
Wyoming	1,688	3,107	113,076	226,811	7,075	28.21	17.00	506	438	376	214	83	62	9
Water Resources Areas														
WRA 01 New England	1,633	3,006	3,383	33,853	1,772	108.08	43.14	1,286	158	104	59	17	6	3
WRA 02 Mid-Atlantic	3,571	6,791	151,507	79,025	3,738	16.89	17.47	2,913	255	220	117	49	14	3
WRA 03 South Atlantic-Gulf	14,986	32,851	1,357,881	946,464	40,459	21.64	12.61	10,278	1,534	1,525	930	371	253	95
WRA 04 Great Lakes	3,337	8,049	413,374	192,912	10,911	18.68	18.96	2,192	223	457	220	126	88	31
WRA 05 Ohio	2,228	3,643	188,038	30,469	2,758	10.75	20.21	1,751	181	162	74	43	15	2
WRA 06 Tennessee	766	1,037	9,149	21,920	586	27.29	14.84	656	32	63	10	3	1	1
WRA 07 Upper Mississippi	4,214	12,094	1,033,198	104,657	19,831	16.96	25.95	1,569	679	1,090	457	209	162	48
WRA 08 Lower Mississippi	7,664	56,967	5,544,318	622,430	93,770	15.08	16.36	1,312	858	1,286	1,449	1,421	1,011	327
WRA 09 Souris-Red-Rainy	480	1,859	155,776	24,962	3,248	18.78	10.14	163	58	126	52	45	26	10
WRA 10 Missouri	26,097	102,712	8,897,320	1,709,938	314,454	32.00	17.82	3,410	2,564	7,183	4,850	3,711	3,240	1,139
WRA 11 Arkansas-White-Red	8,836	45,576	4,671,455	288,912	235,196	50.07	15.89	1,644	808	1,663	872	1,283	1,382	1,184
WRA 12 Texas-Gulf	9,144	50,944	2,584,161	266,555	135,287	50.09	21.07	3,566	712	920	802	963	1,370	811
WRA 13 Rio Grande	2,300	7,769	570,192	42,545	35,079	61.99	41.06	940	73	194	371	237	326	159
WRA 14 Upper Colorado	2,537	4,104	13,559	231,482	5,443	29.15	22.05	1,469	318	477	162	80	27	4
WRA 15 Lower Colorado	1,489	5,956	323,513	163,035	33,293	89.51	25.86	372	379	240	125	93	96	184
WRA 16 Great Basin	2,848	6,032	450,163	221,136	29,752	56.17	25.21	939	363	733	199	250	235	129
WRA 17 Pacific Northwest	27,694	62,695	2,068,529	2,928,918	204,475	49.26	34.11	14,620	4,256	3,894	2,029	1,060	1,039	796
WRA 18 California	32,945	84,847	3,864,965	2,605,605	379,448	78.24	33.94	11,657	3,479	8,942	2,785	1,765	2,291	2,026
WRA 19 Alaska	59	62	2,128	110	24	10.73	11.05	51	4	4	-	-	-	-
WRA 20 Hawaii	289	449	33,938	46,527	2,325	176.27	39.33	252	4	18	6	-	-	9

See footnote(s) at end of table.

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Table 20. **Energy Expenses for On-Farm Pumping of Irrigation Water by Type of Energy: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Electricity													
	Farms	Pumps powered	Acres irrigated by water source		Expenses ($1,000)	Expenses per acre irrigated [2] (dollars)		Farms with energy expenses of -						
			Water from wells	Surface Water		Water from wells	Surface water	$1 to $999	$1,000 to $1,999	$2,000 to $4,999	$5,000 to $9,999	$10,000 to $19,999	$20,000 to $49,999	$50,000 or more
U.S. TOTAL ..... 2003 ..	117,159	319,102	17,014,346	7,121,079	953,247	42.64	29.84	49,235	14,939	23,292	10,802	8,272	6,446	4,173
1998 ..	101,826	308,579	(NA)	(NA)	865,595	(NA)	(NA)	44,848	11,710	16,911	10,832	8,221	(NA)	(NA)
2003 DATA														
Alabama	303	480	15,499	6,279	545	31.89	13.76	243	17	31	4	1	4	3
Alaska	41	44	1,183	-	15	12.92	-	36	2	3	-	-	-	-
Arizona	936	3,863	240,521	82,498	22,698	85.25	25.39	227	315	101	35	63	62	133
Arkansas	3,082	14,128	1,155,890	152,982	24,621	19.61	18.49	678	614	632	493	337	267	61
California	29,975	68,681	2,940,000	1,773,195	304,418	82.41	37.46	9,665	3,549	9,103	2,289	1,959	1,779	1,631
Colorado	3,532	13,203	949,944	293,466	52,352	45.49	36.40	652	212	913	527	541	394	293
Connecticut	131	162	206	349	27	53.82	40.61	127	3	1	-	-	-	-
Delaware	87	203	14,973	(D)	223	14.91	11.81	39	18	19	7	3	1	-
Florida	5,778	10,287	322,626	167,840	9,083	20.79	14.43	4,642	475	445	78	70	50	18
Georgia	1,813	4,347	314,033	56,921	5,805	16.28	12.89	885	328	290	189	56	53	12
Hawaii	209	348	32,945	44,401	1,977	184.76	37.34	180	4	15	2	-	1	7
Idaho	7,308	18,828	1,174,139	1,050,310	100,286	54.67	33.27	2,574	1,460	1,303	586	435	505	445
Illinois	688	1,821	179,509	2,346	2,569	14.19	16.70	226	129	196	72	46	18	1
Indiana	728	1,569	129,161	13,927	1,622	11.46	12.00	363	132	145	64	18	5	1
Iowa	459	853	81,406	2,109	745	8.85	13.23	238	100	91	23	6	1	-
Kansas	1,892	5,583	529,593	13,628	13,204	24.32	5.48	460	349	389	336	217	106	35
Kentucky	163	215	5,464	1,091	92	11.65	25.99	128	26	7	2	-	-	-
Louisiana	902	2,802	165,356	18,595	2,669	14.37	18.85	358	166	230	98	36	11	3
Maine	305	313	1,257	56	38	29.46	(D)	302	2	-	-	1	-	-
Maryland	203	287	8,079	(D)	74	7.58	7.74	183	9	10	1	-	-	-
Massachusetts	363	677	1,149	3,382	471	205.64	67.85	241	64	14	36	6	2	-
Michigan	1,700	3,850	207,145	73,018	5,084	19.11	16.72	1,140	86	257	100	71	32	14
Minnesota	1,132	3,065	298,860	22,658	5,252	16.75	10.99	384	153	356	128	53	51	7
Mississippi	1,187	3,445	315,695	13,048	6,226	18.22	57.50	723	47	159	112	70	50	26
Missouri	1,060	3,761	291,495	20,021	3,074	9.94	9.06	526	113	244	103	52	19	3
Montana	3,119	6,857	91,829	770,618	13,356	24.03	13.80	1,243	423	674	404	285	66	24
Nebraska	9,057	33,720	2,922,075	154,031	83,069	28.00	14.23	1,005	1,027	2,711	1,806	1,634	668	206
Nevada	573	1,884	245,568	48,566	16,248	60.53	35.87	98	66	87	52	80	92	98
New Hampshire	94	121	140	118	14	67.97	40.25	94	-	-	-	-	-	-
New Jersey	391	544	9,363	1,376	319	38.06	8.26	337	15	21	11	7	-	-
New Mexico	2,257	7,072	406,349	10,798	28,981	70.26	57.08	1,159	210	157	206	179	182	164
New York	449	601	3,544	7,630	293	24.72	27.02	427	14	5	-	1	-	2
North Carolina	922	1,196	10,440	13,178	636	25.88	34.30	793	58	32	35	-	4	-
North Dakota	363	1,554	127,164	15,742	3,371	24.11	18.56	55	46	105	64	54	28	11
Ohio	287	403	4,269	2,128	240	43.60	22.48	269	6	6	2	2	-	2
Oklahoma	720	2,200	147,663	25,646	5,814	37.07	7.97	291	90	192	60	49	19	19
Oregon	10,713	21,543	411,559	740,153	31,611	31.20	26.90	6,718	1,906	1,127	408	248	221	85
Pennsylvania	724	916	4,386	1,298	203	40.02	31.10	687	26	9	1	1	-	-
Rhode Island	26	35	52	248	6	34.62	(D)	25	-	1	-	-	-	-
South Carolina	872	1,476	26,297	14,726	889	25.18	19.51	747	26	61	24	7	3	4
South Dakota	826	1,895	187,325	47,733	5,044	20.05	28.94	97	171	266	163	97	20	12
Tennessee	286	382	9,633	1,131	207	18.86	47.59	246	5	30	3	2	-	-
Texas	7,846	43,713	2,007,703	95,100	104,963	50.85	31.35	2,767	702	789	930	956	1,184	518
Utah	1,705	3,208	171,910	111,091	12,003	55.94	26.60	601	336	294	200	114	126	34
Vermont	111	112	152	118	10	32.87	39.15	110	1	-	-	-	-	-
Virginia	498	710	4,712	6,054	274	42.36	10.52	462	9	22	1	3	1	-
Washington	9,052	20,821	477,069	1,049,031	69,946	53.94	41.69	4,954	929	1,283	924	381	318	263
West Virginia	60	71	247	357	10	23.14	13.19	59	-	1	-	-	-	-
Wisconsin	767	2,656	264,536	10,208	6,546	23.53	47.31	339	73	150	65	64	45	31
Wyoming	1,464	2,597	104,233	179,904	6,023	30.20	15.99	432	427	315	158	67	58	7
Water Resources Areas														
WRA 01 New England	990	1,379	2,904	4,173	561	101.72	61.21	860	69	16	36	7	2	-
WRA 02 Mid-Atlantic	2,167	2,999	43,536	11,916	1,165	24.11	11.34	1,964	89	76	21	15	2	-
WRA 03 South Atlantic-Gulf	10,266	18,345	686,905	260,499	17,080	19.16	16.12	7,890	904	860	329	134	113	36
WRA 04 Great Lakes	2,224	4,995	298,590	87,259	7,136	19.08	18.20	1,482	133	317	131	93	43	25
WRA 05 Ohio	951	1,535	95,972	5,526	1,248	11.91	19.70	698	93	105	35	14	4	2
WRA 06 Tennessee	334	405	6,594	2,405	284	33.84	38.34	287	19	25	1	-	1	1
WRA 07 Upper Mississippi	2,715	7,393	663,779	33,914	12,644	18.18	21.42	1,089	386	708	272	137	95	28
WRA 08 Lower Mississippi	4,416	19,515	1,728,784	165,644	32,371	17.32	17.78	1,063	754	1,105	664	433	307	90
WRA 09 Souris-Red-Rainy	336	1,515	132,370	17,679	2,781	19.60	9.92	71	47	101	41	44	23	9
WRA 10 Missouri	16,255	53,399	4,160,674	1,198,429	147,445	30.27	17.94	2,303	2,338	4,608	2,962	2,522	1,041	481
WRA 11 Arkansas-White-Red	4,425	18,185	1,305,431	84,632	49,048	36.51	19.59	1,353	535	822	499	625	383	208
WRA 12 Texas-Gulf	7,087	39,371	1,689,525	94,908	89,620	51.26	31.95	2,714	645	627	938	689	1,013	461
WRA 13 Rio Grande	2,014	6,552	463,730	36,411	27,801	60.11	61.94	895	148	81	266	208	283	133
WRA 14 Upper Colorado	1,729	2,920	13,559	156,570	4,291	27.08	25.18	915	215	382	120	68	25	4
WRA 15 Lower Colorado	1,175	4,358	267,375	84,373	24,597	83.34	27.36	227	391	242	37	68	64	146
WRA 16 Great Basin	2,071	4,740	418,328	151,791	27,116	56.71	27.66	514	302	544	171	194	225	121
WRA 17 Pacific Northwest	26,905	60,826	2,020,312	2,802,181	200,281	49.60	35.01	14,340	4,242	3,503	1,960	1,042	1,030	788
WRA 18 California	30,849	70,278	2,981,850	1,878,368	305,785	81.69	35.55	10,354	3,623	9,152	2,317	1,979	1,791	1,633
WRA 19 Alaska	41	44	1,183	-	15	12.92	-	36	2	3	-	-	-	-
WRA 20 Hawaii	209	348	32,945	44,401	1,977	184.76	37.34	180	4	15	2	-	1	7

See footnote(s) at end of table.

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Table 20. **Energy Expenses for On-Farm Pumping of Irrigation Water by Type of Energy: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Natural gas													
	Farms	Pumps powered	Acres irrigated by water source		Expenses ($1,000)	Expenses per acre irrigated [2] (dollars)		Farms with energy expenses of -						
			Water from wells	Surface Water		Water from wells	Surface water	$1 to $999	$1,000 to $1,999	$2,000 to $4,999	$5,000 to $9,999	$10,000 to $19,999	$20,000 to $49,999	$50,000 or more
U.S. TOTAL ..... 2003 ..	11,289	41,771	4,794,428	175,766	281,029	57.25	33.67	530	572	2,031	2,296	2,289	2,238	1,333
1998 ..	15,795	58,880	(NA)	(NA)	220,881	(NA)	(NA)	1,622	1,284	4,292	3,232	2,153	(NA)	(NA)
2003 DATA														
Alabama	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	241	724	33,058	(D)	5,331	159.47	48.29	-	70	9	93	19	26	24
Arkansas	328	911	82,028	18,982	2,064	21.32	18.75	33	78	84	54	60	17	2
California	315	1,332	139,282	36,744	15,280	86.15	65.14	-	-	17	74	26	103	95
Colorado	288	603	67,837	22,194	3,689	53.18	5.70	17	62	24	40	102	38	5
Connecticut	1	(D)	-	(D)	(D)	-	(D)	-	-	-	-	1	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Florida	2	(D)	(D)	-	(D)	(D)	-	-	-	-	-	2	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	13	13	-	2,353	30	-	(D)	-	-	13	-	-	-	-
Illinois	8	18	(D)	-	(D)	13.24	-	-	1	4	3	-	-	-
Indiana	16	19	2,609	-	21	8.18	-	8	4	4	-	-	-	-
Iowa	6	8	424	-	(D)	28.82	-	2	-	4	-	-	-	-
Kansas	1,857	8,282	1,231,518	5,829	70,031	56.82	70.51	23	49	197	231	294	612	451
Kentucky	1	(D)	(D)	-	(D)	(D)	-	1	-	-	-	-	-	-
Louisiana	77	136	13,444	4,100	390	25.95	10.04	9	10	26	23	7	2	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	5	11	(D)	-	66	57.43	-	-	-	-	1	3	1	-
Minnesota	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi	2	(D)	-	(D)	(D)	-	(D)	-	-	2	-	-	-	-
Missouri	26	111	7,210	1,160	68	7.16	13.79	7	1	13	4	1	-	-
Montana	105	109	-	6,903	163	-	23.58	50	4	51	-	-	-	-
Nebraska	4,000	11,781	1,207,644	35,120	47,795	38.80	30.61	327	101	793	1,254	890	497	138
Nevada	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	3	(D)	-	6	(D)	-	47.00	3	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	304	683	51,561	(D)	3,801	71.80	(D)	5	56	54	96	48	32	13
New York	2	(D)	(D)	-	(D)	(D)	-	-	-	-	2	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota	10	(D)	670	(D)	60	57.84	14.52	4	-	-	4	2	-	-
Ohio	4	8	(D)	(D)	90	(D)	(D)	-	2	-	-	-	2	-
Oklahoma	544	1,480	194,361	2,302	8,243	41.95	35.01	30	26	165	142	69	71	41
Oregon	2	(D)	-	(D)	(D)	-	(D)	-	-	-	-	-	2	-
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	10	10	700	-	28	40.00	-	-	-	10	-	-	-	-
South Dakota	6	17	1,245	1,970	41	18.52	(D)	-	-	5	-	-	1	-
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Texas	3,064	15,385	1,750,619	24,465	123,511	69.87	48.84	-	106	525	272	765	832	564
Utah	17	28	2,675	1,020	33	7.96	11.18	11	-	5	1	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	32	66	2,170	6,122	146	(D)	17.37	-	2	26	2	-	2	-
Water Resources Areas														
WRA 01 New England	4	5	-	(D)	(D)	-	(D)	3	-	-	-	1	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	12	20	1,638	-	51	30.89	-	-	-	10	-	2	-	-
WRA 04 Great Lakes	9	15	1,712	-	85	49.83	-	1	-	1	3	3	1	-
WRA 05 Ohio	18	24	2,436	(D)	103	41.35	(D)	8	6	2	-	-	2	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	21	40	3,080	1,160	60	14.21	13.79	2	1	15	3	-	-	-
WRA 08 Lower Mississippi	360	930	90,245	13,882	2,076	20.31	20.21	35	71	117	74	48	14	1
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	4,878	14,815	1,572,640	58,315	68,237	42.44	29.37	385	129	950	1,356	1,087	684	287
WRA 11 Arkansas-White-Red	3,386	15,934	2,293,704	26,005	149,762	65.35	18.54	80	135	519	383	604	939	726
WRA 12 Texas-Gulf	1,685	7,203	596,157	24,508	34,763	56.48	44.61	-	58	326	231	467	420	183
WRA 13 Rio Grande	264	580	54,417	(D)	4,763	86.96	-	5	49	45	77	32	40	16
WRA 14 Upper Colorado	56	58	-	8,706	87	-	9.95	-	53	2	1	-	-	-
WRA 15 Lower Colorado	249	770	36,442	(D)	5,644	153.22	48.29	-	70	9	93	19	33	25
WRA 16 Great Basin	17	(D)	2,675	1,020	33	7.96	(D)	11	-	5	1	-	-	-
WRA 17 Pacific Northwest	15	(D)	-	(D)	(D)	-	20.85	-	-	13	-	-	2	-
WRA 18 California	315	1,332	139,282	36,744	15,280	86.15	65.14	-	-	17	74	26	103	95
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 20. **Energy Expenses for On-Farm Pumping of Irrigation Water by Type of Energy: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	LP gas, propane, and butane													
	Farms	Pumps powered	Acres irrigated by water source		Expenses ($1,000)	Expenses per acre irrigated [2] (dollars)		Farms with energy expenses of -						
			Water from wells	Surface Water		Water from wells	Surface water	$1 to $999	$1,000 to $1,999	$2,000 to $4,999	$5,000 to $9,999	$10,000 to $19,999	$20,000 to $49,999	$50,000 or more
U.S. TOTAL . . . . . 2003 . .	8,348	17,792	1,043,554	174,169	34,053	27.21	22.68	2,690	1,829	2,022	1,135	250	407	15
1998 . .	11,094	23,964	(NA)	(NA)	31,915	(NA)	(NA)	2,496	3,116	4,254	764	326	(NA)	(NA)
2003 DATA														
Alabama	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	10	10	477	(D)	90	177.08	(D)	-	-	3	1	6	-	-
Arkansas	439	1,089	70,035	9,085	1,837	24.01	19.56	167	39	145	58	18	7	5
California	518	604	32,622	3,223	4,807	136.84	106.40	53	-	330	4	18	113	-
Colorado	277	335	9,197	11,790	333	12.56	18.44	228	4	27	17	-	1	-
Connecticut	5	(D)	-	(D)	19	-	80.69	1	3	-	-	1	-	-
Delaware	2	(D)	(D)	-	(D)	(D)	-	2	-	-	-	-	-	-
Florida	107	(D)	1,748	(D)	82	46.48	-	84	23	-	-	-	-	-
Georgia	178	246	150	8,082	120	1.00	14.82	147	27	-	4	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	79	79	(D)	231	213	(D)	(D)	-	-	76	3	-	-	-
Illinois	66	130	12,207	1,980	295	20.38	30.71	5	17	29	10	3	2	-
Indiana	30	68	4,288	1,401	80	16.16	7.49	8	6	12	3	1	-	-
Iowa	62	96	6,479	1,122	82	10.53	12.32	38	9	13	2	-	-	-
Kansas	583	1,007	69,481	17,100	2,085	27.08	15.07	59	82	367	61	9	4	1
Kentucky	16	(D)	(D)	168	(D)	(D)	9.17	14	-	2	-	-	-	-
Louisiana	65	128	(D)	8,832	244	17.66	15.64	22	13	19	4	3	4	-
Maine	38	42	-	236	41	-	174.24	36	-	-	2	-	-	-
Maryland	5	7	225	(D)	6	15.00	(D)	-	5	-	-	-	-	-
Massachusetts	242	611	121	7,101	684	-	99.52	128	34	55	17	4	3	1
Michigan	48	72	1,362	2,870	63	27.21	9.07	35	1	10	2	-	-	-
Minnesota	8	10	1,800	-	28	15.39	-	2	1	3	2	-	-	-
Mississippi	68	(D)	29,945	(D)	(D)	8.93	13.05	12	15	19	18	4	-	-
Missouri	521	2,682	201,534	4,588	1,848	8.82	15.50	205	63	141	72	27	12	1
Montana	79	94	-	14,202	146	-	10.25	64	7	3	3	1	1	-
Nebraska	4,032	8,701	537,310	39,007	18,410	29.57	19.00	1,018	1,286	529	816	129	253	1
Nevada	2	(D)	(D)	-	(D)	(D)	-	2	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	3	3	-	255	1	-	3.06	3	-	-	-	-	-	-
New Mexico	176	351	(D)	2,793	(D)	31.41	8.00	53	14	89	7	7	6	-
New York	3	(D)	-	240	(D)	-	75.00	-	-	-	3	-	-	-
North Carolina	25	30	-	1,507	18	-	11.70	24	-	1	-	-	-	-
North Dakota	16	24	710	(D)	30	2.54	26.83	10	1	2	2	1	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	216	303	(D)	14,175	426	29.84	11.67	85	39	79	8	5	-	-
Oregon	1	(D)	-	(D)	(D)	-	(D)	-	-	-	-	-	1	-
Pennsylvania	3	3	-	66	1	-	13.64	3	-	-	-	-	-	-
Rhode Island	3	(D)	-	(D)	4	-	62.43	1	2	-	-	-	-	-
South Carolina	10	20	600	700	48	-	-	-	-	10	-	-	-	-
South Dakota	64	67	3,514	4,150	85	11.94	10.30	40	17	5	-	2	-	-
Tennessee	7	13	-	530	15	-	27.91	4	-	3	-	-	-	-
Texas	121	287	16,461	5,100	628	35.06	10.00	4	51	41	12	9	-	4
Utah	5	7	-	2,040	38	-	18.43	-	3	-	-	2	-	-
Vermont	6	6	-	6	(Z)	-	6.00	6	-	-	-	-	-	-
Virginia	11	20	-	386	7	-	17.10	9	2	-	-	-	-	-
Washington	51	(D)	(D)	1,642	(D)	(D)	48.54	-	47	3	1	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	45	68	228	362	40	45.14	81.77	37	1	6	1	-	-	-
Wyoming	102	118	924	3,790	147	16.23	34.78	81	17	-	2	-	-	2
Water Resources Areas														
WRA 01 New England	294	674	121	7,635	748	-	100.96	172	39	55	19	5	3	1
WRA 02 Mid-Atlantic	24	35	275	1,023	15	16.64	10.44	17	7	-	-	-	-	-
WRA 03 South Atlantic-Gulf	320	405	2,498	10,309	268	42.81	14.33	255	50	11	4	-	-	-
WRA 04 Great Lakes	55	82	1,522	3,290	88	28.29	13.66	38	1	10	6	-	-	-
WRA 05 Ohio	47	103	5,759	(D)	108	17.02	6.90	22	8	10	5	2	-	-
WRA 06 Tennessee	4	10	-	380	13	-	33.39	1	-	3	-	-	-	-
WRA 07 Upper Mississippi	160	273	16,290	4,133	409	18.37	29.83	64	25	54	13	2	2	-
WRA 08 Lower Mississippi	860	3,603	275,301	15,755	3,614	12.18	17.14	307	117	222	140	49	19	6
WRA 09 Souris-Red-Rainy	5	5	710	-	(D)	(D)	-	4	1	-	-	-	-	-
WRA 10 Missouri	4,659	9,652	573,294	84,878	19,908	28.98	16.73	1,279	1,370	772	841	135	259	3
WRA 11 Arkansas-White-Red	748	1,336	91,695	21,979	2,346	22.88	12.76	204	97	343	79	20	4	1
WRA 12 Texas-Gulf	122	303	17,041	5,100	739	40.38	10.00	-	51	41	12	9	5	4
WRA 13 Rio Grande	182	337	(D)	1,868	(D)	21.63	36.00	70	13	89	7	2	1	-
WRA 14 Upper Colorado	204	206	-	6,480	115	-	17.72	202	-	-	-	2	-	-
WRA 15 Lower Colorado	10	(D)	477	(D)	90	177.08	(D)	-	-	3	1	6	-	-
WRA 16 Great Basin	5	(D)	(D)	1,620	5	(D)	(D)	2	3	-	-	-	-	-
WRA 17 Pacific Northwest	130	143	(D)	(D)	303	37.87	59.05	-	47	79	4	-	-	-
WRA 18 California	519	610	32,622	6,223	4,829	136.84	58.64	53	-	330	4	18	114	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 20. **Energy Expenses for On-Farm Pumping of Irrigation Water by Type of Energy: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Diesel fuel													
	Farms	Pumps powered	Acres irrigated by water source		Expenses ($1,000)	Expenses per acre irrigated [2] (dollars)		Farms with energy expenses of -						
			Water from wells	Surface Water		Water from wells	Surface water	$1 to $999	$1,000 to $1,999	$2,000 to $4,999	$5,000 to $9,999	$10,000 to $19,999	$20,000 to $49,999	$50,000 or more
U.S. TOTAL . . . . . 2003 . .	39,988	112,600	9,426,385	3,014,618	281,490	25.09	16.27	12,473	5,352	9,700	5,352	3,660	2,628	823
1998 . .	36,905	108,339	(NA)	(NA)	199,570	(NA)	(NA)	11,735	5,918	8,998	4,811	3,444	(NA)	(NA)
2003 DATA														
Alabama	175	321	8,952	21,360	386	20.21	10.01	101	19	42	5	5	2	1
Alaska	14	14	945	(D)	8	(D)	(D)	11	2	1	-	-	-	-
Arizona	78	455	16,717	74,774	2,846	68.42	24.34	-	3	5	14	29	9	18
Arkansas	3,567	21,679	2,104,072	322,447	39,982	17.27	17.00	420	417	666	743	758	469	94
California	3,895	12,535	711,013	670,556	53,388	56.52	19.24	1,547	239	679	297	376	451	306
Colorado	880	1,409	66,923	65,086	2,367	23.66	12.03	509	70	142	77	58	23	1
Connecticut	26	40	(D)	699	25	(D)	35.65	22	2	1	-	1	-	-
Delaware	176	544	48,488	2,588	494	9.70	(D)	92	35	29	11	5	3	1
Florida	2,864	8,233	447,147	454,591	16,156	29.29	8.96	1,249	557	365	415	141	93	44
Georgia	1,202	2,938	204,056	122,040	4,981	14.78	18.38	394	254	290	121	98	38	7
Hawaii	10	26	958	1,973	333	(D)	97.28	-	1	3	4	-	-	2
Idaho	876	1,025	(D)	54,094	2,238	42.43	21.29	324	107	367	54	18	5	1
Illinois	612	1,365	164,588	8,932	2,424	14.26	8.84	188	99	204	78	23	19	1
Indiana	545	1,092	91,210	32,065	1,235	10.53	10.91	247	141	71	69	13	4	-
Iowa	194	345	38,819	1,883	325	7.93	8.00	94	56	31	7	6	-	-
Kansas	2,092	5,123	599,965	43,766	20,115	32.53	14.32	126	366	649	461	261	136	93
Kentucky	501	570	4,140	7,890	253	12.59	25.34	435	34	26	5	1	-	-
Louisiana	1,539	4,977	447,453	160,526	10,187	17.05	12.87	310	222	363	311	221	95	17
Maine	121	208	157	15,288	170	10.00	10.95	94	14	7	2	1	3	-
Maryland	178	449	31,401	10,403	374	6.46	10.86	89	48	25	12	2	-	2
Massachusetts	155	266	19	2,926	149	(D)	50.44	117	16	12	10	-	-	-
Michigan	726	1,546	73,540	65,301	2,332	16.44	16.25	289	129	194	61	33	18	2
Minnesota	523	907	100,093	10,302	1,505	13.68	11.01	151	157	152	35	22	5	1
Mississippi	815	5,466	770,036	30,228	8,951	10.99	12.60	86	79	203	164	158	102	23
Missouri	1,144	4,503	428,544	30,887	4,071	8.83	9.07	441	182	266	153	76	24	2
Montana	853	1,092	4,640	133,445	1,320	13.64	8.34	575	122	89	39	24	4	-
Nebraska	8,571	20,168	2,302,436	117,459	69,808	29.69	17.22	1,006	1,101	3,158	1,410	952	813	131
Nevada	167	210	(D)	10,302	703	36.76	12.73	68	45	19	17	14	3	1
New Hampshire	26	(D)	(D)	209	(D)	-	31.27	22	4	-	-	-	-	-
New Jersey	276	717	16,768	16,074	768	31.07	19.96	132	26	76	22	16	4	-
New Mexico	122	329	23,183	9,698	1,358	53.12	(D)	2	10	27	48	14	17	4
New York	278	531	7,518	22,864	680	32.83	20.55	152	20	54	37	8	7	-
North Carolina	797	1,431	4,085	59,634	1,228	16.41	20.02	431	162	168	22	13	-	1
North Dakota	145	300	24,170	9,484	585	18.79	14.05	43	33	41	12	8	8	-
Ohio	110	142	2,232	4,086	87	6.97	17.37	99	2	3	5	1	-	-
Oklahoma	513	853	61,258	31,443	2,221	29.88	14.39	210	38	145	58	34	24	4
Oregon	148	438	10,083	45,824	1,150	16.73	21.55	47	30	31	25	5	4	6
Pennsylvania	390	522	799	8,453	190	27.30	20.26	361	16	5	4	4	-	-
Rhode Island	5	(D)	-	143	(D)	-	(D)	4	-	1	-	-	-	-
South Carolina	78	110	3,560	5,544	145	15.05	15.15	19	37	14	5	3	-	-
South Dakota	247	425	41,516	21,193	1,383	17.44	31.27	33	40	111	31	23	6	3
Tennessee	208	303	15,984	5,563	192	8.25	10.76	178	11	14	3	1	-	1
Texas	2,186	4,973	400,057	142,158	17,662	39.43	16.09	1,023	130	429	217	132	203	52
Utah	783	1,220	16,147	53,836	2,130	46.90	26.30	398	66	205	66	33	13	2
Vermont	19	21	(D)	234	6	(D)	(D)	19	-	-	-	-	-	-
Virginia	203	461	1,907	19,210	292	26.34	15.14	145	13	30	11	3	1	-
Washington	117	256	(D)	22,327	649	11.28	24.39	28	3	50	27	5	4	-
West Virginia	7	13	-	(D)	1	-	7.37	7	-	-	-	-	-	-
Wisconsin	661	1,680	80,379	27,641	2,866	19.16	46.88	120	170	198	97	58	16	2
Wyoming	170	326	5,749	36,995	759	5.19	19.70	15	24	39	87	3	2	-
Water Resources Areas														
WRA 01 New England	345	571	(D)	19,435	358	19.53	18.20	271	36	21	12	2	3	-
WRA 02 Mid-Atlantic	1,188	2,631	105,195	57,127	2,293	13.64	17.21	749	143	168	83	34	8	3
WRA 03 South Atlantic-Gulf	5,226	13,247	666,358	662,697	22,891	24.71	11.68	2,297	1,037	889	561	257	132	53
WRA 04 Great Lakes	1,152	2,311	107,789	96,900	3,424	16.71	17.23	517	167	285	109	43	29	2
WRA 05 Ohio	974	1,437	83,262	20,790	1,206	10.30	17.37	694	136	78	49	10	7	-
WRA 06 Tennessee	199	274	2,555	16,748	197	5.98	9.64	153	15	20	7	3	1	-
WRA 07 Upper Mississippi	1,871	4,168	346,614	64,111	6,653	14.61	26.41	500	450	569	211	105	33	3
WRA 08 Lower Mississippi	6,110	32,271	3,414,044	419,624	55,237	14.32	14.71	1,013	753	1,313	1,226	1,060	650	95
WRA 09 Souris-Red-Rainy	139	238	22,696	(D)	458	17.02	(D)	46	28	45	13	5	1	1
WRA 10 Missouri	11,154	24,574	2,587,595	360,590	78,695	28.52	14.23	1,897	1,548	3,770	1,870	1,054	873	142
WRA 11 Arkansas-White-Red	2,778	9,556	974,895	153,684	33,856	33.27	15.30	380	372	714	459	471	212	170
WRA 12 Texas-Gulf	2,013	4,042	281,438	139,539	10,159	28.77	16.53	1,019	122	400	183	98	178	13
WRA 13 Rio Grande	128	297	31,147	(D)	2,059	64.23	(D)	2	11	25	39	35	11	5
WRA 14 Upper Colorado	722	833	-	54,242	920	-	16.96	494	62	105	53	8	-	-
WRA 15 Lower Colorado	228	755	(D)	77,024	2,936	68.42	24.34	150	3	5	14	29	9	18
WRA 16 Great Basin	786	1,119	27,970	65,615	2,581	41.42	20.28	368	74	219	64	42	16	3
WRA 17 Pacific Northwest	1,044	1,685	42,742	120,991	3,813	31.28	20.23	365	145	387	98	28	14	7
WRA 18 California	3,907	12,551	711,013	672,940	53,412	56.52	19.20	1,547	247	683	297	376	451	306
WRA 19 Alaska	14	14	945	(D)	8	(D)	(D)	11	2	1	-	-	-	-
WRA 20 Hawaii	10	26	958	1,973	333	(D)	97.28	-	1	3	4	-	-	2

See footnote(s) at end of table.

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Table 20. **Energy Expenses for On-Farm Pumping of Irrigation Water by Type of Energy: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Gasoline and gasohol													
	Farms	Pumps powered	Acres irrigated by water source		Expenses ($1,000)	Expenses per acre irrigated [2] (dollars)		Farms with energy expenses of -						
			Water from wells	Surface Water		Water from wells	Surface water	$1 to $999	$1,000 to $1,999	$2,000 to $4,999	$5,000 to $9,999	$10,000 to $19,999	$20,000 to $49,999	$50,000 or more
U.S. TOTAL . . . . . 2003 . .	4,477	6,178	57,834	75,823	2,027	11.60	18.05	4,033	230	152	45	14	3	-
1998 . .	6,074	8,965	(NA)	(NA)	5,161	(NA)	(NA)	5,055	600	206	121	17	(NA)	(NA)
2003 DATA														
Alabama	27	27	-	182	12	-	63.27	25	-	2	-	-	-	-
Alaska	4	4	-	(D)	1	-	13.20	4	-	-	-	-	-	-
Arizona	63	63	252	-	25	99.50	-	63	-	-	-	-	-	-
Arkansas	321	398	9,340	4,770	236	15.18	26.72	301	-	8	7	5	-	-
California	43	64	198	11,150	139	13.23	12.25	7	18	-	18	-	-	-
Colorado	83	83	1,700	4,459	13	4.00	1.44	83	-	-	-	-	-	-
Connecticut	49	67	(D)	415	(D)	79.88	37.74	42	5	2	-	-	-	-
Delaware	17	(D)	(D)	(D)	(D)	10.57	-	15	-	1	-	-	1	-
Florida	251	275	(D)	(D)	(D)	(D)	4.03	247	-	-	2	2	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	73	75	35	153	15	74.29	79.95	72	-	1	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	29	39	(D)	251	(D)	(D)	8.59	28	-	-	-	1	-	-
Indiana	85	92	482	452	16	24.32	23.51	83	-	2	-	-	-	-
Iowa	50	59	-	150	(D)	-	26.53	50	-	-	-	-	-	-
Kansas	4	4	-	1,000	1	-	1.20	4	-	-	-	-	-	-
Kentucky	164	220	(D)	1,160	73	55.71	47.87	149	7	7	1	-	-	-
Louisiana	52	56	(D)	2,600	29	(D)	9.62	50	-	2	-	-	-	-
Maine	120	125	66	863	19	50.00	17.92	120	-	-	-	-	-	-
Maryland	116	208	426	1,436	36	4.00	23.75	116	-	-	-	-	-	-
Massachusetts	95	123	-	819	37	-	45.78	80	9	6	-	-	-	-
Michigan	234	300	(D)	2,312	94	(D)	24.34	223	9	-	-	2	-	-
Minnesota	138	255	172	592	13	21.66	15.72	136	2	-	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	101	422	32,448	1,002	243	7.25	7.92	64	16	4	11	4	2	-
Montana	16	16	-	2,880	8	-	2.78	16	-	-	-	-	-	-
Nebraska	112	149	1,377	2,763	141	45.45	28.36	37	37	38	-	-	-	-
Nevada	40	(D)	-	160	(D)	-	7.50	40	-	-	-	-	-	-
New Hampshire	30	42	(D)	243	(D)	-	26.03	27	3	-	-	-	-	-
New Jersey	121	163	356	2,071	77	42.75	29.71	96	14	6	5	-	-	-
New Mexico	3	3	(D)	(D)	(D)	(D)	(D)	2	-	1	-	-	-	-
New York	174	240	(D)	3,011	80	14.54	22.61	148	13	13	-	-	-	-
North Carolina	391	594	34	5,550	128	150.00	22.21	367	-	24	-	-	-	-
North Dakota	10	(D)	-	(D)	2	-	10.67	10	-	-	-	-	-	-
Ohio	86	93	(D)	(D)	18	31.54	18.97	86	-	-	-	-	-	-
Oklahoma	185	353	(D)	2,510	148	(D)	55.61	110	56	18	1	-	-	-
Oregon	12	(D)	-	180	2	-	13.33	12	-	-	-	-	-	-
Pennsylvania	503	672	45	3,610	80	18.75	21.99	490	7	6	-	-	-	-
Rhode Island	11	16	-	(D)	(D)	-	17.48	11	-	-	-	-	-	-
South Carolina	16	27	-	529	7	-	13.04	15	1	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	77	122	-	859	28	-	32.36	69	7	1	-	-	-	-
Texas	25	25	-	2,500	5	-	2.19	25	-	-	-	-	-	-
Utah	174	174	1,110	2,114	43	12.00	14.12	174	-	-	-	-	-	-
Vermont	29	31	(D)	107	4	10.00	36.72	28	-	1	-	-	-	-
Virginia	231	265	-	1,656	70	-	42.24	215	12	4	-	-	-	-
Washington	6	(D)	(D)	520	(D)	(D)	2.69	4	-	2	-	-	-	-
West Virginia	6	12	-	(D)	(Z)	-	28.00	6	-	-	-	-	-	-
Wisconsin	100	106	265	2,021	45	49.74	19.60	83	14	3	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas														
WRA 01 New England	307	377	(D)	(D)	(D)	66.55	31.84	281	17	9	-	-	-	-
WRA 02 Mid-Atlantic	772	1,126	2,501	8,959	264	19.92	24.07	712	34	20	5	-	1	-
WRA 03 South Atlantic-Gulf	614	834	482	12,959	170	(D)	12.34	587	10	13	2	2	-	-
WRA 04 Great Lakes	485	646	3,761	5,463	178	13.48	23.31	456	19	8	-	2	-	-
WRA 05 Ohio	452	544	609	2,606	92	23.82	32.94	444	-	7	1	-	-	-
WRA 06 Tennessee	265	348	-	2,387	92	-	38.73	243	4	18	-	-	-	-
WRA 07 Upper Mississippi	188	220	3,435	1,339	65	10.61	22.14	174	9	3	1	1	-	-
WRA 08 Lower Mississippi	311	648	35,944	7,525	471	9.43	19.16	260	10	14	17	8	2	-
WRA 09 Souris-Red-Rainy	55	101	-	(D)	(D)	-	13.70	55	-	-	-	-	-	-
WRA 10 Missouri	223	272	3,117	7,726	168	22.36	12.70	144	41	38	-	-	-	-
WRA 11 Arkansas-White-Red	349	565	5,730	2,612	184	7.59	53.75	261	68	18	1	1	-	-
WRA 12 Texas-Gulf	25	25	-	2,500	5	-	2.19	25	-	-	-	-	-	-
WRA 13 Rio Grande	3	3	(D)	(D)	(D)	(D)	(D)	2	-	1	-	-	-	-
WRA 14 Upper Colorado	87	87	-	5,484	30	-	5.55	87	-	-	-	-	-	-
WRA 15 Lower Colorado	63	(D)	(D)	-	25	99.50	-	63	-	-	-	-	-	-
WRA 16 Great Basin	140	140	(D)	1,090	18	12.00	(D)	140	-	-	-	-	-	-
WRA 17 Pacific Northwest	6	(D)	(D)	520	(D)	(D)	2.69	4	-	2	-	-	-	-
WRA 18 California	55	76	198	11,330	142	13.23	12.27	19	18	-	18	-	-	-
WRA 19 Alaska	4	4	-	(D)	1	-	13.20	4	-	-	-	-	-	-
WRA 20 Hawaii	73	75	35	153	15	74.29	79.95	72	-	1	-	-	-	-

[1] No energy expenses for solar-powered pumps are included.
[2] Expenses are calculated only from records with one source of water.

Table 21. **Acres Irrigated Using Solar and Other Renewable Energy Sources to Power the Pump: 2003**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms	Pumps powered	Total acres irrigated	Only using solar and other renewable sources [1]					
				For pumped well water only			For pumped surface water only		
				Farms	Pumps powered	Acres irrigated	Farms	Pumps powered	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	360	411	16,430	167	167	6,270	190	238	10,154
1998 . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA									
Alabama	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-
Arkansas	-	-	-	-	-	-	-	-	-
California	-	-	-	-	-	-	-	-	-
Colorado	-	-	-	-	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-
Florida	-	-	-	-	-	-	-	-	-
Georgia	-	-	-	-	-	-	-	-	-
Hawaii	8	8	8	-	-	-	8	8	8
Idaho	-	-	-	-	-	-	-	-	-
Illinois	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-
Michigan	2	(D)	(D)	2	(D)	(D)	-	-	-
Minnesota	-	-	-	-	-	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-	-
Missouri	-	-	-	-	-	-	-	-	-
Montana	-	-	-	-	-	-	-	-	-
Nebraska	82	82	4,100	82	82	4,100	-	-	-
Nevada	-	-	-	-	-	-	-	-	-
New Hampshire	6	9	9	3	3	3	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-
New York	54	54	162	54	54	162	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-
North Dakota	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	-
Oklahoma	-	-	-	-	-	-	-	-	-
Oregon	-	-	-	-	-	-	-	-	-
Pennsylvania	32	64	64	-	-	-	32	64	64
Rhode Island	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-
Tennessee	19	(D)	19	19	(D)	19	-	-	-
Texas	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-
Vermont	5	5	10	5	5	10	-	-	-
Virginia	-	-	-	-	-	-	-	-	-
Washington	134	134	10,050	-	-	-	134	134	10,050
West Virginia	-	-	-	-	-	-	-	-	-
Wisconsin	16	32	32	-	-	-	16	32	32
Wyoming	2	(D)	(D)	2	(D)	(D)	-	-	-
Water Resources Areas									
WRA 01 New England	11	14	19	8	8	13	-	-	-
WRA 02 Mid-Atlantic	86	(D)	(D)	54	(D)	(D)	32	64	64
WRA 03 South Atlantic-Gulf	-	-	-	-	-	-	-	-	-
WRA 04 Great Lakes	2	(D)	(D)	2	(D)	(D)	-	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	19	19	19	19	19	19	-	-	-
WRA 07 Upper Mississippi	16	32	32	-	-	-	16	32	32
WRA 08 Lower Mississippi	-	-	-	-	-	-	-	-	-
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	84	84	5,700	84	84	5,700	-	-	-
WRA 11 Arkansas-White-Red	-	-	-	-	-	-	-	-	-
WRA 12 Texas-Gulf	-	-	-	-	-	-	-	-	-
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	134	134	10,050	-	-	-	134	134	10,050
WRA 18 California	-	-	-	-	-	-	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	8	8	8	-	-	-	8	8	8

[1] Rows may not add across. Operations using more than one source of water are only included in the total columns.

Table 22. **Irrigation Water from Off-Farm Suppliers: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms	Total cost ($1,000)	Average cost[1] ($/ac)	Farms by average cost per acre					Average cost[1] ($/ac ft)	Farms by average cost per acre-foot					Farms with off-farm water at no cost
				$1 to $19	$20 to $49	$50 to $99	$100 to $149	$150 or more		$1 to $9	$10 to $19	$20 to $29	$30 to $59	$60 or more	
U.S. TOTAL . . . . . 2003 . .	86,405	578,750	41.73	23,515	23,155	11,215	2,258	7,818	18.29	22,886	13,837	6,814	9,845	14,579	20,349
1998 . .	103,525	673,265	41.03	(NA)	(NA)	(NA)	(NA)	(NA)	16.19	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA															
Alabama	103	40	30.14	-	6	8	7	14	54.35	-	-	-	7	28	69
Alaska	11	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Arizona	1,726	37,119	71.88	14	435	413	356	237	15.91	423	583	87	141	221	277
Arkansas	58	601	22.44	17	17	14	-	-	13.11	17	5	25	1	-	10
California	22,558	360,367	86.48	3,895	4,953	3,539	467	5,495	29.56	5,828	3,267	1,122	1,946	6,186	4,790
Colorado	6,476	9,938	12.26	2,849	1,675	526	3	3	7.28	2,376	995	292	928	465	1,430
Connecticut	58	17	40.68	1	-	2	1	10	131.23	-	1	-	-	13	44
Delaware	5	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Florida	221	2,779	8.70	24	7	15	83	-	9.41	24	2	-	13	90	94
Georgia	56	-	-	-	-	-	-	-	-	-	-	-	-	-	56
Hawaii	910	2,252	44.17	11	13	47	39	429	19.88	-	10	1	22	506	380
Idaho	11,059	35,395	22.00	3,066	4,583	906	21	24	10.53	3,569	2,217	1,390	1,222	202	2,667
Illinois	79	-	-	-	-	-	-	-	-	-	-	-	-	-	79
Indiana	20	-	-	-	-	-	-	-	-	-	-	-	-	-	20
Iowa	62	3	1.28	2	8	-	-	8	2.39	-	-	2	-	16	44
Kansas	315	1,461	23.98	16	61	73	36	-	25.78	16	13	18	48	91	129
Kentucky	154	31	110.43	7	7	7	7	56	238.33	-	7	-	7	70	70
Louisiana	236	244	10.33	65	59	4	-	-	5.79	66	6	-	56	-	159
Maine	17	9	6.73	2	1	-	-	2	26.72	-	2	1	-	2	13
Maryland	78	23	25.47	-	-	-	47	-	71.32	-	-	-	-	47	31
Massachusetts	214	20	21.18	6	31	-	6	33	5.12	6	-	-	31	39	138
Michigan	111	(D)	(D)	2	-	-	-	-	(D)	-	-	-	-	2	109
Minnesota	56	56	5.48	15	2	-	-	-	4.09	11	-	2	2	2	40
Mississippi	19	(D)	(D)	3	-	-	-	-	(D)	-	-	3	-	-	16
Missouri	14	14	3.39	6	-	-	-	-	4.17	2	4	-	-	-	8
Montana	4,861	13,840	10.53	2,451	965	1	3	7	7.46	1,640	729	199	602	257	1,541
Nebraska	1,736	7,295	16.45	442	998	118	-	-	14.94	123	751	56	185	443	273
Nevada	623	2,252	15.46	124	257	56	2	-	6.15	132	236	15	7	49	253
New Hampshire	15	(D)	(D)	-	-	1	1	-	(D)	-	-	-	-	2	13
New Jersey	53	4	12.12	-	1	4	-	-	31.37	-	-	-	-	5	48
New Mexico	2,944	2,630	12.72	977	726	751	-	99	5.34	1,272	154	7	522	598	401
New York	323	204	75.29	2	59	5	63	24	153.97	2	-	-	-	151	170
North Carolina	249	-	-	-	-	-	-	-	-	-	-	-	-	-	249
North Dakota	90	425	13.98	23	26	-	-	-	9.06	13	11	14	5	6	43
Ohio	203	55	23.28	3	2	14	-	48	44.42	-	-	1	4	62	136
Oklahoma	64	754	20.66	20	29	2	2	-	18.55	16	6	10	19	2	11
Oregon	5,615	17,120	23.76	1,238	2,793	508	3	147	11.80	1,309	1,468	740	388	784	1,515
Pennsylvania	260	-	-	-	-	-	-	-	-	-	-	-	-	-	260
Rhode Island	21	(D)	(D)	-	-	4	-	4	(D)	-	-	-	-	8	13
South Carolina	4	(D)	(D)	2	-	-	-	-	(D)	2	-	-	-	-	2
South Dakota	491	1,127	9.60	303	83	-	-	-	1.52	81	202	45	36	22	105
Tennessee	158	29	51.17	-	20	-	18	40	52.03	-	-	-	-	78	80
Texas	4,208	17,756	30.15	1,537	1,805	178	123	80	19.37	702	213	586	966	1,256	485
Utah	8,429	12,693	16.06	4,359	1,887	490	236	9	7.91	3,353	1,803	702	606	517	1,507
Vermont	50	5	46.20	-	2	2	-	6	145.91	-	-	-	-	10	40
Virginia	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Washington	8,271	47,405	45.50	576	1,446	3,503	734	1,043	19.24	755	864	1,457	1,920	2,306	1,025
West Virginia	22	-	-	-	-	-	-	-	-	-	-	-	-	-	22
Wisconsin	96	5	3.91	1	4	-	-	-	12.12	-	-	-	1	4	91
Wyoming	2,999	4,765	6.00	1,456	194	24	-	-	3.58	1,148	288	39	160	39	1,373
Water Resources Areas															
WRA 01 New England	354	58	19.91	9	32	7	8	55	12.89	6	3	1	31	70	244
WRA 02 Mid-Atlantic	381	78	22.69	-	3	6	47	5	48.34	-	-	-	-	61	320
WRA 03 South Atlantic-Gulf	585	2,810	8.67	26	13	16	83	7	9.46	26	2	-	13	104	443
WRA 04 Great Lakes	452	213	21.30	7	65	19	63	53	53.68	2	-	1	4	200	245
WRA 05 Ohio	596	57	22.23	7	25	7	7	107	48.26	-	7	-	7	139	443
WRA 06 Tennessee	93	17	29.86	-	-	7	25	10	41.08	-	-	-	7	35	51
WRA 07 Upper Mississippi	193	31	4.30	5	2	-	-	8	7.70	2	-	-	3	10	179
WRA 08 Lower Mississippi	242	796	16.96	73	71	18	-	-	10.64	71	11	21	57	2	131
WRA 09 Souris-Red-Rainy	20	35	3.19	14	-	-	-	-	2.26	12	-	2	-	-	6
WRA 10 Missouri	10,884	29,008	11.22	4,972	2,615	470	6	7	6.43	3,603	1,999	420	1,226	822	3,045
WRA 11 Arkansas-White-Red	1,673	3,057	9.49	768	260	104	38	-	6.67	269	80	420	151	250	503
WRA 12 Texas-Gulf	2,907	14,589	28.10	1,128	1,037	174	98	-	18.54	701	184	203	568	781	470
WRA 13 Rio Grande	3,416	5,776	37.18	689	1,467	772	25	182	17.27	943	173	7	919	1,093	291
WRA 14 Upper Colorado	6,570	7,971	8.81	3,458	1,337	304	150	-	5.34	2,739	1,278	283	647	302	1,346
WRA 15 Lower Colorado	1,965	37,485	70.58	104	453	454	430	237	15.67	443	671	161	141	262	300
WRA 16 Great Basin	7,484	13,079	17.19	3,378	1,962	354	14	9	8.17	2,895	1,445	581	519	277	1,888
WRA 17 Pacific Northwest	24,156	98,921	29.49	4,881	8,041	4,893	758	1,214	13.82	5,246	4,480	3,443	3,507	3,111	5,216
WRA 18 California	23,513	362,515	84.82	3,985	5,759	3,563	467	5,495	29.26	5,928	3,494	1,270	2,023	6,554	4,837
WRA 19 Alaska	11	-	-	-	-	-	-	-	-	-	-	-	-	-	11
WRA 20 Hawaii	910	2,252	44.17	11	13	47	39	429	19.88	-	10	1	22	506	380

[1] Includes farms reporting water at no cost.

Table 23. **Investment in Irrigation Equipment, Facilities, and Land Improvement: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Irrigation investment (all types) in survey year - con.									
	Farms	Acres irrigated	Investment [1] ($1,000)	Average per farm (dollars)	Farms with investment of -					
					$1 to $999	$1,000 to $4,999	$5,000 to $14,999	$15,000 to $39,999	$40,000 to $74,999	$75,000 or more
U.S. TOTAL . . . . . 2003 . .	86,174	26,674,941	1,125,125	13,056	35,021	21,940	12,526	8,671	4,791	3,225
1998 . .	70,304	25,594,276	1,161,404	16,520	27,382	17,795	12,025	6,735	(NA)	(NA)
2003 DATA										
Alabama	280	22,910	2,197	7,847	133	68	49	14	11	5
Alaska	33	1,188	91	2,769	19	13	-	-	1	-
Arizona	1,381	457,991	21,005	15,210	598	382	78	203	59	61
Arkansas	2,005	2,152,829	62,837	31,340	20	591	506	478	229	181
California	15,589	3,959,889	216,543	13,891	7,871	2,978	1,290	1,911	887	652
Colorado	4,408	1,134,465	40,137	9,106	1,538	1,354	587	752	87	90
Connecticut	56	1,103	330	5,886	23	13	12	8	-	-
Delaware	97	34,158	2,803	28,893	8	8	35	15	20	11
Florida	3,260	698,028	26,807	8,223	1,616	1,092	357	57	62	76
Georgia	786	259,875	19,012	24,188	326	41	112	145	104	58
Hawaii	458	70,374	5,309	11,591	260	136	35	19	1	7
Idaho	6,258	1,987,610	68,676	10,974	3,118	1,366	910	403	223	238
Illinois	350	161,936	7,306	20,873	95	117	47	37	34	20
Indiana	388	99,237	5,631	14,513	159	118	24	40	28	19
Iowa	284	56,409	2,123	7,476	136	87	18	28	11	4
Kansas	1,595	1,176,687	41,257	25,866	204	262	466	255	289	119
Kentucky	340	8,903	1,897	5,581	141	112	61	22	1	3
Louisiana	668	347,611	8,481	12,696	87	234	178	108	50	11
Maine	281	11,093	1,733	6,169	139	53	71	7	4	7
Maryland	209	16,005	1,504	7,195	32	114	40	17	3	3
Massachusetts	327	7,920	1,869	5,716	132	112	48	22	13	-
Michigan	1,024	243,325	16,995	16,597	398	197	223	80	64	62
Minnesota	670	168,680	8,021	11,971	291	164	109	38	38	30
Mississippi	448	687,702	11,020	24,597	50	84	137	84	58	35
Missouri	810	437,957	8,860	10,938	339	199	129	81	38	24
Montana	2,761	1,022,642	34,619	12,539	1,049	788	523	143	171	87
Nebraska	6,568	3,961,489	158,526	24,136	922	1,700	1,257	1,174	1,094	421
Nevada	671	309,902	14,696	21,902	261	147	95	89	39	40
New Hampshire	76	344	126	1,661	55	12	8	1	-	-
New Jersey	393	29,314	3,895	9,912	201	77	58	36	12	9
New Mexico	2,492	339,055	25,592	10,270	1,331	468	248	287	79	79
New York	439	29,801	2,063	4,699	269	92	42	19	14	3
North Carolina	1,020	44,970	8,447	8,282	411	361	53	132	50	13
North Dakota	202	91,145	2,900	14,355	36	80	41	25	9	11
Ohio	261	8,391	1,024	3,923	126	92	23	16	3	1
Oklahoma	962	250,307	14,776	15,359	236	360	158	102	53	53
Oregon	6,625	875,723	38,867	5,867	3,353	1,585	1,279	248	107	53
Pennsylvania	739	10,397	1,914	2,590	510	150	60	11	4	4
Rhode Island	28	313	76	2,701	8	17	2	1	-	-
South Carolina	371	33,324	3,793	10,222	248	45	19	36	9	14
South Dakota	439	136,130	5,570	12,689	110	172	70	30	49	8
Tennessee	282	13,850	1,386	4,915	180	61	31	5	-	5
Texas	7,070	2,763,806	114,875	16,248	1,594	2,477	1,326	719	524	430
Utah	3,811	572,580	24,134	6,333	1,967	1,099	384	240	66	55
Vermont	100	423	149	1,485	60	33	7	-	-	-
Virginia	280	18,251	2,474	8,837	143	36	78	11	5	7
Washington	6,056	1,124,851	57,303	9,462	3,289	1,342	855	323	96	151
West Virginia	37	237	25	677	31	6	-	-	-	-
Wisconsin	474	186,543	7,885	16,635	43	137	148	99	26	21
Wyoming	2,012	647,268	17,569	8,732	855	708	239	100	66	44
Water Resources Areas										
WRA 01 New England	807	20,898	4,163	5,159	389	212	143	39	17	7
WRA 02 Mid-Atlantic	1,896	117,690	13,043	6,879	1,031	439	249	96	44	37
WRA 03 South Atlantic-Gulf	5,483	1,050,697	59,398	10,833	2,771	1,352	581	380	234	165
WRA 04 Great Lakes	1,513	338,342	21,711	14,349	546	371	315	114	93	74
WRA 05 Ohio	964	88,199	5,562	5,770	496	284	113	43	12	16
WRA 06 Tennessee	484	16,362	2,025	4,185	122	304	45	7	2	4
WRA 07 Upper Mississippi	1,488	470,437	22,914	15,399	484	395	265	172	106	66
WRA 08 Lower Mississippi	3,160	3,175,057	71,879	22,747	240	933	788	728	270	201
WRA 09 Souris-Red-Rainy	204	68,777	1,785	8,751	43	89	42	19	8	3
WRA 10 Missouri	12,695	6,483,478	243,700	19,197	2,862	3,357	2,370	1,995	1,454	657
WRA 11 Arkansas-White-Red	4,122	2,729,608	112,089	27,193	654	962	991	559	532	424
WRA 12 Texas-Gulf	5,663	1,742,166	73,180	12,922	1,581	1,895	1,069	500	408	210
WRA 13 Rio Grande	2,656	403,545	30,869	11,622	1,111	814	219	310	104	98
WRA 14 Upper Colorado	4,048	563,408	16,257	4,016	1,910	1,376	414	326	13	9
WRA 15 Lower Colorado	1,772	493,777	23,076	13,023	605	675	87	284	60	61
WRA 16 Great Basin	3,647	813,715	38,077	10,441	1,972	771	497	192	103	112
WRA 17 Pacific Northwest	18,757	3,964,322	160,979	8,582	9,654	4,283	2,991	970	439	420
WRA 18 California	16,324	4,062,901	219,018	13,417	8,271	3,279	1,312	1,918	890	654
WRA 19 Alaska	33	1,188	91	2,769	19	13	-	-	1	-
WRA 20 Hawaii	458	70,374	5,309	11,591	260	136	35	19	1	7

See footnote(s) at end of table.

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Table 23. **Investment in Irrigation Equipment, Facilities, and Land Improvement: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Irrigation investment (all types) in survey year						
	Purpose of expenditures			Source of funding assistance			
	Replacement (dollars)	Water conservation (dollars)	New expansion (dollars)	EQIP (farms)	Other USDA (farms)	Other public (farms)	No public funding (farms)
U.S. TOTAL . . . . . 2003 . .	469,023,865	172,069,158	484,032,448	1,808	744	616	105,310
1998 . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA							
Alabama	586,102	150,000	1,460,921	-	-	-	327
Alaska	(D)	(D)	84,070	-	-	-	38
Arizona	11,162,719	6,654,218	3,187,986	31	42	3	1,903
Arkansas	15,315,301	17,549,042	29,972,446	61	56	69	2,965
California	100,894,085	23,165,115	92,483,368	107	125	164	17,799
Colorado	21,014,490	9,334,603	9,788,390	135	80	2	5,607
Connecticut	51,529	-	278,100	9	-	-	73
Delaware	1,601,651	3,000	1,197,957	-	-	-	120
Florida	15,337,850	5,320,701	6,148,261	60	2	10	4,084
Georgia	6,055,751	902,745	12,053,349	5	2	-	1,024
Hawaii	4,058,158	(D)	(D)	-	-	-	591
Idaho	36,779,494	14,697,270	17,199,204	58	10	-	7,236
Illinois	(D)	(D)	4,291,429	4	-	-	413
Indiana	2,140,174	64,800	3,426,095	1	-	-	442
Iowa	1,383,000	558	739,631	-	2	-	335
Kansas	22,869,623	6,875,156	11,511,988	42	-	5	1,871
Kentucky	(D)	(D)	1,388,106	7	7	15	374
Louisiana	3,332,460	1,534,506	3,613,863	37	9	32	816
Maine	347,410	76,800	1,309,254	36	1	6	331
Maryland	807,896	6,936	688,965	-	-	2	272
Massachusetts	963,742	188,886	716,592	23	16	2	375
Michigan	4,729,679	206,280	12,059,529	-	-	2	1,488
Minnesota	2,559,916	336,580	5,124,054	4	-	-	823
Mississippi	4,177,998	1,747,354	5,094,318	27	-	2	687
Missouri	2,686,255	364,046	5,809,500	10	4	1	995
Montana	7,257,499	10,070,683	17,290,676	158	-	23	3,358
Nebraska	50,882,095	16,312,529	91,331,097	256	183	21	8,111
Nevada	4,293,674	3,478,305	6,924,519	33	-	14	823
New Hampshire	(D)	(D)	92,388	-	-	-	84
New Jersey	1,276,057	192,810	2,426,592	15	13	8	442
New Mexico	12,834,441	6,216,565	6,541,203	86	49	33	2,740
New York	679,276	(D)	(D)	-	6	-	522
North Carolina	4,170,508	109,000	4,167,691	-	-	17	1,262
North Dakota	1,790,575	157,380	951,852	7	-	4	249
Ohio	(D)	(D)	677,889	-	-	-	324
Oklahoma	6,218,891	689,978	7,866,723	69	11	-	1,031
Oregon	18,649,748	10,446,766	9,770,379	106	5	19	8,577
Pennsylvania	763,941	148,000	1,001,772	4	-	1	844
Rhode Island	(D)	(D)	38,000	1	-	-	44
South Carolina	749,190	499,800	2,543,557	29	1	-	556
South Dakota	2,083,902	1,142,700	2,343,730	35	3	-	515
Tennessee	541,250	18,960	825,759	-	-	6	323
Texas	43,331,755	19,747,003	51,795,762	235	29	42	9,079
Utah	11,572,492	2,888,844	9,672,571	26	37	88	4,522
Vermont	54,360	6,000	88,177	-	-	-	124
Virginia	645,112	372,950	1,456,200	-	3	-	384
Washington	29,386,031	5,728,480	22,188,807	36	12	12	7,235
West Virginia	5,600	-	19,440	-	6	-	31
Wisconsin	4,444,176	511,500	2,929,526	-	-	-	665
Wyoming	4,625,449	3,099,968	9,843,254	55	30	13	2,476
Water Resources Areas							
WRA 01 New England	1,438,932	271,246	2,453,261	69	17	8	947
WRA 02 Mid-Atlantic	4,954,885	779,998	7,307,715	19	22	11	2,231
WRA 03 South Atlantic-Gulf	26,584,196	6,962,246	25,851,758	94	5	27	6,914
WRA 04 Great Lakes	7,111,962	271,780	14,326,957	-	-	2	2,091
WRA 05 Ohio	1,738,638	87,950	3,735,664	9	13	14	1,156
WRA 06 Tennessee	(D)	(D)	1,082,301	-	-	7	599
WRA 07 Upper Mississippi	9,648,605	812,135	12,453,313	3	-	-	1,892
WRA 08 Lower Mississippi	22,915,909	17,180,288	31,782,779	123	64	104	4,398
WRA 09 Souris-Red-Rainy	1,115,887	(D)	(D)	9	-	-	240
WRA 10 Missouri	83,136,369	34,657,859	125,905,862	570	215	62	15,322
WRA 11 Arkansas-White-Red	41,108,614	20,667,522	50,312,758	193	26	5	4,872
WRA 12 Texas-Gulf	30,898,023	9,681,453	32,600,490	201	29	42	7,179
WRA 13 Rio Grande	15,958,523	6,180,877	8,729,835	93	66	33	3,424
WRA 14 Upper Colorado	3,674,180	6,788,868	5,793,619	32	58	79	5,099
WRA 15 Lower Colorado	11,896,499	7,117,018	4,062,786	35	42	3	2,449
WRA 16 Great Basin	16,262,680	6,088,281	15,725,666	48	35	24	4,271
WRA 17 Pacific Northwest	82,617,402	30,167,618	48,193,633	200	27	28	23,023
WRA 18 California	102,983,305	23,282,021	92,752,825	110	125	167	18,574
WRA 19 Alaska	(D)	(D)	84,070	-	-	-	38
WRA 20 Hawaii	4,058,158	(D)	(D)	-	-	-	591

See footnote(s) at end of table.

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Table 23. **Investment in Irrigation Equipment, Facilities, and Land Improvement: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Purchase of equipment and machinery in survey year - con.								
	Farms	Acres irrigated	Investment [1] ($1,000)	Average per farm (dollars)	Farms with investment of -				
					$1 to $999	$1,000 to $9,999	$10,000 to $29,999	$30,000 to $74,999	$75,000 or more
U.S. TOTAL . . . . . 2003 . .	75,448	23,496,627	816,603	10,823	33,721	25,111	8,589	5,946	2,081
1998 . .	58,831	21,571,346	704,486	11,975	24,039	22,030	6,972	(NA)	(NA)
2003 DATA									
Alabama	262	18,667	1,864	7,113	147	84	16	10	5
Alaska	32	1,158	84	2,637	23	8	-	1	-
Arizona	1,120	366,948	9,059	8,089	745	192	111	46	26
Arkansas	1,651	1,736,199	27,730	16,796	53	908	485	163	42
California	14,523	3,265,844	145,391	10,011	7,957	3,708	1,490	995	373
Colorado	3,807	926,420	29,980	7,875	1,495	1,194	926	139	53
Connecticut	55	1,073	260	4,730	32	15	5	3	-
Delaware	88	31,808	2,644	30,049	8	32	11	28	9
Florida	3,142	639,938	17,563	5,590	1,904	966	153	62	57
Georgia	729	237,910	15,393	21,116	305	110	109	167	38
Hawaii	449	68,386	3,901	8,689	295	125	16	6	7
Idaho	4,658	1,788,451	60,669	13,025	1,847	1,608	691	304	208
Illinois	318	146,176	5,336	16,780	78	142	31	55	12
Indiana	376	96,518	4,661	12,397	159	127	37	39	14
Iowa	259	52,217	1,878	7,249	135	77	28	15	4
Kansas	1,528	1,097,247	33,804	22,123	204	582	288	356	98
Kentucky	288	8,148	1,518	5,272	141	113	23	9	2
Louisiana	572	282,336	3,997	6,987	91	348	110	23	-
Maine	247	10,778	1,086	4,397	141	90	7	6	3
Maryland	203	14,723	1,268	6,247	56	126	13	6	2
Massachusetts	307	7,600	1,235	4,024	175	98	22	12	-
Michigan	907	235,761	14,200	15,656	373	299	79	106	50
Minnesota	579	143,281	6,500	11,226	264	209	34	47	25
Mississippi	408	590,152	5,070	12,427	49	204	116	31	8
Missouri	778	401,476	6,460	8,303	337	290	85	52	14
Montana	2,212	879,980	29,848	13,494	708	1,039	196	185	84
Nebraska	6,395	3,815,656	127,523	19,941	940	2,744	1,004	1,484	223
Nevada	491	208,977	8,036	16,368	185	183	56	38	29
New Hampshire	70	338	76	1,090	58	8	4	-	-
New Jersey	375	25,748	3,046	8,123	219	84	48	18	6
New Mexico	1,386	284,972	16,762	12,094	573	428	250	71	64
New York	425	29,251	1,808	4,254	274	102	27	22	-
North Carolina	984	43,190	7,308	7,427	413	380	111	69	11
North Dakota	177	83,761	2,345	13,250	26	102	27	14	8
Ohio	261	8,391	746	2,859	141	109	5	5	1
Oklahoma	878	231,948	12,022	13,692	227	480	67	64	40
Oregon	6,221	778,217	28,070	4,512	3,951	1,767	264	203	36
Pennsylvania	665	10,104	1,242	1,867	508	137	15	1	4
Rhode Island	28	313	42	1,495	17	10	1	-	-
South Carolina	357	31,382	2,350	6,583	248	59	31	10	9
South Dakota	407	127,159	4,203	10,327	130	186	42	41	8
Tennessee	225	9,580	988	4,393	162	49	9	-	5
Texas	5,507	2,577,946	89,990	16,341	1,916	1,864	709	700	318
Utah	3,044	451,221	16,453	5,405	1,775	988	179	75	27
Vermont	95	418	91	961	66	29	-	-	-
Virginia	213	13,839	1,334	6,265	143	50	8	8	4
Washington	5,638	1,066,276	41,114	7,292	3,158	1,772	462	147	99
West Virginia	31	231	13	411	31	-	-	-	-
Wisconsin	448	176,490	5,632	12,572	59	250	88	38	13
Wyoming	1,629	472,024	14,005	8,597	779	636	100	72	42
Water Resources Areas									
WRA 01 New England	741	20,222	2,717	3,667	455	223	39	21	3
WRA 02 Mid-Atlantic	1,744	105,660	10,021	5,746	1,077	476	99	67	25
WRA 03 South Atlantic-Gulf	5,245	964,797	43,742	8,340	3,054	1,342	414	316	119
WRA 04 Great Lakes	1,383	326,870	18,290	13,225	542	514	124	144	59
WRA 05 Ohio	858	84,969	4,305	5,017	497	292	34	22	13
WRA 06 Tennessee	436	14,146	1,616	3,707	115	300	15	2	4
WRA 07 Upper Mississippi	1,363	430,146	17,162	12,591	455	566	154	144	44
WRA 08 Lower Mississippi	2,700	2,618,170	33,279	12,325	274	1,465	706	207	48
WRA 09 Souris-Red-Rainy	165	56,749	1,348	8,170	39	89	23	12	2
WRA 10 Missouri	11,584	5,982,599	200,369	17,297	2,552	4,781	1,867	1,943	441
WRA 11 Arkansas-White-Red	3,798	2,510,145	85,352	22,473	622	1,517	779	543	337
WRA 12 Texas-Gulf	4,551	1,602,708	55,003	12,086	1,916	1,516	425	583	111
WRA 13 Rio Grande	1,179	322,599	17,842	15,133	458	302	245	108	66
WRA 14 Upper Colorado	3,461	417,069	11,340	3,276	1,922	1,182	338	12	7
WRA 15 Lower Colorado	1,357	387,244	10,319	7,605	752	340	192	47	26
WRA 16 Great Basin	3,021	631,060	24,838	8,222	1,660	1,024	168	103	66
WRA 17 Pacific Northwest	16,128	3,586,483	128,329	7,957	8,656	5,025	1,450	667	330
WRA 18 California	15,253	3,365,447	146,745	9,621	8,357	4,024	1,501	998	373
WRA 19 Alaska	32	1,158	84	2,637	23	8	-	1	-
WRA 20 Hawaii	449	68,386	3,901	8,689	295	125	16	6	7

See footnote(s) at end of table.

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Table 23. **Investment in Irrigation Equipment, Facilities, and Land Improvement: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Purchase of equipment and machinery in survey year						
	Purpose of expenditures			Source of funding assistance			
	Replacement (farms)	Water conservation (farms)	New expansion (farms)	EQIP (farms)	Other USDA (farms)	Other public (farms)	No public funding (farms)
U.S. TOTAL . . . . . 2003 . .	54,114	4,307	17,027	1,199	359	371	73,519
1998 . .	43,895	2,323	12,613	(NA)	(NA)	(NA)	(NA)
2003 DATA							
Alabama	180	3	79	-	-	-	262
Alaska	10	3	19	-	-	-	32
Arizona	932	17	171	9	9	1	1,101
Arkansas	1,070	44	537	1	33	20	1,597
California	10,985	210	3,328	35	57	160	14,271
Colorado	2,706	694	407	68	63	2	3,674
Connecticut	36	-	19	7	-	-	48
Delaware	63	-	25	-	-	-	88
Florida	2,699	27	416	54	-	-	3,088
Georgia	416	28	285	5	-	-	724
Hawaii	356	11	82	-	-	-	449
Idaho	3,113	447	1,098	32	7	-	4,619
Illinois	241	-	77	4	-	-	314
Indiana	244	4	128	1	-	-	375
Iowa	187	-	72	-	2	-	257
Kansas	1,167	137	224	42	-	5	1,481
Kentucky	166	1	121	7	-	8	273
Louisiana	385	8	179	14	5	15	538
Maine	182	6	59	36	1	-	210
Maryland	158	4	41	-	-	-	203
Massachusetts	205	2	100	13	6	2	286
Michigan	435	4	468	-	-	2	905
Minnesota	443	8	128	-	-	-	579
Mississippi	290	11	107	8	-	2	398
Missouri	422	3	353	6	4	1	767
Montana	1,053	147	1,012	93	-	7	2,112
Nebraska	4,490	438	1,467	255	101	21	6,018
Nevada	329	74	88	17	-	11	463
New Hampshire	36	2	32	-	-	-	70
New Jersey	280	13	82	6	13	6	350
New Mexico	939	124	323	33	-	7	1,346
New York	205	8	212	-	-	-	425
North Carolina	559	-	425	-	-	17	967
North Dakota	130	13	34	7	-	2	168
Ohio	177	1	83	-	-	-	261
Oklahoma	609	66	203	67	7	-	804
Oregon	5,082	745	394	68	3	16	6,134
Pennsylvania	511	3	151	4	-	1	660
Rhode Island	26	-	2	1	-	-	27
South Carolina	184	119	54	19	-	-	338
South Dakota	265	29	113	13	-	-	394
Tennessee	130	2	93	-	-	3	222
Texas	3,902	281	1,324	191	4	38	5,274
Utah	2,105	119	820	9	25	2	3,008
Vermont	52	-	43	-	-	-	95
Virginia	184	-	29	-	-	-	213
Washington	4,483	180	975	34	5	9	5,590
West Virginia	23	-	8	-	-	-	31
Wisconsin	303	1	144	-	-	-	448
Wyoming	966	270	393	40	14	13	1,562
Water Resources Areas							
WRA 01 New England	501	10	230	57	7	2	675
WRA 02 Mid-Atlantic	1,269	25	450	10	13	7	1,714
WRA 03 South Atlantic-Gulf	3,943	176	1,126	78	-	17	5,150
WRA 04 Great Lakes	723	7	653	-	-	2	1,381
WRA 05 Ohio	541	3	314	9	-	7	842
WRA 06 Tennessee	239	3	194	-	-	4	432
WRA 07 Upper Mississippi	998	6	359	3	-	-	1,360
WRA 08 Lower Mississippi	1,803	66	831	28	37	38	2,597
WRA 09 Souris-Red-Rainy	134	11	20	5	-	-	160
WRA 10 Missouri	7,754	1,065	2,765	462	117	44	10,961
WRA 11 Arkansas-White-Red	2,474	348	976	149	22	5	3,622
WRA 12 Texas-Gulf	3,273	158	1,120	156	4	38	4,353
WRA 13 Rio Grande	921	130	128	35	-	7	1,137
WRA 14 Upper Colorado	2,314	524	623	10	55	3	3,393
WRA 15 Lower Colorado	1,085	17	255	11	9	1	1,336
WRA 16 Great Basin	2,073	154	794	17	23	11	2,970
WRA 17 Pacific Northwest	12,017	1,376	2,735	131	15	25	15,957
WRA 18 California	11,686	214	3,353	38	57	160	14,998
WRA 19 Alaska	10	3	19	-	-	-	32
WRA 20 Hawaii	356	11	82	-	-	-	449

See footnote(s) at end of table.

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Table 23. **Investment in Irrigation Equipment, Facilities, and Land Improvement: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	New construction or deepening of wells in survey year - con.								
	Farms	Acres irrigated	Investment [1] ($1,000)	Average per farm (dollars)	Farms with investment of -				
					$1 to $999	$1,000 to $9,999	$10,000 to $29,999	$30,000 to $74,999	$75,000 or more
U.S. TOTAL . . . . . 2003 . .	8,977	5,779,399	151,421	16,868	210	4,220	3,102	1,101	344
1998 . .	5,981	5,575,690	150,838	25,220	119	2,481	2,094	(NA)	(NA)
2003 DATA									
Alabama	25	2,870	56	2,240	13	11	1	-	-
Alaska	-	-	-	-	-	-	-	-	-
Arizona	237	66,548	2,771	11,692	-	150	66	18	3
Arkansas	631	927,592	10,256	16,254	-	222	340	46	23
California	1,169	706,827	35,213	30,122	3	48	823	134	161
Colorado	281	226,388	5,874	20,903	-	95	149	16	21
Connecticut	9	9	(D)	(D)	-	9	-	-	-
Delaware	20	8,724	114	5,676	-	16	4	-	-
Florida	277	119,036	2,933	10,587	-	231	25	13	8
Georgia	51	46,900	1,207	23,670	-	12	21	17	1
Hawaii	-	-	-	-	-	-	-	-	-
Idaho	442	292,157	2,770	6,267	-	388	41	9	4
Illinois	44	43,301	681	15,479	-	10	30	3	1
Indiana	46	28,791	857	18,637	2	30	7	3	4
Iowa	38	18,015	192	5,066	9	21	8	-	-
Kansas	240	276,035	6,488	27,035	-	97	50	86	7
Kentucky	16	1,740	85	5,309	-	14	2	-	-
Louisiana	77	55,116	1,399	18,172	2	30	30	15	-
Maine	34	282	(D)	(D)	-	33	1	-	-
Maryland	10	3,039	124	12,383	-	5	3	2	-
Massachusetts	5	572	71	14,100	-	-	5	-	-
Michigan	140	88,119	1,878	13,417	-	78	43	18	1
Minnesota	137	40,871	1,038	7,576	28	50	59	-	-
Mississippi	139	278,010	1,824	13,125	1	45	78	15	-
Missouri	121	141,404	862	7,126	3	95	18	5	-
Montana	75	32,685	1,106	14,744	-	68	2	-	5
Nebraska	1,355	1,088,491	26,605	19,635	-	435	525	393	2
Nevada	42	86,206	2,494	59,386	-	4	7	17	14
New Hampshire	7	23	40	5,663	-	7	-	-	-
New Jersey	27	5,998	385	14,256	-	14	12	-	1
New Mexico	261	111,065	5,902	22,613	-	139	41	63	18
New York	15	2,630	150	10,007	-	11	1	3	-
North Carolina	13	3,895	73	5,646	-	8	5	-	-
North Dakota	17	10,482	272	16,001	4	4	5	4	-
Ohio	17	(D)	150	8,847	-	16	-	1	-
Oklahoma	66	45,912	1,567	23,738	-	30	18	16	2
Oregon	1,124	106,551	7,696	6,847	-	960	137	25	2
Pennsylvania	44	(D)	291	6,614	-	41	3	-	-
Rhode Island	4	4	(D)	(D)	4	-	-	-	-
South Carolina	140	14,484	618	4,416	112	-	21	7	-
South Dakota	28	12,755	298	10,625	-	3	25	-	-
Tennessee	11	6,155	121	11,018	-	8	1	2	-
Texas	749	655,984	15,331	20,468	4	294	288	144	19
Utah	307	71,568	4,685	15,260	-	182	92	7	26
Vermont	11	22	47	4,273	-	11	-	-	-
Virginia	8	3,594	140	17,513	-	-	7	1	-
Washington	256	72,780	4,208	16,436	-	175	62	-	19
West Virginia	6	6	12	2,050	-	6	-	-	-
Wisconsin	48	28,112	775	16,136	-	3	44	1	-
Wyoming	157	45,310	1,561	9,943	25	111	2	17	2
Water Resources Areas									
WRA 01 New England	65	907	323	4,974	4	55	6	-	-
WRA 02 Mid-Atlantic	93	23,871	1,029	11,068	-	56	30	6	1
WRA 03 South Atlantic-Gulf	505	185,435	4,867	9,638	125	262	72	37	9
WRA 04 Great Lakes	178	103,792	2,238	12,576	-	94	65	18	1
WRA 05 Ohio	95	24,668	810	8,522	2	85	3	3	2
WRA 06 Tennessee	6	2,122	39	6,500	-	5	1	-	-
WRA 07 Upper Mississippi	237	104,483	2,636	11,120	28	90	111	5	3
WRA 08 Lower Mississippi	810	1,242,576	11,741	14,495	6	321	402	68	13
WRA 09 Souris-Red-Rainy	16	12,023	156	9,751	4	2	10	-	-
WRA 10 Missouri	1,822	1,334,817	31,556	17,319	34	699	664	418	7
WRA 11 Arkansas-White-Red	574	626,899	17,048	29,700	-	173	173	201	27
WRA 12 Texas-Gulf	636	523,737	9,964	15,667	4	296	250	68	18
WRA 13 Rio Grande	322	152,580	8,738	27,136	-	142	83	65	32
WRA 14 Upper Colorado	88	43,869	1,285	14,602	-	31	53	2	2
WRA 15 Lower Colorado	389	80,498	3,042	7,821	-	302	66	18	3
WRA 16 Great Basin	218	139,779	6,706	30,760	-	104	50	24	40
WRA 17 Pacific Northwest	1,741	465,096	13,017	7,477	-	1,444	240	34	23
WRA 18 California	1,182	712,247	36,226	30,648	3	59	823	134	163
WRA 19 Alaska	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 23. **Investment in Irrigation Equipment, Facilities, and Land Improvement: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	New construction or deepening of wells in survey year						
	Purpose of expenditures			Source of funding assistance			
	Replacement (farms)	Water conservation (farms)	New expansion (farms)	EQIP (farms)	Other USDA (farms)	Other public (farms)	No public funding (farms)
U.S. TOTAL . . . . . 2003 . .	3,686	(X)	4,944	73	23	36	8,845
1998 . .	3,005	(X)	2,976	(NA)	(NA)	(NA)	(NA)
2003 DATA							
Alabama	23	(X)	2	-	-	-	25
Alaska	-	(X)	-	-	-	-	-
Arizona	225	(X)	7	-	-	-	237
Arkansas	316	(X)	305	7	-	13	611
California	308	(X)	855	-	-	4	1,165
Colorado	114	(X)	137	36	-	-	245
Connecticut	-	(X)	9	-	-	-	9
Delaware	2	(X)	18	-	-	-	20
Florida	146	(X)	124	2	-	3	272
Georgia	10	(X)	39	-	-	-	51
Hawaii	-	(X)	-	-	-	-	-
Idaho	171	(X)	271	-	-	-	442
Illinois	21	(X)	23	-	-	-	44
Indiana	14	(X)	32	-	-	-	46
Iowa	8	(X)	21	-	-	-	38
Kansas	184	(X)	56	-	-	-	240
Kentucky	-	(X)	16	-	-	-	16
Louisiana	23	(X)	54	-	-	1	76
Maine	1	(X)	33	-	-	1	33
Maryland	7	(X)	3	-	-	2	8
Massachusetts	3	(X)	2	-	-	-	5
Michigan	15	(X)	123	-	-	-	140
Minnesota	57	(X)	80	-	-	-	137
Mississippi	55	(X)	82	4	-	-	135
Missouri	21	(X)	100	-	-	-	121
Montana	64	(X)	2	-	-	-	75
Nebraska	413	(X)	923	-	-	-	1,355
Nevada	30	(X)	12	-	-	-	42
New Hampshire	2	(X)	5	-	-	-	7
New Jersey	9	(X)	18	4	-	2	21
New Mexico	85	(X)	169	3	1	7	250
New York	6	(X)	9	-	-	-	15
North Carolina	3	(X)	10	-	-	-	13
North Dakota	12	(X)	5	-	-	-	17
Ohio	-	(X)	17	-	-	-	17
Oklahoma	28	(X)	33	2	2	-	62
Oregon	513	(X)	474	-	-	-	1,124
Pennsylvania	36	(X)	5	-	-	-	44
Rhode Island	4	(X)	-	-	-	-	4
South Carolina	112	(X)	18	10	1	-	129
South Dakota	18	(X)	10	-	-	-	28
Tennessee	3	(X)	8	-	-	3	8
Texas	249	(X)	418	5	-	-	744
Utah	228	(X)	77	-	8	-	299
Vermont	-	(X)	11	-	-	-	11
Virginia	4	(X)	4	-	3	-	5
Washington	68	(X)	188	-	-	-	256
West Virginia	-	(X)	6	-	6	-	-
Wisconsin	16	(X)	32	-	-	-	48
Wyoming	59	(X)	98	-	2	-	155
Water Resources Areas							
WRA 01 New England	10	(X)	55	-	-	1	64
WRA 02 Mid-Atlantic	31	(X)	59	4	3	4	82
WRA 03 South Atlantic-Gulf	294	(X)	192	12	1	3	489
WRA 04 Great Lakes	29	(X)	147	-	-	-	178
WRA 05 Ohio	37	(X)	58	-	6	-	89
WRA 06 Tennessee	2	(X)	4	-	-	3	3
WRA 07 Upper Mississippi	88	(X)	149	-	-	-	237
WRA 08 Lower Mississippi	353	(X)	445	11	-	14	785
WRA 09 Souris-Red-Rainy	12	(X)	4	-	-	-	16
WRA 10 Missouri	624	(X)	1,156	9	-	-	1,813
WRA 11 Arkansas-White-Red	314	(X)	204	14	2	-	558
WRA 12 Texas-Gulf	214	(X)	389	6	-	-	630
WRA 13 Rio Grande	121	(X)	192	-	1	7	314
WRA 14 Upper Colorado	14	(X)	57	17	2	-	69
WRA 15 Lower Colorado	377	(X)	7	-	-	-	389
WRA 16 Great Basin	178	(X)	38	-	8	-	210
WRA 17 Pacific Northwest	678	(X)	922	-	-	-	1,741
WRA 18 California	310	(X)	866	-	-	4	1,178
WRA 19 Alaska	-	(X)	-	-	-	-	-
WRA 20 Hawaii	-	(X)	-	-	-	-	-

See footnote(s) at end of table.

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Table 23. **Investment in Irrigation Equipment, Facilities, and Land Improvement: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Construction of permanent storage and distribution systems in survey year - con.								
	Farms	Acres irrigated	Investment [1] ($1,000)	Average per farm (dollars)	Farms with investment of -				
					$1 to $999	$1,000 to $9,999	$10,000 to $29,999	$30,000 to $74,999	$75,000 or more
U.S. TOTAL . . . . . 2003 . .	10,695	3,549,223	67,018	6,266	4,700	4,732	945	156	162
1998 . .	11,042	4,836,760	209,915	19,011	5,334	3,700	1,270	(NA)	(NA)
2003 DATA									
Alabama	32	3,894	223	6,969	-	22	9	1	-
Alaska	-	-	-	-	-	-	-	-	-
Arizona	308	123,230	2,805	9,106	82	182	17	20	7
Arkansas	309	436,331	11,276	36,492	38	177	43	12	39
California	749	660,761	15,044	20,086	57	291	288	32	81
Colorado	984	321,075	2,869	2,916	240	680	58	3	3
Connecticut	15	176	43	2,833	2	12	1	-	-
Delaware	4	1,974	(D)	(D)	-	3	1	-	-
Florida	291	240,728	3,364	11,561	247	24	8	3	9
Georgia	93	28,091	1,554	16,711	2	37	41	13	-
Hawaii	35	48,280	1,189	33,981	8	22	1	2	2
Idaho	1,290	329,176	2,099	1,627	1,036	210	34	3	7
Illinois	19	12,015	826	43,474	14	2	1	-	2
Indiana	2	(D)	(D)	(D)	-	2	-	-	-
Iowa	14	1,658	21	1,533	11	1	2	-	-
Kansas	30	10,806	342	11,400	-	12	18	-	-
Kentucky	67	1,017	247	3,685	21	38	8	-	-
Louisiana	49	39,277	204	4,156	3	43	3	-	-
Maine	79	7,158	266	3,369	35	39	4	1	-
Maryland	34	1,266	101	2,971	-	32	2	-	-
Massachusetts	93	2,799	530	5,704	-	79	11	3	-
Michigan	201	16,352	498	2,480	54	143	-	4	-
Minnesota	10	9,255	79	7,900	-	6	4	-	-
Mississippi	25	59,552	122	4,898	-	22	3	-	-
Missouri	6	7,116	10	1,675	3	3	-	-	-
Montana	673	231,037	1,111	1,650	515	138	20	-	-
Nebraska	22	28,044	33	1,521	1	20	1	-	-
Nevada	169	101,164	2,732	16,165	79	63	22	4	1
New Hampshire	3	(D)	(D)	(D)	2	1	-	-	-
New Jersey	47	4,152	329	6,996	3	34	8	2	-
New Mexico	396	20,864	1,294	3,268	260	77	57	2	-
New York	81	2,754	96	1,183	54	25	2	-	-
North Carolina	82	5,300	350	4,262	-	75	7	-	-
North Dakota	21	10,657	61	2,892	14	6	-	1	-
Ohio	31	393	96	3,081	-	31	-	-	-
Oklahoma	73	12,362	662	9,072	2	12	58	1	-
Oregon	720	146,556	1,458	2,025	571	115	31	2	1
Pennsylvania	85	1,607	245	2,879	39	40	6	-	-
Rhode Island	5	(D)	(D)	(D)	4	1	-	-	-
South Carolina	37	6,323	414	11,191	9	15	3	10	-
South Dakota	54	6,005	644	11,932	3	35	3	13	-
Tennessee	54	(D)	250	4,633	18	36	-	-	-
Texas	1,772	150,142	3,776	2,131	483	1,265	24	-	-
Utah	522	102,851	2,078	3,980	229	261	25	7	-
Vermont	12	48	(D)	(D)	6	6	-	-	-
Virginia	87	6,302	630	7,241	9	67	7	4	-
Washington	456	112,852	4,383	9,611	316	97	30	8	5
West Virginia	-	-	-	-	-	-	-	-	-
Wisconsin	112	20,796	1,178	10,520	-	61	45	1	5
Wyoming	442	215,612	1,451	3,283	230	169	39	4	-
Water Resources Areas									
WRA 01 New England	195	10,270	849	4,354	43	132	16	4	-
WRA 02 Mid-Atlantic	260	15,064	1,333	5,128	45	184	25	6	-
WRA 03 South Atlantic-Gulf	541	282,256	5,898	10,902	258	180	67	27	9
WRA 04 Great Lakes	237	19,967	606	2,556	54	179	-	4	-
WRA 05 Ohio	155	1,791	312	2,010	98	48	9	-	-
WRA 06 Tennessee	46	2,446	261	5,674	7	38	1	-	-
WRA 07 Upper Mississippi	132	37,976	2,046	15,502	15	60	49	1	7
WRA 08 Lower Mississippi	335	464,198	11,159	33,310	36	215	33	12	39
WRA 09 Souris-Red-Rainy	11	12,656	69	6,274	4	5	1	1	-
WRA 10 Missouri	1,068	495,988	3,507	3,284	604	364	83	14	3
WRA 11 Arkansas-White-Red	231	167,291	2,003	8,671	9	108	111	3	-
WRA 12 Texas-Gulf	1,358	103,128	3,291	2,423	101	1,252	5	-	-
WRA 13 Rio Grande	857	80,241	1,886	2,200	652	133	69	3	-
WRA 14 Upper Colorado	932	207,219	2,544	2,729	220	682	27	3	-
WRA 15 Lower Colorado	389	130,600	3,291	8,461	82	261	19	20	7
WRA 16 Great Basin	393	171,586	4,344	11,054	201	128	45	11	8
WRA 17 Pacific Northwest	2,745	619,841	7,301	2,660	2,200	432	94	13	6
WRA 18 California	775	678,425	15,129	19,521	63	309	290	32	81
WRA 19 Alaska	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	35	48,280	1,189	33,981	8	22	1	2	2

See footnote(s) at end of table.

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Table 23. **Investment in Irrigation Equipment, Facilities, and Land Improvement: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Construction of permanent storage and distribution systems in survey year						
	Purpose of expenditures			Source of funding assistance			
	Replacement (farms)	Water conservation (farms)	New expansion (farms)	EQIP (farms)	Other USDA (farms)	Other public (farms)	No public funding (farms)
U.S. TOTAL . . . . . 2003 . .	3,469	2,954	4,272	291	132	157	10,115
1998 . .	3,660	4,760	2,622	(NA)	(NA)	(NA)	(NA)
2003 DATA							
Alabama	-	2	30	-	-	-	32
Alaska	-	-	-	-	-	-	-
Arizona	137	97	74	10	14	2	282
Arkansas	92	113	104	30	23	23	233
California	170	212	367	71	18	-	660
Colorado	220	428	336	21	17	-	946
Connecticut	1	-	14	2	-	-	13
Delaware	-	3	1	-	-	-	4
Florida	275	12	4	2	2	7	280
Georgia	17	32	44	-	2	-	91
Hawaii	13	11	11	-	-	-	35
Idaho	418	358	514	26	-	-	1,264
Illinois	1	-	18	-	-	-	19
Indiana	-	-	2	-	-	-	2
Iowa	4	9	1	-	-	-	14
Kansas	-	-	30	-	-	-	30
Kentucky	16	1	50	-	7	7	53
Louisiana	8	11	30	5	-	1	43
Maine	4	-	75	-	-	5	74
Maryland	31	-	3	-	-	-	34
Massachusetts	11	53	29	10	10	-	73
Michigan	26	80	95	-	-	-	201
Minnesota	7	2	1	-	-	-	10
Mississippi	7	10	8	2	-	-	23
Missouri	2	4	-	-	-	-	6
Montana	492	116	65	3	-	7	663
Nebraska	1	19	2	-	-	-	22
Nevada	75	60	34	4	-	2	163
New Hampshire	2	-	1	-	-	-	3
New Jersey	11	3	33	1	-	-	46
New Mexico	43	61	292	48	-	19	329
New York	7	8	66	-	6	-	75
North Carolina	-	15	67	-	-	-	82
North Dakota	16	-	5	-	-	-	21
Ohio	-	-	31	-	-	-	31
Oklahoma	5	8	60	-	2	-	71
Oregon	122	59	539	26	2	-	692
Pennsylvania	35	3	47	-	-	-	85
Rhode Island	1	4	-	-	-	-	5
South Carolina	-	23	14	-	-	-	37
South Dakota	30	14	10	11	3	-	40
Tennessee	18	18	18	-	-	-	54
Texas	534	450	788	5	25	-	1,742
Utah	45	323	154	-	-	81	441
Vermont	6	6	-	-	-	-	12
Virginia	12	69	6	-	-	-	87
Washington	304	70	82	-	-	3	453
West Virginia	-	-	-	-	-	-	-
Wisconsin	32	27	53	-	-	-	112
Wyoming	218	160	64	14	1	-	427
Water Resources Areas							
WRA 01 New England	19	57	119	12	10	5	168
WRA 02 Mid-Atlantic	91	83	86	1	6	-	253
WRA 03 South Atlantic-Gulf	301	84	156	2	4	7	528
WRA 04 Great Lakes	28	80	129	-	-	-	237
WRA 05 Ohio	18	28	109	-	7	7	141
WRA 06 Tennessee	18	-	28	-	-	-	46
WRA 07 Upper Mississippi	35	28	69	-	-	-	132
WRA 08 Lower Mississippi	96	110	129	32	23	24	256
WRA 09 Souris-Red-Rainy	9	1	1	-	-	-	11
WRA 10 Missouri	543	301	224	24	3	7	1,034
WRA 11 Arkansas-White-Red	59	56	116	22	2	-	207
WRA 12 Texas-Gulf	521	437	400	5	25	-	1,328
WRA 13 Rio Grande	64	99	694	48	17	19	773
WRA 14 Upper Colorado	97	486	349	5	1	74	852
WRA 15 Lower Colorado	144	171	74	12	14	2	361
WRA 16 Great Basin	106	215	72	2	-	9	382
WRA 17 Pacific Northwest	1,137	484	1,124	55	2	3	2,685
WRA 18 California	170	223	382	71	18	-	686
WRA 19 Alaska	-	-	-	-	-	-	-
WRA 20 Hawaii	13	11	11	-	-	-	35

See footnote(s) at end of table.

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Table 23. **Investment in Irrigation Equipment, Facilities, and Land Improvement: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Land clearing and leveling in survey year - con.								
	Farms	Acres irrigated	Investment [1] ($1,000)	Average per farm (dollars)	Farms with investment of -				
					$1 to $999	$1,000 to $9,999	$10,000 to $29,999	$30,000 to $74,999	$75,000 or more
U.S. TOTAL . . . . . 2003 . .	9,404	4,604,493	75,690	8,049	3,446	3,995	1,471	347	145
1998 . .	9,246	4,847,251	88,265	9,546	2,536	4,391	1,753	(NA)	(NA)
2003 DATA									
Alabama	5	4,000	38	7,500	-	3	2	-	-
Alaska	6	(D)	7	1,167	4	2	-	-	-
Arizona	219	171,338	6,277	28,664	68	53	44	28	26
Arkansas	529	714,969	13,419	25,367	13	177	214	89	36
California	1,312	1,202,559	16,898	12,879	22	735	430	109	16
Colorado	557	76,795	787	1,413	246	309	1	-	1
Connecticut	2	(D)	(D)	(D)	-	2	-	-	-
Delaware	4	1,245	25	6,348	-	4	-	-	-
Florida	57	238,213	2,427	42,571	2	10	28	10	7
Georgia	138	43,272	777	5,633	77	35	20	6	-
Hawaii	63	358	169	2,684	1	61	1	-	-
Idaho	744	193,645	1,855	2,493	582	66	92	3	1
Illinois	14	21,298	355	25,361	2	9	2	-	1
Indiana	11	7,962	86	7,782	-	7	4	-	-
Iowa	5	2,895	8	1,636	2	3	-	-	-
Kansas	41	19,880	383	9,341	-	40	-	-	1
Kentucky	15	(D)	30	2,010	14	-	1	-	-
Louisiana	172	136,255	2,847	16,552	7	79	55	26	5
Maine	12	6,477	196	16,365	4	5	1	-	2
Maryland	-	-	-	-	-	-	-	-	-
Massachusetts	9	273	(D)	(D)	-	9	-	-	-
Michigan	116	41,815	221	1,909	64	49	3	-	-
Minnesota	71	22,891	325	4,572	2	61	8	-	-
Mississippi	136	273,053	3,986	29,311	4	51	39	30	12
Missouri	75	107,042	1,439	19,185	2	32	26	12	3
Montana	528	170,151	2,157	4,085	234	221	69	1	3
Nebraska	497	398,342	3,377	6,794	149	171	177	-	-
Nevada	144	102,196	1,302	9,044	23	55	65	1	-
New Hampshire	1	(D)	(D)	(D)	-	1	-	-	-
New Jersey	23	3,878	131	5,687	6	14	1	2	-
New Mexico	753	36,503	1,278	1,698	564	164	14	8	3
New York	2	(D)	(D)	(D)	-	2	-	-	-
North Carolina	73	8,410	630	8,630	-	52	21	-	-
North Dakota	25	16,741	165	6,589	10	12	-	3	-
Ohio	14	(D)	(D)	(D)	-	13	1	-	-
Oklahoma	78	32,506	489	6,264	5	65	6	2	-
Oregon	83	42,091	460	5,542	8	62	13	-	-
Pennsylvania	14	1,147	112	8,029	6	-	8	-	-
Rhode Island	8	60	28	3,500	-	8	-	-	-
South Carolina	36	10,452	375	10,417	-	19	14	3	-
South Dakota	44	12,391	409	9,304	12	21	-	11	-
Tennessee	37	645	(D)	(D)	37	-	-	-	-
Texas	1,112	178,074	5,023	4,517	410	619	78	-	5
Utah	774	88,266	842	1,088	525	231	18	-	-
Vermont	6	30	(D)	(D)	6	-	-	-	-
Virginia	74	1,653	342	4,619	-	73	-	1	-
Washington	427	101,477	5,340	12,506	134	260	9	2	22
West Virginia	-	-	-	-	-	-	-	-	-
Wisconsin	36	17,637	160	4,439	16	17	2	-	1
Wyoming	302	91,055	431	1,427	185	113	4	-	-
Water Resources Areas									
WRA 01 New England	32	6,970	261	8,168	4	25	1	-	2
WRA 02 Mid-Atlantic	106	7,503	587	5,533	15	79	9	3	-
WRA 03 South Atlantic-Gulf	306	300,497	4,224	13,803	79	117	84	19	7
WRA 04 Great Lakes	151	47,583	291	1,926	80	66	5	-	-
WRA 05 Ohio	55	10,867	105	1,910	35	16	4	-	-
WRA 06 Tennessee	6	(D)	38	6,250	-	5	1	-	-
WRA 07 Upper Mississippi	82	53,351	798	9,729	6	63	9	2	2
WRA 08 Lower Mississippi	778	1,072,914	15,471	19,885	45	304	267	123	39
WRA 09 Souris-Red-Rainy	35	15,985	158	4,503	4	27	3	1	-
WRA 10 Missouri	1,210	678,416	6,480	5,356	412	530	251	14	3
WRA 11 Arkansas-White-Red	258	205,852	7,062	27,372	5	124	77	34	18
WRA 12 Texas-Gulf	711	163,563	4,348	6,116	28	617	61	-	5
WRA 13 Rio Grande	1,108	50,176	1,805	1,629	908	164	25	8	3
WRA 14 Upper Colorado	756	91,188	1,021	1,350	335	415	5	-	1
WRA 15 Lower Colorado	299	177,660	6,331	21,174	142	57	46	28	26
WRA 16 Great Basin	684	162,213	1,876	2,743	430	175	78	1	-
WRA 17 Pacific Northwest	1,438	343,935	7,742	5,384	886	410	114	5	23
WRA 18 California	1,320	1,210,812	16,918	12,817	27	738	430	109	16
WRA 19 Alaska	6	(D)	7	1,167	4	2	-	-	-
WRA 20 Hawaii	63	358	169	2,684	1	61	1	-	-

See footnote(s) at end of table.

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Table 23. **Investment in Irrigation Equipment, Facilities, and Land Improvement: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Land clearing and leveling in survey year						
	Purpose of expenditures			Source of funding assistance			
	Replacement (farms)	Water conservation (farms)	New expansion (farms)	EQIP (farms)	Other USDA (farms)	Other public (farms)	No public funding (farms)
U.S. TOTAL . . . . . 2003 . .	(X)	2,915	5,315	203	76	29	9,096
1998 . .	(X)	4,490	4,756	(NA)	(NA)	(NA)	(NA)
2003 DATA							
Alabama	(X)	-	5	-	-	-	5
Alaska	(X)	-	6	-	-	-	6
Arizona	(X)	169	23	12	19	-	188
Arkansas	(X)	285	229	23	-	13	493
California	(X)	625	330	1	-	-	1,311
Colorado	(X)	40	479	-	-	-	557
Connecticut	(X)	-	2	-	-	-	2
Delaware	(X)	-	4	-	-	-	4
Florida	(X)	11	24	2	-	-	55
Georgia	(X)	7	129	-	-	-	138
Hawaii	(X)	-	44	-	-	-	63
Idaho	(X)	113	595	-	3	-	741
Illinois	(X)	-	13	-	-	-	14
Indiana	(X)	-	9	-	-	-	11
Iowa	(X)	-	5	-	-	-	5
Kansas	(X)	4	19	-	-	-	41
Kentucky	(X)	-	15	-	-	-	15
Louisiana	(X)	74	84	18	4	-	150
Maine	(X)	-	12	-	-	-	12
Maryland	(X)	-	-	-	-	-	-
Massachusetts	(X)	-	3	-	-	-	9
Michigan	(X)	26	90	-	-	-	116
Minnesota	(X)	9	32	-	-	-	71
Mississippi	(X)	55	73	13	-	-	123
Missouri	(X)	19	47	4	-	-	71
Montana	(X)	139	370	59	-	3	466
Nebraska	(X)	19	423	-	-	-	497
Nevada	(X)	34	96	12	-	1	131
New Hampshire	(X)	-	1	-	-	-	1
New Jersey	(X)	18	5	-	-	-	23
New Mexico	(X)	452	295	-	48	-	705
New York	(X)	-	2	-	-	-	2
North Carolina	(X)	5	64	-	-	-	73
North Dakota	(X)	6	9	-	-	2	23
Ohio	(X)	-	14	-	-	-	14
Oklahoma	(X)	9	67	-	-	-	78
Oregon	(X)	63	20	-	-	3	80
Pennsylvania	(X)	-	14	-	-	-	14
Rhode Island	(X)	-	8	-	-	-	8
South Carolina	(X)	14	21	-	-	-	36
South Dakota	(X)	14	26	11	-	-	33
Tennessee	(X)	-	19	-	-	-	37
Texas	(X)	171	785	30	-	4	1,078
Utah	(X)	420	270	17	2	3	752
Vermont	(X)	-	-	-	-	-	6
Virginia	(X)	-	74	-	-	-	74
Washington	(X)	12	271	-	-	-	427
West Virginia	(X)	-	-	-	-	-	-
Wisconsin	(X)	9	27	-	-	-	36
Wyoming	(X)	93	162	1	-	-	301
Water Resources Areas							
WRA 01 New England	(X)	-	26	-	-	-	32
WRA 02 Mid-Atlantic	(X)	18	82	-	-	-	106
WRA 03 South Atlantic-Gulf	(X)	37	240	2	-	-	304
WRA 04 Great Lakes	(X)	27	124	-	-	-	151
WRA 05 Ohio	(X)	-	35	-	-	-	55
WRA 06 Tennessee	(X)	-	6	-	-	-	6
WRA 07 Upper Mississippi	(X)	18	57	-	-	-	82
WRA 08 Lower Mississippi	(X)	391	346	52	4	13	709
WRA 09 Souris-Red-Rainy	(X)	1	6	-	-	-	35
WRA 10 Missouri	(X)	278	794	71	-	5	1,134
WRA 11 Arkansas-White-Red	(X)	59	190	6	-	-	252
WRA 12 Texas-Gulf	(X)	152	403	30	-	4	677
WRA 13 Rio Grande	(X)	427	677	-	48	-	1,060
WRA 14 Upper Colorado	(X)	91	550	-	-	-	756
WRA 15 Lower Colorado	(X)	245	27	12	19	-	268
WRA 16 Great Basin	(X)	354	306	29	2	4	649
WRA 17 Pacific Northwest	(X)	187	1,063	-	3	-	1,435
WRA 18 California	(X)	630	333	1	-	3	1,316
WRA 19 Alaska	(X)	-	6	-	-	-	6
WRA 20 Hawaii	(X)	-	44	-	-	-	63

See footnote(s) at end of table.

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Table 23. **Investment in Irrigation Equipment, Facilities, and Land Improvement: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Computers, control panels and software for irrigation water management in survey year - con.								
	Farms	Acres irrigated	Investment [1] ($1,000)	Average per farm (dollars)	Farms with investment of -				
					$1 to $999	$1,000 to $9,999	$10,000 to $29,999	$30,000 to $74,999	$75,000 or more
U.S. TOTAL . . . . . 2003 . .	3,954	2,277,913	14,393	3,640	1,413	2,223	212	102	4
1998 . .	1,291	1,525,653	7,898	6,118	262	864	93	(NA)	(NA)
2003 DATA									
Alabama	3	(D)	17	5,667	-	2	1	-	-
Alaska	-	-	-	-	-	-	-	-	-
Arizona	95	43,933	92	972	79	15	1	-	-
Arkansas	31	63,765	156	5,033	5	21	5	-	-
California	442	298,335	3,996	9,041	104	220	64	54	-
Colorado	195	109,724	627	3,218	57	114	24	-	-
Connecticut	1	(D)	(D)	(D)	-	1	-	-	-
Delaware	4	3,000	(D)	(D)	2	2	-	-	-
Florida	389	77,759	520	1,337	281	96	9	3	-
Georgia	20	16,874	80	4,000	2	15	3	-	-
Hawaii	44	(D)	49	1,106	28	15	1	-	-
Idaho	170	282,732	1,283	7,546	29	112	19	7	3
Illinois	22	27,636	107	4,879	3	16	3	-	-
Indiana	8	5,918	(D)	(D)	2	5	1	-	-
Iowa	21	1,934	24	1,119	8	13	-	-	-
Kansas	79	128,115	239	3,027	30	44	5	-	-
Kentucky	17	2,504	17	1,014	16	-	1	-	-
Louisiana	24	14,188	35	1,443	17	6	1	-	-
Maine	2	(D)	(D)	(D)	-	2	-	-	-
Maryland	27	1,915	11	398	26	1	-	-	-
Massachusetts	2	(D)	(D)	(D)	-	2	-	-	-
Michigan	126	32,452	197	1,563	51	74	1	-	-
Minnesota	30	28,467	79	2,642	9	20	1	-	-
Mississippi	8	23,653	17	2,063	4	4	-	-	-
Missouri	30	30,509	89	2,967	-	30	-	-	-
Montana	51	95,400	397	7,788	13	31	-	7	-
Nebraska	302	236,737	987	3,267	18	265	19	-	-
Nevada	24	35,456	132	5,485	2	19	3	-	-
New Hampshire	3	3	(D)	(D)	3	-	-	-	-
New Jersey	6	436	5	821	2	4	-	-	-
New Mexico	112	49,967	356	3,178	20	79	13	-	-
New York	5	230	(D)	(D)	-	5	-	-	-
North Carolina	127	4,105	86	680	112	15	-	-	-
North Dakota	20	13,137	57	2,854	14	3	3	-	-
Ohio	1	(D)	(D)	(D)	-	1	-	-	-
Oklahoma	16	7,843	36	2,263	11	4	1	-	-
Oregon	559	100,777	1,184	2,117	146	409	2	1	1
Pennsylvania	41	919	24	583	40	1	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-
South Carolina	16	7,632	35	2,188	10	4	2	-	-
South Dakota	20	4,110	16	805	17	3	-	-	-
Tennessee	2	(D)	(D)	(D)	-	2	-	-	-
Texas	245	181,503	755	3,083	51	185	4	5	-
Utah	26	16,300	76	2,911	-	26	-	-	-
Vermont	-	-	-	-	-	-	-	-	-
Virginia	5	3,219	28	5,600	-	3	2	-	-
Washington	518	205,607	2,259	4,361	186	287	21	24	-
West Virginia	-	-	-	-	-	-	-	-	-
Wisconsin	21	36,635	140	6,676	-	18	2	1	-
Wyoming	44	37,274	120	2,735	15	29	-	-	-
Water Resources Areas									
WRA 01 New England	8	5,141	13	1,590	3	5	-	-	-
WRA 02 Mid-Atlantic	80	(D)	73	910	67	11	2	-	-
WRA 03 South Atlantic-Gulf	443	105,280	667	1,505	296	130	14	3	-
WRA 04 Great Lakes	144	48,992	286	1,985	51	89	4	-	-
WRA 05 Ohio	29	10,351	31	1,081	24	5	-	-	-
WRA 06 Tennessee	112	3,160	72	638	109	2	1	-	-
WRA 07 Upper Mississippi	81	66,492	272	3,363	11	66	3	1	-
WRA 08 Lower Mississippi	66	94,803	230	3,487	26	33	7	-	-
WRA 09 Souris-Red-Rainy	22	18,501	55	2,485	14	6	2	-	-
WRA 10 Missouri	485	434,832	1,788	3,687	74	382	22	7	-
WRA 11 Arkansas-White-Red	235	250,178	624	2,655	64	163	8	-	-
WRA 12 Texas-Gulf	195	117,100	574	2,944	38	146	6	5	-
WRA 13 Rio Grande	150	70,455	599	3,994	47	71	32	-	-
WRA 14 Upper Colorado	31	23,210	68	2,181	12	19	-	-	-
WRA 15 Lower Colorado	95	43,933	92	972	79	15	1	-	-
WRA 16 Great Basin	62	58,908	312	5,034	2	49	11	-	-
WRA 17 Pacific Northwest	1,226	575,648	4,589	3,743	362	794	34	32	4
WRA 18 California	446	303,841	4,000	8,968	106	222	64	54	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	44	(D)	49	1,106	28	15	1	-	-

See footnote(s) at end of table.

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Table 23. **Investment in Irrigation Equipment, Facilities, and Land Improvement: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Computers, control panels and software for irrigation water management in survey year						
	Purpose of expenditures			Source of funding assistance			
	Replacement (farms)	Water conservation (farms)	New expansion (farms)	EQIP (farms)	Other USDA (farms)	Other public (farms)	No public funding (farms)
U.S. TOTAL . . . . . 2003 . .	1,225	737	1,992	42	154	23	3,735
1998 . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA							
Alabama	2	-	1	-	-	-	3
Alaska	-	-	-	-	-	-	-
Arizona	64	5	26	-	-	-	95
Arkansas	5	10	16	-	-	-	31
California	186	126	130	-	50	-	392
Colorado	58	87	50	10	-	-	185
Connecticut	-	-	1	-	-	-	1
Delaware	2	-	2	-	-	-	4
Florida	28	10	351	-	-	-	389
Georgia	13	4	3	-	-	-	20
Hawaii	13	22	9	-	-	-	44
Idaho	69	45	56	-	-	-	170
Illinois	8	2	12	-	-	-	22
Indiana	2	-	6	-	-	-	8
Iowa	9	-	12	-	-	-	21
Kansas	34	31	14	-	-	-	79
Kentucky	14	-	3	-	-	-	17
Louisiana	17	-	7	-	-	15	9
Maine	-	-	2	-	-	-	2
Maryland	2	-	25	-	-	-	27
Massachusetts	-	-	2	-	-	-	2
Michigan	31	3	92	-	-	-	126
Minnesota	8	7	15	4	-	-	26
Mississippi	8	-	-	-	-	-	8
Missouri	15	-	15	-	-	-	30
Montana	5	22	24	3	-	6	42
Nebraska	19	42	241	1	82	-	219
Nevada	16	2	6	-	-	-	24
New Hampshire	3	-	-	-	-	-	3
New Jersey	2	4	-	4	-	-	2
New Mexico	79	22	11	2	-	-	110
New York	-	-	5	-	-	-	5
North Carolina	3	-	124	-	-	-	127
North Dakota	8	2	10	-	-	-	20
Ohio	1	-	-	-	-	-	1
Oklahoma	13	1	2	-	-	-	16
Oregon	154	24	381	12	-	-	547
Pennsylvania	3	-	38	-	-	-	41
Rhode Island	-	-	-	-	-	-	-
South Carolina	10	2	4	-	-	-	16
South Dakota	2	15	3	-	-	-	20
Tennessee	-	-	2	-	-	-	2
Texas	177	20	48	4	-	-	241
Utah	9	13	4	-	2	2	22
Vermont	-	-	-	-	-	-	-
Virginia	5	-	-	-	-	-	5
Washington	113	204	201	2	7	-	509
West Virginia	-	-	-	-	-	-	-
Wisconsin	10	3	8	-	-	-	21
Wyoming	5	9	30	-	13	-	31
Water Resources Areas							
WRA 01 New England	3	-	5	-	-	-	8
WRA 02 Mid-Atlantic	14	4	62	4	-	-	76
WRA 03 South Atlantic-Gulf	54	16	373	-	-	-	443
WRA 04 Great Lakes	38	5	101	-	-	-	144
WRA 05 Ohio	19	-	10	-	-	-	29
WRA 06 Tennessee	2	-	110	-	-	-	112
WRA 07 Upper Mississippi	39	7	35	-	-	-	81
WRA 08 Lower Mississippi	30	5	31	-	-	15	51
WRA 09 Souris-Red-Rainy	2	5	15	4	-	-	18
WRA 10 Missouri	48	105	332	4	95	6	380
WRA 11 Arkansas-White-Red	164	43	28	2	-	-	233
WRA 12 Texas-Gulf	133	16	46	4	-	-	191
WRA 13 Rio Grande	55	74	21	10	-	-	140
WRA 14 Upper Colorado	7	14	10	-	-	2	29
WRA 15 Lower Colorado	64	5	26	-	-	-	95
WRA 16 Great Basin	31	21	10	-	2	-	60
WRA 17 Pacific Northwest	321	267	638	14	7	-	1,205
WRA 18 California	188	128	130	-	50	-	396
WRA 19 Alaska	-	-	-	-	-	-	-
WRA 20 Hawaii	13	22	9	-	-	-	44

[1] May not add due to rounding.

Table 24. **Expenses for Maintenance and Repairs of Irrigation Equipment and Facilities: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms	Acres irrigated	Expenses ($1,000)	Average cost		Farms with expenses of -						
				Per farm (dollars)	Per acre irrigated (dollars)	$1 to $999	$1,000 to $4,999	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $19,999	$20,000 to $29,999	$30,000 or more
U.S. TOTAL . . . . . 2003 . .	119,952	40,014,045	491,705	4,099	12.29	63,658	34,780	10,180	4,615	1,672	2,151	2,896
1998 . .	138,725	44,364,141	508,199	3,663	11.46	78,119	38,766	10,366	4,212	2,151	2,177	2,934
2003 DATA												
Alabama	291	32,765	551	1,893	16.81	186	73	10	15	6	1	-
Alaska	29	1,870	13	459	7.11	25	4	-	-	-	-	-
Arizona	1,721	619,146	11,537	6,704	18.63	901	542	57	33	24	55	109
Arkansas	3,013	2,987,227	20,296	6,736	6.79	679	1,134	621	206	89	143	141
California	21,757	6,090,763	99,020	4,551	16.26	12,876	4,901	2,056	600	227	388	709
Colorado	6,278	1,826,923	19,658	3,131	10.76	3,561	1,784	419	311	75	51	77
Connecticut	85	1,630	63	746	38.92	64	20	1	-	-	-	-
Delaware	152	44,873	392	2,577	8.73	98	25	17	8	1	1	2
Florida	4,061	1,161,836	21,110	5,198	18.17	2,143	1,352	213	101	70	69	113
Georgia	1,157	436,468	5,221	4,512	11.96	411	461	135	69	22	27	32
Hawaii	368	70,642	5,656	15,370	80.07	250	69	35	3	-	-	11
Idaho	8,974	2,667,690	33,505	3,734	12.56	5,568	2,222	583	136	93	171	201
Illinois	781	321,243	1,785	2,285	5.56	394	285	61	22	9	5	5
Indiana	679	197,587	1,231	1,813	6.23	434	169	51	8	7	9	1
Iowa	421	106,220	505	1,198	4.75	269	135	9	5	2	1	-
Kansas	3,544	2,039,317	26,214	7,397	12.85	1,141	1,087	565	287	116	200	148
Kentucky	326	10,995	159	488	14.47	284	40	2	-	-	-	-
Louisiana	1,341	588,993	7,535	5,619	12.79	365	687	124	55	30	18	62
Maine	189	15,393	259	1,368	16.80	131	53	1	-	2	-	2
Maryland	251	36,363	465	1,853	12.79	123	105	15	2	2	4	-
Massachusetts	532	13,100	1,008	1,895	76.97	314	178	16	5	8	8	3
Michigan	1,441	386,159	3,453	2,396	8.94	976	282	94	30	20	26	13
Minnesota	1,135	359,042	3,706	3,265	10.32	601	343	102	42	14	18	15
Mississippi	1,347	943,677	5,314	3,945	5.63	811	250	135	59	20	31	41
Missouri	1,210	667,446	3,198	2,643	4.79	626	401	97	37	17	15	17
Montana	4,436	1,565,305	7,582	1,709	4.84	2,457	1,681	167	75	8	29	19
Nebraska	11,748	6,147,386	49,552	4,218	8.06	3,185	5,674	1,532	884	176	163	134
Nevada	795	482,059	3,940	4,956	8.17	373	200	126	32	11	34	19
New Hampshire	65	436	25	390	58.09	58	7	-	-	-	-	-
New Jersey	423	36,028	969	2,292	26.91	256	108	33	15	6	2	3
New Mexico	2,626	467,564	10,985	4,183	23.49	1,600	609	123	117	32	60	85
New York	521	40,192	686	1,317	17.07	338	147	17	12	-	5	2
North Carolina	1,367	78,733	2,031	1,486	25.80	803	479	51	21	2	8	3
North Dakota	358	154,512	2,029	5,666	13.13	132	145	39	22	3	7	10
Ohio	246	10,352	173	702	16.69	222	12	9	3	-	-	-
Oklahoma	1,247	376,081	6,802	5,455	18.09	493	420	194	33	58	26	23
Oregon	7,602	1,298,746	15,652	2,059	12.05	4,777	2,095	304	283	36	66	41
Pennsylvania	780	14,514	487	624	33.52	678	93	5	1	-	3	-
Rhode Island	21	482	19	894	38.96	16	5	-	-	-	-	-
South Carolina	474	36,931	514	1,084	13.91	389	52	21	2	4	5	1
South Dakota	1,037	302,422	3,122	3,011	10.32	456	448	65	31	13	16	8
Tennessee	282	21,158	212	752	10.03	242	34	3	1	1	1	-
Texas	8,889	3,824,764	69,578	7,827	18.19	3,936	1,874	1,178	731	297	314	559
Utah	5,190	775,437	7,558	1,456	9.75	3,698	1,119	259	48	8	24	34
Vermont	81	488	26	319	52.90	71	10	-	-	-	-	-
Virginia	386	22,910	929	2,406	40.54	335	27	6	3	-	8	7
Washington	6,983	1,524,319	29,466	4,220	19.33	4,169	1,792	362	197	126	113	224
West Virginia	42	290	18	421	61.00	36	6	-	-	-	-	-
Wisconsin	846	335,547	3,708	4,383	11.05	295	345	110	43	15	20	18
Wyoming	2,424	870,021	3,789	1,563	4.36	1,412	796	157	27	22	6	4
Water Resources Areas												
WRA 01 New England	938	31,307	1,382	1,474	44.16	625	267	18	5	10	8	5
WRA 02 Mid-Atlantic	2,038	166,348	3,520	1,727	21.16	1,479	389	93	35	9	21	12
WRA 03 South Atlantic-Gulf	7,958	1,742,816	29,170	3,665	16.74	4,676	2,285	428	206	104	110	149
WRA 04 Great Lakes	2,133	528,171	4,774	2,238	9.04	1,411	473	123	50	21	35	20
WRA 05 Ohio	1,149	169,487	1,259	1,096	7.43	909	185	32	5	8	9	1
WRA 06 Tennessee	362	21,054	471	1,300	22.36	189	165	5	3	-	-	-
WRA 07 Upper Mississippi	2,810	949,320	8,196	2,917	8.63	1,364	1,001	255	87	40	35	28
WRA 08 Lower Mississippi	5,297	4,649,244	32,516	6,139	6.99	1,407	2,129	873	325	146	188	229
WRA 09 Souris-Red-Rainy	349	141,017	1,737	4,978	12.32	144	114	55	21	-	5	10
WRA 10 Missouri	21,712	10,125,295	82,638	3,806	8.16	8,113	9,099	2,329	1,328	294	310	239
WRA 11 Arkansas-White-Red	6,839	4,198,114	61,736	9,027	14.71	1,855	2,418	1,069	483	284	266	464
WRA 12 Texas-Gulf	6,636	2,347,575	40,031	6,032	17.05	3,102	1,461	855	515	195	219	289
WRA 13 Rio Grande	3,222	585,805	12,713	3,946	21.70	2,118	610	125	157	35	81	96
WRA 14 Upper Colorado	4,900	801,138	5,435	1,109	6.78	3,476	1,167	159	81	1	13	3
WRA 15 Lower Colorado	2,071	658,069	11,827	5,711	17.97	1,208	569	70	35	24	56	109
WRA 16 Great Basin	4,845	1,117,622	12,233	2,525	10.95	3,305	995	347	60	19	59	60
WRA 17 Pacific Northwest	24,161	5,487,828	76,754	3,177	13.99	14,888	6,370	1,237	608	250	347	461
WRA 18 California	22,135	6,221,323	99,643	4,502	16.02	13,114	5,010	2,072	608	232	389	710
WRA 19 Alaska	29	1,870	13	459	7.11	25	4	-	-	-	-	-
WRA 20 Hawaii	368	70,642	5,656	15,370	80.07	250	69	35	3	-	-	11

Table 25. **Expenses for Hired and Contract Irrigation Labor: 2003**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms	Acres irrigated	Total expenses ($1,000)	Average cost		For hired labor				For contract labor			
				Per farm (dollars)	Per acre irrigated (dollars)	Farms	Expenses ($1,000)	Average cost: Per farm (dollars)	Average cost: Per acre irrigated (dollars)	Farms	Expenses ($1,000)	Average cost: Per farm (dollars)	Average cost: Per acre irrigated (dollars)
U.S. TOTAL . . . . . 2003 . .	62,260	27,241,219	657,335	10,558	24.13	54,349	591,148	10,877	25.75	10,623	66,187	6,231	41.78
1998 . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA													
Alabama	100	17,495	230	2,298	13.13	93	227	2,440	13.48	7	3	414	4.39
Alaska	17	1,518	22	1,273	14.25	13	(D)	(D)	(D)	4	(D)	(D)	(D)
Arizona	987	597,863	28,093	28,463	46.99	928	24,769	26,690	52.54	89	3,324	37,349	49.54
Arkansas	1,756	2,118,220	18,295	10,419	8.64	1,744	17,644	10,117	8.99	132	652	4,936	20.55
California	18,857	5,924,750	283,680	15,044	47.88	15,691	249,328	15,890	51.56	3,626	34,352	9,474	87.66
Colorado	2,267	1,017,875	16,785	7,404	16.49	2,120	15,133	7,138	18.14	620	1,652	2,664	30.45
Connecticut	40	1,171	167	4,179	142.76	40	167	4,179	142.76	-	-	-	-
Delaware	33	20,749	203	6,147	9.78	26	179	6,873	11.58	13	24	1,858	7.93
Florida	2,057	695,737	21,143	10,279	30.39	1,370	13,998	10,217	32.38	808	7,145	8,843	65.60
Georgia	468	182,075	2,466	5,268	13.54	465	2,318	4,985	15.97	42	148	3,512	258.77
Hawaii	145	69,973	7,125	49,135	101.82	134	7,099	52,974	102.01	16	26	1,630	434.57
Idaho	3,698	2,029,138	46,669	12,620	23.00	3,522	44,758	12,708	24.78	263	1,911	7,266	25.45
Illinois	211	104,853	606	2,871	5.78	194	539	2,780	7.05	36	66	1,845	7.95
Indiana	205	86,069	523	2,553	6.08	191	484	2,535	7.30	25	39	1,568	3.19
Iowa	140	31,880	181	1,295	5.69	136	180	1,322	5.93	4	2	400	1.03
Kansas	1,474	1,168,015	20,028	13,588	17.15	1,340	18,931	14,128	21.17	218	1,097	5,033	10.55
Kentucky	213	5,250	129	608	24.66	196	114	582	27.94	17	15	906	13.17
Louisiana	522	282,836	5,237	10,033	18.52	454	3,063	6,746	12.30	131	2,175	16,600	262.26
Maine	28	9,294	238	8,499	25.61	28	238	8,499	25.61	-	-	-	-
Maryland	102	20,062	281	2,753	14.00	101	263	2,601	15.37	8	18	2,266	40.29
Massachusetts	227	6,710	625	2,752	93.10	224	(D)	(D)	(D)	8	(D)	(D)	(D)
Michigan	610	261,527	2,982	4,888	11.40	604	2,909	4,816	12.44	16	73	4,575	25.12
Minnesota	241	137,247	992	4,117	7.23	205	895	4,364	8.20	47	98	2,076	8.37
Mississippi	525	728,977	4,903	9,339	6.73	521	4,633	8,893	6.82	22	270	12,276	37.20
Missouri	463	404,235	1,968	4,250	4.87	449	1,899	4,230	5.12	29	68	2,359	5.77
Montana	1,574	947,051	8,111	5,153	8.56	1,381	7,316	5,298	9.05	282	794	2,817	16.46
Nebraska	4,278	3,067,422	24,946	5,831	8.13	3,955	23,260	5,881	8.83	522	1,686	3,229	6.86
Nevada	360	358,510	4,771	13,252	13.31	352	4,668	13,260	14.23	11	103	9,386	9.90
New Hampshire	12	188	16	1,358	86.70	10	(D)	(D)	(D)	2	(D)	(D)	(D)
New Jersey	187	27,498	1,011	5,405	36.76	163	939	5,762	37.60	33	72	2,172	2,986.83
New Mexico	1,334	322,230	9,929	7,443	30.81	1,185	9,360	7,899	32.37	193	569	2,946	31.66
New York	316	24,734	1,033	3,269	41.76	305	1,001	3,283	41.46	17	32	1,859	143.64
North Carolina	775	56,085	2,636	3,401	46.99	751	2,439	3,248	52.91	42	196	4,677	50.78
North Dakota	119	85,301	1,252	10,518	14.67	107	1,204	11,257	16.57	25	47	1,887	12.35
Ohio	73	8,842	239	3,271	27.00	73	(D)	(D)	(D)	1	(D)	(D)	(D)
Oklahoma	363	200,523	2,746	7,565	13.70	327	2,456	7,509	14.30	68	291	4,275	17.06
Oregon	4,008	924,807	18,987	4,737	20.53	3,092	17,652	5,709	20.79	949	1,335	1,407	30.62
Pennsylvania	328	10,339	594	1,810	57.42	325	590	1,816	58.39	5	3	685	114.13
Rhode Island	4	4	(Z)	100	100.00	4	(Z)	100	100.00	-	-	-	-
South Carolina	178	18,627	689	3,873	37.02	177	660	3,728	44.21	12	30	2,467	14.10
South Dakota	246	120,758	1,294	5,261	10.72	222	1,189	5,356	12.48	70	105	1,502	11.10
Tennessee	124	14,818	156	1,258	10.52	100	98	981	9.73	26	58	2,225	172.17
Texas	4,908	2,570,719	50,795	10,349	19.76	3,897	45,345	11,636	23.53	1,351	5,450	4,034	31.55
Utah	1,904	502,362	7,853	4,125	15.63	1,721	7,302	4,243	16.32	258	551	2,136	13.38
Vermont	17	288	42	2,442	144.12	17	(D)	(D)	(D)	2	(D)	(D)	(D)
Virginia	166	15,263	469	2,824	30.72	166	469	2,824	30.72	-	-	-	-
Washington	4,150	1,201,967	45,395	10,939	37.77	3,873	44,193	11,410	40.23	406	1,203	2,962	56.43
West Virginia	9	57	6	667	105.26	9	6	667	105.26	-	-	-	-
Wisconsin	320	182,098	3,111	9,721	17.08	316	3,060	9,683	18.75	35	51	1,449	19.73
Wyoming	1,121	657,209	7,685	6,855	11.69	1,032	7,267	7,042	12.45	132	418	3,165	10.40
Water Resources Areas													
WRA 01 New England	322	17,565	1,067	3,314	60.75	317	1,033	3,257	59.90	12	34	2,873	125.37
WRA 02 Mid-Atlantic	796	101,088	2,853	3,584	28.22	755	2,705	3,582	30.20	71	148	2,084	40.35
WRA 03 South Atlantic-Gulf	3,519	961,869	26,990	7,670	28.06	2,797	19,469	6,961	30.08	911	7,522	8,256	64.77
WRA 04 Great Lakes	950	334,090	4,298	4,524	12.86	937	4,199	4,481	14.16	25	99	3,968	17.12
WRA 05 Ohio	454	80,982	709	1,562	8.76	414	638	1,541	11.17	55	71	1,294	7.12
WRA 06 Tennessee	229	14,575	380	1,659	26.06	219	(D)	(D)	(D)	10	(D)	(D)	(D)
WRA 07 Upper Mississippi	833	380,531	4,197	5,039	11.03	774	4,026	5,202	12.65	114	171	1,499	7.37
WRA 08 Lower Mississippi	2,893	3,219,159	27,576	9,532	8.57	2,798	24,544	8,772	8.27	292	3,032	10,384	54.32
WRA 09 Souris-Red-Rainy	85	68,131	573	6,744	8.41	81	554	6,836	9.24	13	20	1,501	8.45
WRA 10 Missouri	7,840	5,376,955	53,940	6,880	10.03	7,151	50,543	7,068	11.09	1,116	3,397	3,044	8.70
WRA 11 Arkansas-White-Red	2,804	2,676,695	38,706	13,804	14.46	2,603	35,266	13,548	17.70	432	3,441	7,965	18.02
WRA 12 Texas-Gulf	3,288	1,496,091	31,804	9,673	21.26	3,174	28,510	8,982	22.78	339	3,294	9,716	38.81
WRA 13 Rio Grande	2,121	377,498	12,828	6,048	33.98	1,137	11,735	10,321	34.68	998	1,093	1,095	48.76
WRA 14 Upper Colorado	1,842	486,252	8,335	4,525	17.14	1,688	7,598	4,501	18.04	600	737	1,229	25.29
WRA 15 Lower Colorado	1,109	626,980	28,926	26,083	46.14	1,043	25,520	24,468	52.06	98	3,406	34,756	49.58
WRA 16 Great Basin	2,080	807,959	11,881	5,712	14.70	1,987	11,377	5,726	15.54	173	504	2,913	11.34
WRA 17 Pacific Northwest	11,968	4,128,666	110,054	9,196	26.66	10,553	105,386	9,986	28.30	1,690	4,667	2,762	34.76
WRA 18 California	18,965	6,014,642	285,072	15,031	47.40	15,774	250,599	15,887	50.99	3,654	34,472	9,434	85.97
WRA 19 Alaska	17	1,518	22	1,273	14.25	13	(D)	(D)	(D)	4	(D)	(D)	(D)
WRA 20 Hawaii	145	69,973	7,125	49,135	101.82	134	7,099	52,974	102.01	16	26	1,630	434.57

Table 26. **Farms with Diminished Crop Yields Resulting from Irrigation Interruption by Cause: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Total [1]		Shortage of surface water		Shortage of ground water		Irrigation equipment failure	
	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	40,323	10,207,995	29,277	6,041,013	5,450	2,282,363	6,554	2,823,075
1998 . .	28,256	10,637,500	11,777	3,590,934	4,821	2,649,299	10,292	5,058,081
2003 DATA								
Alabama	27	3,404	1	(D)	1	(D)	13	2,497
Alaska	5	514	-	-	-	-	5	514
Arizona	382	130,643	234	56,458	88	50,121	55	49,340
Arkansas	363	241,814	172	57,385	59	57,853	225	133,880
California	2,760	804,775	1,478	499,675	853	184,379	511	190,993
Colorado	5,660	1,099,804	4,972	830,519	674	258,226	432	179,716
Connecticut	9	9	-	-	9	9	-	-
Delaware	6	3,139	-	-	-	-	4	1,167
Florida	244	42,183	118	13,839	2	(D)	43	27,330
Georgia	117	5,464	56	1,120	-	-	5	4,008
Hawaii	137	48,890	77	(D)	19	(D)	26	(D)
Idaho	4,670	1,255,229	3,982	1,002,867	387	284,050	597	289,536
Illinois	68	21,072	12	1,200	4	480	45	16,214
Indiana	63	13,921	1	(D)	4	695	36	11,961
Iowa	67	8,712	18	1,600	5	916	37	6,147
Kansas	998	565,344	249	114,553	228	132,272	252	240,700
Kentucky	78	861	36	749	-	-	7	49
Louisiana	59	32,104	13	4,840	5	2,600	41	24,404
Maine	6	648	4	448	-	-	1	(D)
Maryland	10	1,808	2	(D)	1	(D)	1	(D)
Massachusetts	16	113	5	50	-	-	11	(D)
Michigan	216	64,709	125	21,988	6	6,670	72	41,975
Minnesota	231	42,951	43	7,727	39	3,780	136	31,903
Mississippi	27	38,309	-	-	-	-	19	22,053
Missouri	112	48,037	70	22,634	-	-	48	27,372
Montana	2,750	931,867	2,458	839,828	161	73,512	454	153,015
Nebraska	2,019	892,221	749	255,327	543	210,780	766	399,299
Nevada	535	256,887	386	212,449	20	21,135	58	54,851
New Hampshire	13	61	10	58	-	-	5	9
New Jersey	68	1,422	4	376	24	24	5	154
New Mexico	3,609	256,591	3,329	137,716	134	66,310	172	48,716
New York	64	2,668	3	390	-	-	3	330
North Carolina	5	1,139	2	(D)	-	-	-	-
North Dakota	102	41,100	39	8,478	2	(D)	33	16,125
Ohio	27	67	13	39	14	28	-	-
Oklahoma	380	99,984	51	21,966	143	15,999	101	42,002
Oregon	3,025	480,969	1,977	400,601	214	56,234	671	80,113
Pennsylvania	82	425	36	96	-	-	6	144
Rhode Island	-	-	-	-	-	-	-	-
South Carolina	28	3,249	12	690	-	-	13	865
South Dakota	320	71,837	127	23,244	31	4,929	139	33,468
Tennessee	61	329	38	234	18	18	18	180
Texas	2,897	1,120,947	1,592	212,437	729	566,845	645	403,409
Utah	4,633	616,773	4,249	559,256	876	139,262	353	73,362
Vermont	15	138	8	38	-	-	6	90
Virginia	14	740	2	(D)	-	-	2	(D)
Washington	1,035	251,834	581	75,080	48	42,061	278	127,864
West Virginia	12	30	-	-	-	-	-	-
Wisconsin	175	42,953	44	5,919	21	1,348	94	25,044
Wyoming	2,123	659,307	1,899	601,332	88	58,765	110	56,043
Water Resources Areas								
WRA 01 New England	50	849	25	574	9	9	17	222
WRA 02 Mid-Atlantic	111	7,572	11	(D)	25	(D)	24	(D)
WRA 03 South Atlantic-Gulf	432	54,923	190	16,033	2	(D)	74	34,700
WRA 04 Great Lakes	333	83,012	139	24,147	20	6,698	99	54,210
WRA 05 Ohio	234	6,371	77	752	4	695	33	3,719
WRA 06 Tennessee	42	1,095	37	1,054	19	(D)	18	180
WRA 07 Upper Mississippi	490	104,362	105	20,597	66	6,108	291	69,694
WRA 08 Lower Mississippi	439	297,989	194	63,830	47	49,122	269	177,098
WRA 09 Souris-Red-Rainy	60	31,174	17	4,396	2	(D)	20	12,715
WRA 10 Missouri	8,929	2,845,589	6,360	1,761,047	1,003	411,395	1,659	795,064
WRA 11 Arkansas-White-Red	2,590	1,146,302	1,261	312,754	689	363,248	575	422,810
WRA 12 Texas-Gulf	1,782	859,655	765	209,085	668	479,685	488	282,078
WRA 13 Rio Grande	3,877	278,535	3,681	192,661	192	102,461	141	53,877
WRA 14 Upper Colorado	4,675	730,354	4,473	674,985	216	50,518	293	51,771
WRA 15 Lower Colorado	694	155,963	541	80,028	238	55,371	66	52,530
WRA 16 Great Basin	4,218	720,964	3,648	627,638	725	152,909	442	136,022
WRA 17 Pacific Northwest	8,044	1,997,576	6,173	1,497,571	653	376,661	1,119	459,008
WRA 18 California	3,181	836,306	1,503	507,835	853	184,379	895	208,964
WRA 19 Alaska	5	514	-	-	-	-	5	514
WRA 20 Hawaii	137	48,890	77	(D)	19	(D)	26	(D)

See footnote(s) at end of table.

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Table 26. **Farms with Diminished Crop Yields Resulting from Irrigation Interruption by Cause: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Energy price increases or energy shortage		Poor water quality		Loss of water rights		Cost of purchased water		Other	
	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	1,942	964,404	877	230,020	596	198,349	1,759	350,911	2,982	925,029
1998 . .	1,342	872,752	625	206,912	156	171,369	1,057	293,204	3,725	1,265,945
2003 DATA										
Alabama	-	-	-	-	-	-	-	-	14	(D)
Alaska	-	-	-	-	-	-	-	-	-	-
Arizona	6	6,696	4	11,721	1	(D)	6	12,464	69	12,996
Arkansas	22	27,400	10	13,745	-	-	13	5,785	49	43,904
California	172	62,225	30	22,686	3	6,000	116	99,000	261	164,462
Colorado	29	20,212	96	6,690	335	69,030	119	36,501	399	67,066
Connecticut	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	2	(D)
Florida	4	4,560	83	3,320	-	-	-	-	4	2,254
Georgia	-	-	-	-	-	-	-	-	56	336
Hawaii	9	(D)	4	8,159	-	-	49	331	18	158
Idaho	208	81,356	8	21,110	65	49,928	277	28,870	332	86,900
Illinois	5	4,362	13	39	-	-	-	-	9	1,810
Indiana	3	1,290	-	-	-	-	-	-	24	1,480
Iowa	-	-	-	-	-	-	-	-	12	801
Kansas	164	144,544	1	(D)	23	18,098	5	13,260	293	104,985
Kentucky	-	-	1	(D)	-	-	7	14	35	98
Louisiana	5	3,260	2	(D)	3	1,200	-	-	1	(D)
Maine	-	-	-	-	-	-	2	(D)	-	-
Maryland	-	-	-	-	-	-	-	-	6	1,042
Massachusetts	-	-	-	-	-	-	-	-	-	-
Michigan	13	7,154	-	-	-	-	-	-	30	6,180
Minnesota	42	4,908	-	-	-	-	2	(D)	23	5,618
Mississippi	-	-	-	-	-	-	-	-	9	20,125
Missouri	6	2,000	-	-	-	-	-	-	16	3,271
Montana	37	17,972	18	30,062	9	6,623	20	10,193	227	84,539
Nebraska	308	95,050	-	-	-	-	-	-	39	53,328
Nevada	18	10,245	2	(D)	7	3,400	1	(D)	108	15,001
New Hampshire	-	-	2	(D)	-	-	-	-	-	-
New Jersey	2	(D)	2	(D)	-	-	-	-	35	868
New Mexico	47	13,220	62	8,768	2	(D)	253	7,399	111	31,542
New York	-	-	-	-	-	-	54	108	4	1,840
North Carolina	-	-	-	-	-	-	-	-	3	915
North Dakota	24	12,274	-	-	-	-	2	(D)	18	7,555
Ohio	-	-	-	-	-	-	-	-	-	-
Oklahoma	128	36,242	-	-	2	(D)	15	3,530	66	11,025
Oregon	69	37,512	367	367	27	13,850	4	2,590	161	16,085
Pennsylvania	-	-	-	-	-	-	-	-	40	185
Rhode Island	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	1	(D)	-	-	2	(D)	-	-
South Dakota	34	13,165	2	(D)	5	1,685	-	-	75	8,202
Tennessee	18	54	2	(D)	18	18	-	-	3	9
Texas	293	279,933	36	38,616	-	-	555	97,574	147	82,080
Utah	80	4,829	110	25,255	37	11,830	186	15,313	97	24,730
Vermont	-	-	-	-	-	-	2	(D)	1	(D)
Virginia	-	-	-	-	-	-	-	-	10	180
Washington	138	8,628	-	-	-	-	6	4,263	16	17,133
West Virginia	-	-	-	-	-	-	-	-	12	30
Wisconsin	10	12,861	-	-	-	-	-	-	14	5,012
Wyoming	48	15,290	21	27,184	59	12,915	63	9,450	133	36,401
Water Resources Areas										
WRA 01 New England	-	-	2	(D)	-	-	2	(D)	-	-
WRA 02 Mid-Atlantic	2	(D)	2	(D)	-	-	2	(D)	51	4,044
WRA 03 South Atlantic-Gulf	4	4,560	84	3,514	-	-	2	(D)	87	4,986
WRA 04 Great Lakes	14	10,554	-	-	-	-	54	108	38	9,953
WRA 05 Ohio	18	54	1	(D)	-	-	7	14	103	1,401
WRA 06 Tennessee	-	-	2	(D)	18	18	-	-	3	9
WRA 07 Upper Mississippi	63	21,021	13	39	-	-	2	(D)	49	10,442
WRA 08 Lower Mississippi	29	31,660	7	9,650	3	(D)	13	5,785	61	58,920
WRA 09 Souris-Red-Rainy	24	12,274	-	-	-	-	-	-	8	1,855
WRA 10 Missouri	457	166,939	36	55,932	45	37,841	144	28,979	787	242,188
WRA 11 Arkansas-White-Red	362	284,429	10	11,420	109	47,642	40	38,798	376	117,894
WRA 12 Texas-Gulf	216	164,910	39	42,696	-	-	185	83,306	68	68,752
WRA 13 Rio Grande	26	8,752	55	4,208	6	5,572	613	6,279	167	19,541
WRA 14 Upper Colorado	16	(D)	182	13,217	288	19,288	35	16,459	79	39,845
WRA 15 Lower Colorado	6	6,696	4	11,721	1	(D)	6	12,464	69	12,996
WRA 16 Great Basin	120	30,080	31	24,857	27	13,190	185	14,035	428	39,920
WRA 17 Pacific Northwest	404	117,168	375	21,477	84	60,398	304	43,033	329	127,663
WRA 18 California	172	62,225	30	22,686	15	11,400	116	99,000	261	164,462
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	9	(D)	4	8,159	-	-	49	331	18	158

[1] Rows may not add since respondents could check more than one cause.

Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Corn for grain or seed										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre (bushels)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre (bushels)
				1 to 99 acres	100 to 249 acres	250 to 499 acres	500 to 999 acres	1,000 acres or more			
U.S. TOTAL . . . . . 2003 . .	32,267	9,749,748	178	10,823	9,417	6,153	4,218	1,656	18,533	4,901,416	106
1998 . .	36,826	10,617,766	163	11,489	11,652	(NA)	(NA)	(NA)	19,253	3,915,188	115
2003 DATA											
Alabama	79	10,269	162	46	22	6	5	-	72	17,328	128
Alaska	-	-	-	-	-	-	-	-	-	-	-
Arizona	29	10,642	186	6	7	6	9	1	-	-	-
Arkansas	546	192,564	150	88	181	136	106	35	182	54,915	114
California	1,204	198,869	177	840	165	111	65	23	3	1,167	125
Colorado	1,649	555,870	176	505	555	272	195	122	241	94,466	30
Connecticut	-	-	-	-	-	-	-	-	1	(D)	(D)
Delaware	159	33,892	150	58	57	29	10	5	129	30,033	128
Florida	20	3,610	125	5	11	4	-	-	84	14,470	50
Georgia	723	97,735	158	359	266	83	13	2	305	40,512	114
Hawaii	3	545	(D)	2	-	1	-	-	-	-	-
Idaho	575	51,352	171	443	84	29	18	1	16	5,604	100
Illinois	838	222,459	174	233	321	163	92	29	779	392,316	163
Indiana	627	157,415	169	191	229	145	42	20	745	330,534	143
Iowa	346	71,262	171	136	121	61	18	10	381	127,892	146
Kansas	3,022	1,231,918	178	529	1,066	567	614	246	776	149,023	57
Kentucky	49	6,626	160	22	19	7	1	-	191	47,558	126
Louisiana	380	126,920	159	82	112	106	59	21	307	179,686	81
Maine	-	-	-	-	-	-	-	-	2	(D)	(D)
Maryland	109	18,884	164	56	24	20	8	1	131	35,959	134
Massachusetts	-	-	-	-	-	-	-	-	-	-	-
Michigan	655	185,788	165	261	173	101	75	45	739	203,594	122
Minnesota	981	177,272	169	494	301	120	44	22	851	189,889	130
Mississippi	275	129,105	164	50	85	59	57	24	239	90,540	130
Missouri	942	304,295	158	203	307	240	151	41	701	180,252	114
Montana	103	7,473	140	70	29	4	-	-	1	(D)	(D)
Nebraska	14,103	4,605,499	186	4,425	3,553	3,194	2,148	783	8,740	1,865,368	87
Nevada	2	(D)	(D)	2	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-
New Jersey	18	1,988	158	7	9	2	-	-	79	7,330	120
New Mexico	72	42,166	195	10	28	14	13	7	5	155	36
New York	6	445	177	5	-	1	-	-	102	24,017	117
North Carolina	117	9,282	128	97	13	5	2	-	335	44,079	121
North Dakota	236	57,865	143	69	88	46	26	7	176	81,553	108
Ohio	9	3,188	143	3	2	-	4	-	102	20,230	140
Oklahoma	329	91,178	166	114	118	51	31	15	103	44,722	115
Oregon	120	16,002	196	65	47	4	2	2	-	-	-
Pennsylvania	11	806	130	7	3	1	-	-	353	46,427	120
Rhode Island	-	-	-	-	-	-	-	-	-	-	-
South Carolina	89	13,998	150	32	39	13	4	1	85	15,087	107
South Dakota	715	142,149	169	276	278	96	53	12	586	248,507	111
Tennessee	48	5,886	161	32	10	2	4	-	155	39,854	132
Texas	1,740	749,465	184	256	697	336	292	159	244	103,815	51
Utah	142	12,352	163	116	14	6	6	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-
Virginia	80	11,260	164	49	21	3	5	2	63	22,892	130
Washington	339	62,815	186	163	135	22	11	8	15	7,500	51
West Virginia	2	(D)	(D)	1	1	-	-	-	1	(D)	(D)
Wisconsin	476	85,477	171	254	135	48	27	12	513	140,332	114
Wyoming	299	42,832	123	161	91	39	8	-	-	-	-
Water Resources Areas											
WRA 01 New England	-	-	-	-	-	-	-	-	3	715	99
WRA 02 Mid-Atlantic	361	65,691	157	163	112	55	23	8	705	132,805	127
WRA 03 South Atlantic-Gulf	1,058	135,301	153	568	354	112	21	3	902	136,940	109
WRA 04 Great Lakes	876	232,977	167	363	238	134	90	51	1,098	289,483	126
WRA 05 Ohio	472	119,781	164	122	196	112	23	19	801	336,779	142
WRA 06 Tennessee	32	5,570	173	18	6	3	5	-	76	18,691	134
WRA 07 Upper Mississippi	2,438	511,169	172	1,018	825	358	180	57	2,394	834,771	141
WRA 08 Lower Mississippi	1,656	628,121	158	306	465	454	323	108	979	376,737	107
WRA 09 Souris-Red-Rainy	295	63,095	153	126	93	43	23	10	213	72,378	117
WRA 10 Missouri	18,076	5,741,365	183	5,633	5,005	3,901	2,573	964	10,293	2,398,122	89
WRA 11 Arkansas-White-Red	3,358	1,604,807	184	504	1,104	615	772	363	855	206,749	83
WRA 12 Texas-Gulf	1,042	264,572	153	231	518	185	73	35	175	82,820	50
WRA 13 Rio Grande	11	1,683	197	5	4	1	1	-	-	-	-
WRA 14 Upper Colorado	184	22,616	181	133	46	1	2	2	5	155	36
WRA 15 Lower Colorado	32	12,605	186	6	9	6	9	2	-	-	-
WRA 16 Great Basin	135	10,812	(D)	114	11	6	4	-	13	5,460	100
WRA 17 Pacific Northwest	1,034	130,169	181	671	266	55	31	11	18	7,644	52
WRA 18 California	1,204	198,869	177	840	165	111	65	23	3	1,167	125
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	3	545	(D)	2	-	1	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Corn for silage or greenchop										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre (tons, green)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre (tons, green)
				1 to 24 acres	25 to 49 acres	50 to 99 acres	100 to 249 acres	250 acres or more			
U.S. TOTAL . . . . . 2003 . .	10,118	1,312,660	25	1,711	1,856	2,639	2,614	1,298	3,580	333,705	13
1998 . .	10,280	922,970	23	3,112	2,225	2,261	(NA)	(NA)	1,757	154,851	15
2003 DATA											
Alabama	33	1,571	14	3	17	10	3	-	22	3,478	11
Alaska	-	-	-	-	-	-	-	-	-	-	-
Arizona	75	15,564	26	2	7	20	27	19	-	-	-
Arkansas	12	2,063	20	-	-	5	-	7	24	2,500	7
California	2,214	466,109	28	7	226	443	1,040	498	-	-	-
Colorado	601	77,149	24	55	186	105	153	102	14	4,600	6
Connecticut	-	-	-	-	-	-	-	-	-	-	-
Delaware	2	(D)	(D)	-	1	1	-	-	9	661	15
Florida	66	20,008	18	-	-	-	48	18	9	1,470	13
Georgia	142	23,492	19	4	3	46	76	13	41	4,927	15
Hawaii	1	(D)	(D)	-	-	-	1	-	-	-	-
Idaho	1,064	127,652	27	317	160	235	198	154	3	195	10
Illinois	6	244	17	-	4	2	-	-	19	886	14
Indiana	47	5,891	21	2	7	12	17	9	131	10,801	16
Iowa	8	550	20	2	-	4	2	-	16	1,618	13
Kansas	569	66,310	20	86	103	160	161	59	175	23,489	8
Kentucky	-	-	-	-	-	-	-	-	64	1,791	18
Louisiana	2	(D)	(D)	-	-	-	-	2	14	1,330	16
Maine	2	(D)	(D)	-	2	-	-	-	2	(D)	(D)
Maryland	8	1,693	18	-	2	2	2	2	32	1,983	16
Massachusetts	-	-	-	-	-	-	-	-	6	420	5
Michigan	102	13,910	21	24	4	21	36	17	95	38,644	18
Minnesota	163	9,652	19	57	40	50	11	5	262	15,468	17
Mississippi	-	-	-	-	-	-	-	-	-	-	-
Missouri	23	2,273	21	9	9	4	-	1	24	5,735	17
Montana	361	36,314	25	24	27	200	79	31	3	180	20
Nebraska	1,437	78,738	21	559	522	149	183	24	1,463	74,345	8
Nevada	38	3,613	26	5	5	17	7	4	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	2	(D)	(D)
New Jersey	-	-	-	-	-	-	-	-	2	(D)	(D)
New Mexico	298	76,214	25	31	36	39	99	93	-	-	-
New York	6	582	26	-	-	3	3	-	131	19,473	18
North Carolina	24	763	20	17	-	7	-	-	24	1,460	19
North Dakota	96	7,479	14	9	33	25	27	2	78	18,018	9
Ohio	2	(D)	(D)	-	-	-	1	1	48	1,341	18
Oklahoma	46	14,633	22	2	4	6	23	11	6	2,576	13
Oregon	726	52,991	28	70	56	504	52	44	65	1,300	15
Pennsylvania	8	172	19	7	-	-	1	-	215	9,753	18
Rhode Island	-	-	-	-	-	-	-	-	-	-	-
South Carolina	20	2,080	20	2	2	10	5	1	22	3,350	15
South Dakota	131	10,739	14	20	19	70	16	6	179	29,811	8
Tennessee	9	879	31	2	3	3	-	1	12	998	23
Texas	412	81,523	26	-	-	218	103	91	46	32,320	20
Utah	624	38,921	23	194	194	123	95	18	-	-	-
Vermont	-	-	-	-	-	-	-	-	6	360	4
Virginia	14	867	24	12	-	-	-	2	5	1,111	20
Washington	457	43,416	25	151	117	48	99	42	168	5,726	25
West Virginia	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	88	5,947	20	28	16	19	23	2	143	10,591	14
Wyoming	181	21,399	22	10	51	78	23	19	-	-	-
Water Resources Areas											
WRA 01 New England	2	(D)	(D)	-	2	-	-	-	10	1,320	15
WRA 02 Mid-Atlantic	32	2,811	20	19	3	3	3	4	323	15,152	18
WRA 03 South Atlantic-Gulf	258	47,206	19	9	19	66	132	32	94	12,196	14
WRA 04 Great Lakes	151	19,387	21	32	16	32	45	26	253	61,297	18
WRA 05 Ohio	17	1,493	(D)	-	3	6	7	1	167	7,085	17
WRA 06 Tennessee	33	1,488	26	19	3	10	-	1	33	3,337	18
WRA 07 Upper Mississippi	239	16,036	20	75	53	66	38	7	415	33,173	15
WRA 08 Lower Mississippi	16	2,688	19	-	-	7	-	9	20	2,000	13
WRA 09 Souris-Red-Rainy	27	2,178	20	6	10	7	3	1	63	5,210	16
WRA 10 Missouri	2,692	222,176	22	654	738	668	472	160	1,758	133,930	8
WRA 11 Arkansas-White-Red	693	108,944	22	84	83	208	203	115	166	19,904	9
WRA 12 Texas-Gulf	303	75,909	26	-	-	110	98	95	42	31,880	20
WRA 13 Rio Grande	232	48,202	24	31	34	39	77	51	-	-	-
WRA 14 Upper Colorado	257	17,593	24	61	119	34	25	18	-	-	-
WRA 15 Lower Colorado	75	15,564	26	2	7	20	27	19	-	-	-
WRA 16 Great Basin	624	40,997	23	174	197	130	102	21	-	-	-
WRA 17 Pacific Northwest	2,252	223,619	27	538	343	790	341	240	236	7,221	23
WRA 18 California	2,214	466,109	28	7	226	443	1,040	498	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	1	(D)	(D)	-	-	-	1	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Sorghum for grain or seed										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre (bushels)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre (bushels)
				1 to 49 acres	50 to 99 acres	100 to 249 acres	250 to 499 acres	500 acres or more			
U.S. TOTAL . . . . . 2003 . .	6,134	1,108,375	75	1,944	1,277	1,514	863	536	6,298	1,630,609	43
1998 . .	4,998	615,981	80	2,158	884	1,284	(NA)	(NA)	6,423	1,548,487	68
2003 DATA											
Alabama	3	(D)	(D)	2	-	1	-	-	8	457	73
Alaska	-	-	-	-	-	-	-	-	-	-	-
Arizona	28	6,490	79	-	7	11	7	3	-	-	-
Arkansas	326	58,081	90	92	68	80	61	25	424	85,909	74
California	4	3,525	(D)	-	-	3	-	1	-	-	-
Colorado	231	14,184	68	87	109	31	4	-	151	56,614	32
Connecticut	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	2	(D)	(D)
Florida	-	-	-	-	-	-	-	-	-	-	-
Georgia	48	5,008	61	4	25	19	-	-	56	8,452	43
Hawaii	-	-	-	-	-	-	-	-	-	-	-
Idaho	5	(D)	(D)	4	-	-	1	-	-	-	-
Illinois	3	(D)	(D)	1	1	1	-	-	61	4,937	93
Indiana	3	260	96	2	-	1	-	-	23	5,298	82
Iowa	-	-	-	-	-	-	-	-	1	(D)	(D)
Kansas	1,564	183,365	93	537	397	454	135	41	2,065	573,379	39
Kentucky	-	-	-	-	-	-	-	-	-	-	-
Louisiana	38	6,771	88	7	6	14	11	-	198	57,740	89
Maine	2	(D)	(D)	-	2	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	8	460	58
Massachusetts	-	-	-	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	10	760	55
Minnesota	2	(D)	(D)	2	-	-	-	-	2	(D)	(D)
Mississippi	31	6,692	91	7	4	11	3	6	75	23,292	77
Missouri	57	7,380	89	8	27	15	7	-	177	26,532	82
Montana	-	-	-	-	-	-	-	-	-	-	-
Nebraska	945	44,148	113	670	237	38	-	-	1,739	219,898	53
Nevada	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-
New Mexico	145	33,510	58	14	21	61	38	11	17	8,224	18
New York	-	-	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	3	300	35
North Dakota	-	-	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	166	27,770	73	58	22	57	17	12	242	89,463	21
Oregon	2	(D)	(D)	2	-	-	-	-	-	-	-
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	2	(D)	(D)
South Dakota	2	(D)	(D)	-	-	2	-	-	8	1,852	63
Tennessee	3	(D)	(D)	2	-	-	1	-	10	5,199	97
Texas	2,502	708,288	68	436	338	715	576	437	1,012	460,770	33
Utah	11	610	78	9	-	-	2	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	1	(D)	(D)
Washington	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	3	220	49
Wyoming	13	650	30	-	13	-	-	-	-	-	-
Water Resources Areas											
WRA 01 New England	2	(D)	(D)	-	2	-	-	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	11	553	56
WRA 03 South Atlantic-Gulf	51	5,159	61	6	25	20	-	-	62	9,197	44
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	11	860	54
WRA 05 Ohio	5	560	100	2	1	2	-	-	51	9,047	89
WRA 06 Tennessee	-	-	-	-	-	-	-	-	7	182	93
WRA 07 Upper Mississippi	4	(D)	(D)	3	-	-	1	-	61	4,369	82
WRA 08 Lower Mississippi	416	72,994	90	103	102	103	77	31	793	184,963	80
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	1,560	95,097	102	918	436	156	46	4	2,395	360,557	46
WRA 11 Arkansas-White-Red	2,285	471,966	82	472	463	728	396	226	2,256	713,518	36
WRA 12 Texas-Gulf	1,710	442,673	60	412	224	479	326	269	651	347,363	35
WRA 13 Rio Grande	44	7,512	(D)	13	17	5	7	2	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	35	7,260	84	-	7	18	7	3	-	-	-
WRA 16 Great Basin	11	610	78	9	-	-	2	-	-	-	-
WRA 17 Pacific Northwest	7	494	88	6	-	-	1	-	-	-	-
WRA 18 California	4	3,525	(D)	-	-	3	-	1	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Wheat for grain or seed										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre (bushels)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre (bushels)
				1 to 49 acres	50 to 99 acres	100 to 249 acres	250 to 499 acres	500 acres or more			
U.S. TOTAL . . . . . 2003 . .	13,531	3,268,658	76	2,806	2,613	4,565	1,914	1,633	17,008	6,882,778	39
1998 . .	14,696	3,351,941	74	3,215	2,953	4,574	(NA)	(NA)	18,429	6,916,208	41
2003 DATA											
Alabama	-	-	-	-	-	-	-	-	34	6,972	52
Alaska	-	-	-	-	-	-	-	-	-	-	-
Arizona	275	122,144	103	9	57	69	72	68	-	-	-
Arkansas	46	8,770	53	-	23	17	-	6	1,080	293,449	53
California	1,038	406,582	90	16	117	306	385	214	371	106,651	60
Colorado	1,129	156,198	70	275	366	378	39	71	1,312	648,183	26
Connecticut	-	-	-	-	-	-	-	-	-	-	-
Delaware	29	3,908	51	2	10	14	3	-	86	15,005	46
Florida	-	-	-	-	-	-	-	-	7	546	41
Georgia	79	16,444	50	4	22	31	17	5	216	47,139	49
Hawaii	-	-	-	-	-	-	-	-	-	-	-
Idaho	2,479	501,472	101	1,198	312	470	249	250	389	58,232	35
Illinois	13	2,357	81	1	2	7	2	1	195	31,213	64
Indiana	27	3,153	68	9	3	14	1	-	161	22,520	64
Iowa	-	-	-	-	-	-	-	-	12	753	38
Kansas	1,710	414,516	57	211	301	738	252	208	3,629	2,127,902	41
Kentucky	-	-	-	-	-	-	-	-	58	19,062	67
Louisiana	20	(D)	41	12	-	8	-	-	130	24,862	38
Maine	-	-	-	-	-	-	-	-	2	(D)	(D)
Maryland	11	812	39	-	8	3	-	-	73	16,527	39
Massachusetts	-	-	-	-	-	-	-	-	-	-	-
Michigan	56	8,936	64	27	11	11	3	4	279	31,417	62
Minnesota	63	4,463	62	43	12	4	3	1	141	20,583	48
Mississippi	3	1,800	(D)	-	-	2	-	1	117	33,860	50
Missouri	28	7,983	65	5	10	3	2	8	500	139,527	58
Montana	709	119,455	65	107	203	275	67	57	802	432,009	25
Nebraska	580	110,254	59	18	151	325	42	44	2,916	623,743	54
Nevada	15	8,871	85	10	-	2	-	3	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-
New Jersey	6	284	52	2	4	-	-	-	32	3,617	44
New Mexico	160	81,782	61	2	13	62	44	39	47	22,414	23
New York	54	54	50	54	-	-	-	-	43	11,636	48
North Carolina	36	938	53	33	-	3	-	-	192	33,657	38
North Dakota	80	17,724	64	10	6	43	14	7	317	233,886	36
Ohio	1	(D)	(D)	-	-	1	-	-	38	2,209	65
Oklahoma	587	131,691	48	99	188	163	72	65	621	529,395	34
Oregon	831	143,046	94	208	239	267	75	42	552	325,227	51
Pennsylvania	-	-	-	-	-	-	-	-	129	10,834	42
Rhode Island	-	-	-	-	-	-	-	-	1	(D)	(D)
South Carolina	6	1,390	48	-	-	3	3	-	53	13,435	45
South Dakota	19	3,118	60	-	3	12	4	-	223	110,180	50
Tennessee	-	-	-	-	-	-	-	-	54	13,849	53
Texas	2,008	657,126	49	80	262	915	381	370	1,493	692,151	17
Utah	529	44,182	94	290	118	81	32	8	76	22,433	20
Vermont	-	-	-	-	-	-	-	-	-	-	-
Virginia	7	850	54	-	-	7	-	-	191	17,382	46
Washington	832	277,624	111	76	136	315	146	159	200	91,787	44
West Virginia	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	11	554	63	5	3	3	-	-	132	10,399	64
Wyoming	54	8,312	66	-	33	13	6	2	104	38,037	28
Water Resources Areas											
WRA 01 New England	-	-	-	-	-	-	-	-	3	95	46
WRA 02 Mid-Atlantic	104	5,548	50	58	22	21	3	-	322	55,867	42
WRA 03 South Atlantic-Gulf	124	19,132	50	37	22	40	20	5	637	103,454	44
WRA 04 Great Lakes	60	9,017	64	30	12	11	3	4	401	50,631	60
WRA 05 Ohio	24	3,784	68	2	4	15	3	-	234	52,656	63
WRA 06 Tennessee	-	-	-	-	-	-	-	-	62	10,285	54
WRA 07 Upper Mississippi	44	4,411	73	20	10	10	2	2	439	55,176	59
WRA 08 Lower Mississippi	95	19,913	60	17	33	28	2	15	1,485	400,050	53
WRA 09 Souris-Red-Rainy	68	6,367	57	33	8	24	2	1	204	106,070	43
WRA 10 Missouri	2,873	442,583	64	469	835	1,130	281	158	6,618	2,353,187	39
WRA 11 Arkansas-White-Red	3,037	981,745	53	215	469	1,284	484	585	4,116	2,766,322	35
WRA 12 Texas-Gulf	980	241,519	46	76	204	458	148	94	666	189,481	20
WRA 13 Rio Grande	38	8,227	80	2	5	25	1	5	10	2,800	48
WRA 14 Upper Colorado	59	14,343	84	37	10	-	-	12	209	127,962	8
WRA 15 Lower Colorado	275	122,144	103	9	57	69	72	68	-	-	-
WRA 16 Great Basin	590	59,675	90	314	125	100	40	11	350	56,456	32
WRA 17 Pacific Northwest	4,059	916,892	103	1,430	678	1,031	464	456	881	445,635	48
WRA 18 California	1,101	413,358	90	57	119	319	389	217	371	106,651	60
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Barley for grain or seed										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre (bushels)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre (bushels)
				1 to 24 acres	25 to 49 acres	50 to 99 acres	100 to 249 acres	250 acres or more			
U.S. TOTAL . . . . . 2003 . .	4,654	991,277	96	962	661	804	1,103	1,124	1,365	297,925	38
1998 . .	8,982	999,322	90	3,127	1,775	1,408	(NA)	(NA)	1,803	382,817	53
2003 DATA											
Alabama	-	-	-	-	-	-	-	-	3	375	35
Alaska	2	(D)	(D)	1	1	-	-	-	5	355	46
Arizona	102	23,564	105	-	5	28	42	27	-	-	-
Arkansas	-	-	-	-	-	-	-	-	1	(D)	(D)
California	130	29,781	98	18	-	52	18	42	22	3,870	89
Colorado	398	82,734	124	21	9	106	138	124	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-
Delaware	8	1,553	52	-	-	3	3	2	37	6,737	59
Florida	-	-	-	-	-	-	-	-	-	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-
Idaho	1,758	438,399	97	431	262	212	407	446	340	49,631	19
Illinois	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	9	406	42
Iowa	2	(D)	(D)	-	-	-	2	-	2	(D)	(D)
Kansas	18	3,330	95	-	-	-	18	-	19	13,345	30
Kentucky	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	6	4,830	56
Maryland	5	805	(D)	2	2	-	-	1	21	1,878	63
Massachusetts	-	-	-	-	-	-	-	-	-	-	-
Michigan	12	168	60	12	-	-	-	-	24	1,526	50
Minnesota	13	560	73	9	-	2	2	-	31	1,783	57
Mississippi	3	1,370	40	-	-	1	-	2	3	1,200	15
Missouri	4	180	50	-	4	-	-	-	8	1,036	34
Montana	953	292,443	85	72	107	137	265	372	406	153,797	40
Nebraska	20	1,493	41	-	-	19	1	-	1	(D)	(D)
Nevada	7	1,492	90	-	1	-	3	3	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	2	(D)	(D)
New Mexico	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	20	460	47
North Dakota	30	4,353	89	2	7	3	13	5	80	20,378	59
Ohio	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	11	275	95	-	11	-	-	-	-	-	-
Oregon	162	18,684	85	50	47	21	28	16	71	13,796	27
Pennsylvania	-	-	-	-	-	-	-	-	81	2,040	63
Rhode Island	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	2	(D)	(D)
South Dakota	-	-	-	-	-	-	-	-	-	-	-
Tennessee	1	(D)	(D)	-	-	-	1	-	1	(D)	(D)
Texas	-	-	-	-	-	-	-	-	-	-	-
Utah	582	31,112	92	182	147	193	54	6	56	3,073	27
Vermont	-	-	-	-	-	-	-	-	-	-	-
Virginia	1	(D)	(D)	-	-	-	1	-	24	2,390	55
Washington	35	2,978	70	18	2	3	11	1	70	11,028	41
West Virginia	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	3	102	48	-	3	-	-	-	5	303	57
Wyoming	394	54,978	105	144	53	24	96	77	15	1,659	45
Water Resources Areas											
WRA 01 New England	-	-	-	-	-	-	-	-	6	4,830	56
WRA 02 Mid-Atlantic	14	2,513	62	2	2	3	4	3	162	12,215	61
WRA 03 South Atlantic-Gulf	-	-	-	-	-	-	-	-	25	2,120	37
WRA 04 Great Lakes	13	208	57	12	1	-	-	-	34	2,152	50
WRA 05 Ohio	-	-	-	-	-	-	-	-	2	(D)	(D)
WRA 06 Tennessee	1	(D)	(D)	-	-	-	1	-	4	735	47
WRA 07 Upper Mississippi	15	622	70	9	2	2	2	-	16	(D)	(D)
WRA 08 Lower Mississippi	7	1,550	41	-	4	1	-	2	12	2,636	26
WRA 09 Souris-Red-Rainy	9	1,426	71	2	-	-	5	2	61	14,419	62
WRA 10 Missouri	1,417	365,828	90	149	122	236	454	456	434	159,723	41
WRA 11 Arkansas-White-Red	29	3,605	95	-	11	-	18	-	19	13,345	30
WRA 12 Texas-Gulf	-	-	-	-	-	-	-	-	-	-	-
WRA 13 Rio Grande	200	53,632	131	-	-	53	56	91	-	-	-
WRA 14 Upper Colorado	179	(D)	(D)	78	85	2	2	12	-	-	-
WRA 15 Lower Colorado	102	23,564	105	-	5	28	42	27	-	-	-
WRA 16 Great Basin	917	44,278	79	426	162	250	62	17	315	7,517	18
WRA 17 Pacific Northwest	1,593	446,051	97	265	255	175	439	459	247	70,526	24
WRA 18 California	156	39,640	93	18	11	54	18	55	23	6,890	68
WRA 19 Alaska	2	(D)	(D)	1	1	-	-	-	5	355	46
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Soybeans for beans										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre (bushels)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre (bushels)
				1 to 49 acres	50 to 99 acres	100 to 249 acres	250 to 499 acres	500 acres or more			
U.S. TOTAL . . . . . 2003 . .	21,072	5,347,078	48	2,850	5,387	6,024	4,041	2,770	18,884	5,491,901	33
1998 . .	19,830	4,516,540	42	3,600	4,191	6,631	(NA)	(NA)	19,359	5,426,263	30
2003 DATA											
Alabama	5	448	45	2	1	2	-	-	24	10,210	38
Alaska	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-
Arkansas	3,182	1,686,946	43	180	256	638	835	1,273	1,793	691,455	31
California	-	-	-	-	-	-	-	-	-	-	-
Colorado	12	2,200	51	-	-	12	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-
Delaware	103	10,561	44	50	19	20	12	2	157	51,066	40
Florida	13	3,820	43	-	-	9	2	2	84	9,240	(D)
Georgia	137	16,027	48	41	37	46	12	1	234	47,950	36
Hawaii	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-
Illinois	627	101,897	46	108	168	233	92	26	794	290,679	37
Indiana	475	75,040	43	83	136	172	63	21	654	263,162	37
Iowa	284	53,757	42	57	60	100	46	21	369	123,816	34
Kansas	1,669	311,032	52	243	284	749	294	99	721	126,081	22
Kentucky	29	4,691	55	10	3	9	5	2	154	53,165	44
Louisiana	220	74,566	41	11	41	60	64	44	583	266,582	35
Maine	-	-	-	-	-	-	-	-	-	-	-
Maryland	84	9,832	40	29	29	15	9	2	161	51,353	38
Massachusetts	-	-	-	-	-	-	-	-	-	-	-
Michigan	426	72,371	43	124	106	106	57	33	599	172,806	28
Minnesota	655	102,854	43	176	156	226	69	28	658	208,560	30
Mississippi	568	399,348	47	38	32	89	138	271	601	300,945	33
Missouri	1,013	309,081	43	66	216	323	196	212	1,119	493,698	33
Montana	15	1,684	(D)	-	7	8	-	-	1	(D)	(D)
Nebraska	10,033	1,858,359	55	1,324	3,471	2,686	1,879	673	7,757	1,540,832	32
Nevada	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-
New Jersey	33	1,148	41	25	5	2	1	-	72	10,520	35
New Mexico	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	86	10,396	33
North Carolina	122	(D)	41	104	10	6	2	-	431	82,705	37
North Dakota	103	17,113	38	8	35	44	11	5	179	121,905	30
Ohio	3	370	53	1	1	-	1	-	91	20,333	41
Oklahoma	79	13,563	45	5	12	47	12	3	62	15,990	31
Oregon	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	3	108	40	1	2	-	-	-	158	14,998	41
Rhode Island	-	-	-	-	-	-	-	-	-	-	-
South Carolina	30	5,737	44	3	8	13	3	3	92	30,957	35
South Dakota	559	100,662	43	29	173	236	89	32	550	277,886	28
Tennessee	22	5,054	49	2	5	8	3	4	135	63,878	43
Texas	263	64,850	33	42	8	84	128	1	9	(D)	30
Utah	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-
Virginia	24	2,660	45	-	12	12	-	-	164	32,993	38
Washington	-	-	-	-	-	-	-	-	-	-	-
West Virginia	2	(D)	(D)	-	1	1	-	-	1	(D)	(D)
Wisconsin	279	36,717	41	88	93	68	18	12	391	98,165	26
Wyoming	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas											
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	245	24,049	42	105	67	47	22	4	606	150,481	39
WRA 03 South Atlantic-Gulf	307	30,696	46	148	55	79	19	6	958	184,580	36
WRA 04 Great Lakes	573	93,949	43	159	149	155	67	43	925	234,683	31
WRA 05 Ohio	328	55,584	47	53	92	112	57	14	700	304,515	39
WRA 06 Tennessee	6	468	47	2	1	3	-	-	68	24,144	43
WRA 07 Upper Mississippi	1,722	257,389	43	391	466	610	188	67	2,042	670,954	32
WRA 08 Lower Mississippi	4,174	2,152,432	44	259	447	850	1,015	1,603	3,233	1,465,904	34
WRA 09 Souris-Red-Rainy	163	26,663	40	47	44	49	10	13	233	148,259	30
WRA 10 Missouri	11,366	2,122,388	54	1,367	3,866	3,210	2,164	759	9,013	2,069,343	31
WRA 11 Arkansas-White-Red	2,065	566,267	44	281	196	849	478	261	1,102	235,438	28
WRA 12 Texas-Gulf	123	17,193	38	38	4	60	21	-	4	3,600	30
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-
WRA 18 California	-	-	-	-	-	-	-	-	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Beans, dry edible										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre (cwt)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre (cwt)
				1 to 24 acres	25 to 49 acres	50 to 99 acres	100 to 249 acres	250 acres or more			
U.S. TOTAL . . . . . 2003 . .	2,697	458,265	23	182	302	623	1,114	476	449	149,337	10
1998 . .	5,464	655,572	20	1,681	527	988	(NA)	(NA)	315	66,361	14
2003 DATA											
Alabama	-	-	-	-	-	-	-	-	1	(D)	(D)
Alaska	-	-	-	-	-	-	-	-	-	-	-
Arizona	17	2,430	20	-	-	8	7	2	-	-	-
Arkansas	13	1,300	20	-	-	-	13	-	18	8,533	9
California	313	76,179	23	3	57	58	70	125	-	-	-
Colorado	218	38,975	26	19	-	28	116	55	10	6,630	20
Connecticut	-	-	-	-	-	-	-	-	-	-	-
Delaware	2	(D)	(D)	-	-	2	-	-	2	(D)	(D)
Florida	9	3,330	21	-	-	-	7	2	-	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-
Idaho	637	69,066	22	63	90	249	184	51	-	-	-
Illinois	-	-	-	-	-	-	-	-	2	(D)	(D)
Indiana	4	760	33	-	-	-	4	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-
Kansas	130	20,236	21	-	-	48	59	23	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-
Michigan	60	9,177	21	-	14	12	23	11	45	8,336	17
Minnesota	67	24,230	21	-	3	8	25	31	40	4,692	16
Mississippi	-	-	-	-	-	-	-	-	-	-	-
Missouri	10	724	35	-	-	8	2	-	2	(D)	(D)
Montana	61	8,314	23	-	-	27	30	4	-	-	-
Nebraska	403	81,800	22	-	-	-	325	78	185	55,918	5
Nevada	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	2	(D)	(D)	2	-	-	-	-	-	-	-
New Jersey	4	27	19	4	-	-	-	-	2	(D)	(D)
New Mexico	19	10,770	19	5	2	-	5	7	-	-	-
New York	1	(D)	(D)	-	-	-	1	-	9	1,290	17
North Carolina	-	-	-	-	-	-	-	-	-	-	-
North Dakota	55	12,129	19	4	1	8	26	16	96	35,127	14
Ohio	3	3	10	3	-	-	-	-	-	-	-
Oklahoma	12	2,330	12	-	-	-	11	1	1	(D)	(D)
Oregon	76	6,984	16	-	14	28	34	-	1	(D)	(D)
Pennsylvania	33	99	18	33	-	-	-	-	4	20	19
Rhode Island	-	-	-	-	-	-	-	-	-	-	-
South Carolina	1	(D)	(D)	1	-	-	-	-	-	-	-
South Dakota	2	(D)	(D)	-	-	-	-	2	4	1,400	24
Tennessee	-	-	-	-	-	-	-	-	1	(D)	(D)
Texas	80	26,982	22	-	4	22	29	25	21	21,215	7
Utah	2	(D)	(D)	-	-	2	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-
Virginia	3	99	16	-	3	-	-	-	-	-	-
Washington	207	23,657	25	24	33	60	76	14	3	(D)	(D)
West Virginia	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	4	7,600	24	-	-	-	1	3	2	(D)	(D)
Wyoming	249	27,973	24	21	81	55	66	26	-	-	-
Water Resources Areas											
WRA 01 New England	2	(D)	(D)	2	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	9	320	21	4	3	2	-	-	8	(D)	(D)
WRA 03 South Atlantic-Gulf	10	3,340	21	1	-	-	7	2	1	(D)	(D)
WRA 04 Great Lakes	61	9,302	21	-	14	12	24	11	54	9,626	17
WRA 05 Ohio	38	(D)	(D)	36	-	-	2	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	51	25,543	23	-	1	7	17	26	29	4,756	16
WRA 08 Lower Mississippi	23	2,024	25	-	-	8	15	-	21	11,875	10
WRA 09 Souris-Red-Rainy	62	15,343	20	4	2	8	26	22	79	23,923	14
WRA 10 Missouri	1,064	180,481	23	40	82	159	594	189	221	69,308	7
WRA 11 Arkansas-White-Red	22	9,432	29	-	-	1	15	6	1	(D)	(D)
WRA 12 Texas-Gulf	77	22,774	18	-	4	21	27	25	21	21,215	7
WRA 13 Rio Grande	12	1,070	18	5	2	-	3	2	-	-	-
WRA 14 Upper Colorado	11	9,376	19	-	-	-	10	1	10	6,630	20
WRA 15 Lower Colorado	17	2,430	20	-	-	8	7	2	-	-	-
WRA 16 Great Basin	10	932	25	-	-	2	8	-	-	-	-
WRA 17 Pacific Northwest	913	99,155	22	87	137	335	289	65	4	1,244	62
WRA 18 California	315	76,319	23	3	57	60	70	125	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Rice								Other small grains (oats, rye, etc.)			
	Irrigated								Irrigated		Non-irrigated	
	Farms	Acres harvested	Average yield per acre (cwt)	Farms by acres harvested								
				1 to 99 acres	100 to 249 acres	250 to 499 acres	500 to 999 acres	1,000 acres or more	Farms	Acres harvested	Farms	Acres harvested
U.S. TOTAL . . . . . 2003 . .	6,836	2,994,757	69	919	1,728	2,088	1,523	578	2,829	240,304	3,406	283,690
1998 . .	8,791	3,473,384	59	1,433	2,190	(NA)	(NA)	(NA)	3,900	218,531	2,350	164,502
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	29	1,454
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	18	2,240	-	-
Arkansas	3,080	1,322,891	68	446	842	832	691	269	5	1,900	41	8,513
California	1,175	595,932	78	109	139	547	254	126	350	62,285	268	25,625
Colorado	-	-	-	-	-	-	-	-	150	9,854	77	22,260
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	6	99
Florida	1	(D)	(D)	-	-	-	-	1	17	2,388	7	420
Georgia	-	-	-	-	-	-	-	-	30	2,537	71	6,572
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	134	12,981	-	-
Illinois	2	(D)	(D)	-	-	-	2	-	2	(D)	27	667
Indiana	-	-	-	-	-	-	-	-	7	35	14	692
Iowa	-	-	-	-	-	-	-	-	2	(D)	49	822
Kansas	-	-	-	-	-	-	-	-	23	2,843	127	12,046
Kentucky	1	(D)	(D)	-	-	-	1	-	-	-	14	(D)
Louisiana	1,165	439,565	61	251	261	336	248	69	-	-	3	210
Maine	-	-	-	-	-	-	-	-	-	-	8	(D)
Maryland	-	-	-	-	-	-	-	-	-	-	4	50
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	14	1,203	130	4,370
Minnesota	-	-	-	-	-	-	-	-	58	1,269	176	11,692
Mississippi	344	194,212	69	11	78	125	86	44	4	2,042	6	510
Missouri	301	129,931	60	25	104	97	44	31	-	-	1	(D)
Montana	-	-	-	-	-	-	-	-	400	18,734	23	8,480
Nebraska	-	-	-	-	-	-	-	-	176	13,448	528	37,436
Nevada	-	-	-	-	-	-	-	-	39	2,771	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	3	15	8	1,147
New Mexico	-	-	-	-	-	-	-	-	46	5,154	-	-
New York	-	-	-	-	-	-	-	-	-	-	21	3,928
North Carolina	-	-	-	-	-	-	-	-	20	2,478	24	840
North Dakota	-	-	-	-	-	-	-	-	16	1,670	58	10,748
Ohio	-	-	-	-	-	-	-	-	-	-	14	154
Oklahoma	-	-	-	-	-	-	-	-	39	5,317	31	5,970
Oregon	-	-	-	-	-	-	-	-	129	18,493	323	25,616
Pennsylvania	-	-	-	-	-	-	-	-	-	-	253	7,975
Rhode Island	-	-	-	-	-	-	-	-	-	-	1	(D)
South Carolina	-	-	-	-	-	-	-	-	-	-	14	950
South Dakota	-	-	-	-	-	-	-	-	66	3,265	90	13,813
Tennessee	3	275	60	1	2	-	-	-	-	-	-	-
Texas	764	308,522	67	76	302	151	197	38	187	25,180	467	38,850
Utah	-	-	-	-	-	-	-	-	522	18,398	86	2,287
Vermont	-	-	-	-	-	-	-	-	-	-	1	(D)
Virginia	-	-	-	-	-	-	-	-	-	-	79	1,109
Washington	-	-	-	-	-	-	-	-	150	11,879	108	11,535
West Virginia	-	-	-	-	-	-	-	-	-	-	6	54
Wisconsin	-	-	-	-	-	-	-	-	16	1,756	146	13,568
Wyoming	-	-	-	-	-	-	-	-	206	9,975	67	1,956
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	10	1,213
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	3	15	212	9,858
WRA 03 South Atlantic-Gulf	1	(D)	(D)	-	-	-	-	1	67	7,403	214	11,118
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	28	2,491	194	14,355
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	111	1,413
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	7	140
WRA 07 Upper Mississippi	2	(D)	(D)	-	-	-	2	-	40	1,411	292	15,985
WRA 08 Lower Mississippi	4,057	1,809,141	67	473	1,087	1,201	937	359	9	3,942	50	9,233
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	29	435	71	5,818
WRA 10 Missouri	-	-	-	-	-	-	-	-	748	45,687	866	93,346
WRA 11 Arkansas-White-Red	837	278,268	65	261	200	189	133	54	127	15,340	148	21,342
WRA 12 Texas-Gulf	764	308,522	67	76	302	151	197	38	105	12,120	407	31,150
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	101	15,820	4	1,900
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	350	11,133	35	1,756
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	19	2,280	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	349	15,792	86	2,287
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	490	41,601	431	37,151
WRA 18 California	1,175	595,932	78	109	139	547	254	126	364	64,834	268	25,625
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Alfalfa and alfalfa mixtures (dry hay, haylage, and greenchop)										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre [1] (tons, dry)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre [1] (tons, dry)
				1 to 49 acres	50 to 99 acres	100 to 249 acres	250 to 499 acres	500 acres or more			
U.S. TOTAL . . . . . 2003 . .	46,290	6,221,542	5.0	21,846	8,683	9,550	3,727	2,484	11,101	1,090,388	2.5
1998 . .	55,247	6,513,077	5.1	28,791	9,331	(NA)	(NA)	(NA)	11,789	698,606	3.0
2003 DATA											
Alabama	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-
Arizona	803	210,084	8.2	374	137	140	34	118	-	-	-
Arkansas	-	-	-	-	-	-	-	-	13	390	1.5
California	2,638	1,008,458	7.1	429	432	604	536	637	72	8,696	2.2
Colorado	6,144	629,406	3.5	3,090	1,531	858	479	186	447	23,305	1.3
Connecticut	-	-	-	-	-	-	-	-	-	-	-
Delaware	4	58	4.0	4	-	-	-	-	7	306	3.0
Florida	-	-	-	-	-	-	-	-	82	8,200	3.0
Georgia	20	847	4.5	14	-	6	-	-	5	205	4.5
Hawaii	3	59	3.7	3	-	-	-	-	-	-	-
Idaho	7,192	758,734	4.9	4,279	864	1,414	366	269	407	76,216	1.0
Illinois	3	42	4.9	3	-	-	-	-	53	2,043	4.6
Indiana	36	2,278	5.2	24	6	3	3	-	223	10,884	3.7
Iowa	23	687	5.9	20	2	1	-	-	86	2,306	4.8
Kansas	925	207,977	5.5	277	226	255	95	72	872	97,739	3.6
Kentucky	-	-	-	-	-	-	-	-	164	6,027	3.2
Louisiana	-	-	-	-	-	-	-	-	-	-	-
Maine	2	(D)	(D)	2	-	-	-	-	-	-	-
Maryland	5	222	6.2	4	1	-	-	-	9	1,766	5.9
Massachusetts	-	-	-	-	-	-	-	-	-	-	-
Michigan	69	4,574	6.4	40	13	12	4	-	293	36,043	6.5
Minnesota	363	24,620	5.2	182	98	75	5	3	352	23,030	3.3
Mississippi	1	(D)	(D)	-	-	-	1	-	3	24	(D)
Missouri	197	6,117	4.4	185	11	1	-	-	200	10,629	3.4
Montana	5,393	714,722	3.3	2,310	1,009	1,228	592	254	653	86,835	1.1
Nebraska	2,901	350,700	5.2	1,168	513	984	117	119	4,508	378,887	2.7
Nevada	1,077	279,644	4.6	460	140	179	131	167	26	5,288	1.6
New Hampshire	-	-	-	-	-	-	-	-	3	12	6.0
New Jersey	2	(D)	(D)	-	2	-	-	-	23	596	3.5
New Mexico	2,505	163,932	5.7	1,814	365	160	126	40	2	(D)	(D)
New York	4	171	4.8	3	-	1	-	-	140	10,275	4.2
North Carolina	56	1,744	3.1	51	-	5	-	-	3	264	2.6
North Dakota	205	23,090	4.0	53	54	82	14	2	153	39,662	1.7
Ohio	2	(D)	(D)	-	1	-	1	-	36	739	3.4
Oklahoma	310	37,928	4.0	94	104	68	38	6	59	13,303	2.7
Oregon	2,773	376,702	4.7	1,252	445	692	233	151	82	8,076	2.4
Pennsylvania	13	526	5.2	9	4	-	-	-	287	8,038	4.8
Rhode Island	-	-	-	-	-	-	-	-	4	80	2.0
South Carolina	-	-	-	-	-	-	-	-	-	-	-
South Dakota	719	97,064	3.9	151	174	283	99	12	473	84,519	2.3
Tennessee	-	-	-	-	-	-	-	-	41	4,036	2.6
Texas	588	98,021	5.9	253	102	108	85	40	131	22,112	2.0
Utah	6,217	494,119	4.3	3,832	1,055	874	316	140	451	33,348	1.2
Vermont	-	-	-	-	-	-	-	-	-	-	-
Virginia	13	229	3.7	13	-	-	-	-	20	1,370	2.6
Washington	2,258	354,087	6.5	611	536	767	206	138	169	15,690	2.3
West Virginia	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	218	17,294	4.8	93	66	55	1	3	317	30,917	3.6
Wyoming	2,608	356,195	3.0	749	792	695	245	127	232	38,506	1.1
Water Resources Areas											
WRA 01 New England	2	(D)	(D)	2	-	-	-	-	7	92	2.5
WRA 02 Mid-Atlantic	37	1,191	4.7	30	7	-	-	-	362	12,648	4.8
WRA 03 South Atlantic-Gulf	76	2,591	3.6	65	-	11	-	-	93	9,029	3.0
WRA 04 Great Lakes	141	10,911	5.6	75	25	35	4	2	535	51,897	5.6
WRA 05 Ohio	16	1,667	5.1	11	1	-	4	-	340	14,005	3.2
WRA 06 Tennessee	-	-	-	-	-	-	-	-	30	968	2.9
WRA 07 Upper Mississippi	503	33,615	5.2	244	147	105	5	2	717	53,310	3.7
WRA 08 Lower Mississippi	52	2,515	2.7	51	-	-	1	-	16	414	1.5
WRA 09 Souris-Red-Rainy	111	(D)	(D)	53	30	23	3	2	139	19,277	2.2
WRA 10 Missouri	13,474	1,632,462	3.9	5,381	3,101	3,364	1,113	515	6,401	661,651	2.4
WRA 11 Arkansas-White-Red	1,956	386,818	4.2	582	535	461	232	146	761	88,132	2.7
WRA 12 Texas-Gulf	347	55,062	6.2	141	49	81	55	21	51	10,510	2.0
WRA 13 Rio Grande	2,731	257,571	5.4	1,833	323	243	227	105	17	170	2.0
WRA 14 Upper Colorado	4,542	350,919	3.1	2,566	1,128	543	236	69	437	12,697	0.9
WRA 15 Lower Colorado	1,065	235,152	7.9	576	148	168	43	130	-	-	-
WRA 16 Great Basin	5,674	703,226	4.5	3,244	740	966	428	296	585	57,808	0.9
WRA 17 Pacific Northwest	12,640	1,473,044	5.1	6,494	1,971	2,857	789	529	538	89,084	1.5
WRA 18 California	2,920	1,065,717	7.0	495	478	693	587	667	72	8,696	2.2
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	3	59	3.7	3	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	All other hay (dry hay, haylage, grass silage, and greenchop)										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre [2] (tons, dry)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre [2] (tons, dry)
				1 to 24 acres	25 to 49 acres	50 to 99 acres	100 to 249 acres	250 acres or more			
U.S. TOTAL . . . . . 2003 . .	27,667	3,253,729	2.8	9,714	5,896	3,939	5,176	2,942	13,420	1,453,104	1.9
1998 . .	23,562	3,008,815	2.5	7,869	4,962	3,985	(NA)	(NA)	11,184	1,227,142	2.0
2003 DATA											
Alabama	55	2,722	7.2	17	20	10	8	-	71	8,358	5.6
Alaska	13	1,456	2.2	4	-	3	4	2	16	1,266	1.2
Arizona	335	42,051	4.9	219	8	21	44	43	1	(D)	(D)
Arkansas	355	17,870	4.7	7	267	44	24	13	433	25,740	2.4
California	1,885	344,531	4.6	53	336	241	966	289	671	165,302	2.7
Colorado	4,554	472,776	2.1	1,459	1,439	455	767	434	328	70,202	1.4
Connecticut	-	-	-	-	-	-	-	-	43	865	1.4
Delaware	5	390	3.9	1	2	-	2	-	16	(D)	(D)
Florida	274	16,275	3.6	83	149	2	23	17	60	8,078	2.4
Georgia	257	11,478	3.9	168	17	42	30	-	374	31,247	2.8
Hawaii	1	(D)	(D)	-	1	-	-	-	-	-	-
Idaho	1,353	103,573	2.6	716	193	129	227	88	409	23,646	0.8
Illinois	4	583	1.4	-	1	1	2	-	11	746	3.9
Indiana	9	288	4.9	2	7	-	-	-	83	2,503	1.9
Iowa	2	(D)	(D)	-	-	-	-	2	9	526	3.5
Kansas	384	36,567	6.3	78	132	65	91	18	328	43,381	2.1
Kentucky	7	413	4.4	-	-	7	-	-	447	34,337	2.2
Louisiana	31	2,598	6.2	-	14	-	17	-	71	8,239	4.0
Maine	2	(D)	(D)	2	-	-	-	-	80	23,521	1.2
Maryland	15	1,361	3.6	4	2	6	2	1	94	6,496	2.0
Massachusetts	-	-	-	-	-	-	-	-	59	4,255	1.8
Michigan	5	337	5.0	-	2	2	1	-	122	9,556	3.4
Minnesota	91	3,071	3.1	58	-	24	8	1	161	5,927	3.1
Mississippi	6	2,836	2.5	-	-	-	-	6	1	(D)	(D)
Missouri	41	3,849	2.7	-	9	26	4	2	189	22,978	2.0
Montana	2,329	383,511	2.1	645	351	374	545	414	490	93,085	1.2
Nebraska	934	131,811	2.8	19	454	39	290	132	2,540	244,681	1.5
Nevada	460	175,166	1.7	93	44	71	94	158	14	1,590	0.6
New Hampshire	-	-	-	-	-	-	-	-	23	970	1.9
New Jersey	4	82	3.2	4	-	-	-	-	85	3,465	2.0
New Mexico	1,094	84,439	3.2	622	124	101	187	60	161	3,684	0.9
New York	9	1,350	7.3	-	5	-	-	4	104	5,425	3.1
North Carolina	409	21,237	4.5	124	160	83	36	6	434	15,463	1.9
North Dakota	36	3,847	3.0	13	9	4	7	3	122	26,497	1.3
Ohio	15	260	2.0	15	-	-	-	-	155	5,214	2.0
Oklahoma	412	37,697	3.6	184	74	54	82	18	314	52,238	1.7
Oregon	3,337	364,205	2.4	1,520	590	479	457	291	775	57,744	1.8
Pennsylvania	5	288	4.2	-	3	1	1	-	466	22,986	2.2
Rhode Island	-	-	-	-	-	-	-	-	6	114	1.9
South Carolina	12	256	3.0	11	-	-	1	-	22	1,469	5.0
South Dakota	190	17,368	2.7	59	8	74	33	16	360	83,122	1.3
Tennessee	7	221	1.9	3	3	1	-	-	197	10,427	1.8
Texas	2,612	202,243	3.9	1,197	406	548	298	163	1,192	201,614	2.2
Utah	2,290	128,599	2.5	1,313	352	331	186	108	501	17,492	0.7
Vermont	-	-	-	-	-	-	-	-	50	1,919	2.1
Virginia	27	378	2.5	27	-	-	-	-	336	19,738	2.2
Washington	1,690	155,568	5.4	495	306	468	285	136	573	46,602	1.6
West Virginia	-	-	-	-	-	-	-	-	23	593	1.2
Wisconsin	27	2,178	6.1	6	11	4	4	2	133	11,819	3.2
Wyoming	2,084	477,049	1.5	493	397	229	450	515	267	27,085	0.8
Water Resources Areas											
WRA 01 New England	2	(D)	(D)	2	-	-	-	-	241	30,881	1.3
WRA 02 Mid-Atlantic	38	2,229	3.7	18	7	7	5	1	704	37,389	2.2
WRA 03 South Atlantic-Gulf	1,017	53,764	4.2	412	346	137	95	27	1,112	74,282	2.8
WRA 04 Great Lakes	15	2,097	6.3	-	7	2	1	5	268	19,133	3.1
WRA 05 Ohio	39	1,073	3.8	24	8	7	-	-	862	47,506	2.0
WRA 06 Tennessee	4	470	2.2	-	-	1	3	-	159	10,222	2.0
WRA 07 Upper Mississippi	98	5,997	3.6	43	11	27	13	4	299	19,968	3.0
WRA 08 Lower Mississippi	274	11,974	4.1	10	218	22	22	2	463	30,124	3.0
WRA 09 Souris-Red-Rainy	34	2,478	2.5	24	-	2	6	2	55	9,316	1.4
WRA 10 Missouri	5,653	893,951	2.1	1,386	1,354	736	1,299	878	3,870	504,073	1.4
WRA 11 Arkansas-White-Red	1,611	218,456	3.5	259	403	228	543	178	960	192,117	1.9
WRA 12 Texas-Gulf	2,425	167,018	4.1	1,194	381	538	172	140	920	135,123	2.3
WRA 13 Rio Grande	943	80,944	2.9	498	94	116	165	70	179	9,292	1.1
WRA 14 Upper Colorado	4,060	447,883	1.8	1,402	1,362	284	574	438	247	14,440	1.1
WRA 15 Lower Colorado	399	46,467	4.7	229	19	55	53	43	7	460	0.6
WRA 16 Great Basin	2,192	279,799	1.9	1,224	155	294	268	251	686	23,434	0.6
WRA 17 Pacific Northwest	6,730	671,174	3.1	2,827	1,179	1,168	964	592	1,700	128,726	1.6
WRA 18 California	2,119	366,444	4.4	158	351	312	989	309	672	165,352	2.7
WRA 19 Alaska	13	1,456	2.2	4	-	3	4	2	16	1,266	1.2
WRA 20 Hawaii	1	(D)	(D)	-	1	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Peanuts for nuts										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre (pounds)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre (pounds)
				1 to 49 acres	50 to 99 acres	100 to 249 acres	250 to 499 acres	500 acres or more			
U.S. TOTAL . . . . . 2003 . .	2,117	384,867	3,600	553	420	656	305	183	740	141,728	2,765
1998 . .	3,207	502,801	3,296	872	707	1,045	(NA)	(NA)	1,117	135,862	2,151
2003 DATA											
Alabama	37	9,048	3,675	2	13	8	8	6	56	25,595	2,688
Alaska	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-
Arkansas	5	(D)	3,500	-	-	5	-	-	-	-	-
California	-	-	-	-	-	-	-	-	-	-	-
Colorado	-	-	-	-	-	-	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-
Florida	126	22,797	3,786	83	4	16	11	12	52	9,633	2,889
Georgia	871	140,081	3,889	265	225	190	125	66	400	72,311	3,225
Hawaii	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-
Illinois	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-
Louisiana	2	(D)	(D)	-	-	-	2	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-
Missouri	-	-	-	-	-	-	-	-	-	-	-
Montana	-	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-
New Mexico	38	15,333	2,287	1	4	15	11	7	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-
North Carolina	23	2,861	3,412	7	6	7	2	1	65	11,351	3,131
North Dakota	-	-	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	265	26,616	3,136	144	34	67	5	15	39	8,533	664
Oregon	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-
South Carolina	11	2,535	3,659	-	4	4	2	1	13	386	3,744
South Dakota	-	-	-	-	-	-	-	-	-	-	-
Tennessee	-	-	-	-	-	-	-	-	-	-	-
Texas	733	163,228	3,524	51	127	341	139	75	93	12,396	1,200
Utah	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-
Virginia	6	588	(D)	-	3	3	-	-	22	1,523	3,016
Washington	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas											
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	1,074	177,910	3,854	357	255	228	148	86	608	120,799	3,074
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	-	-	-	-	-	-	-	-	-	-	-
WRA 08 Lower Mississippi	2	(D)	(D)	-	-	-	2	-	-	-	-
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	-	-	-	-	-	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	375	37,203	3,241	195	34	126	5	15	115	20,115	973
WRA 12 Texas-Gulf	662	166,436	3,397	-	131	302	148	81	17	814	1,200
WRA 13 Rio Grande	4	(D)	(D)	1	-	-	2	1	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-
WRA 18 California	-	-	-	-	-	-	-	-	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	All cotton										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre (lbs, lint)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre (lbs, lint)
				1 to 99 acres	100 to 249 acres	250 to 499 acres	500 to 999 acres	1,000 acres or more			
U.S. TOTAL . . . . . 2003 . .	8,621	4,080,054	996	1,777	2,012	2,135	1,771	926	3,859	1,971,307	563
1998 . .	10,952	4,881,801	768	2,236	2,560	(NA)	(NA)	(NA)	4,498	1,919,058	472
2003 DATA											
Alabama	54	21,244	1,092	10	13	10	17	4	71	55,593	880
Alaska	-	-	-	-	-	-	-	-	-	-	-
Arizona	453	231,296	1,331	44	122	133	106	48	-	-	-
Arkansas	794	633,598	959	53	119	172	252	198	346	126,851	759
California	1,292	757,008	1,332	315	211	341	247	178	-	-	-
Colorado	-	-	-	-	-	-	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-
Florida	14	7,938	844	2	2	2	6	2	8	7,490	612
Georgia	736	230,553	995	189	249	121	147	30	629	238,479	838
Hawaii	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-
Illinois	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-
Kansas	54	30,736	845	9	21	15	-	9	22	5,666	401
Kentucky	-	-	-	-	-	-	-	-	-	-	-
Louisiana	438	153,209	1,010	155	68	107	88	20	331	110,687	949
Maine	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	-	-	-
Mississippi	514	427,271	1,065	57	74	100	140	143	404	229,503	943
Missouri	390	217,464	920	47	76	106	94	67	337	147,906	739
Montana	-	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-
New Mexico	261	48,958	1,054	132	65	48	8	8	5	800	200
New York	-	-	-	-	-	-	-	-	-	-	-
North Carolina	66	9,540	903	33	17	13	3	-	93	63,767	696
North Dakota	-	-	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	170	59,588	1,105	39	70	25	22	14	64	12,073	365
Oregon	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-
South Carolina	34	8,616	960	12	7	11	3	1	46	25,447	740
South Dakota	-	-	-	-	-	-	-	-	-	-	-
Tennessee	16	9,680	1,042	-	5	4	5	2	16	38,809	833
Texas	3,335	1,233,355	728	680	893	927	633	202	1,475	906,934	250
Utah	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	12	1,302	612
Washington	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas											
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	3	762	550
WRA 03 South Atlantic-Gulf	906	269,037	990	264	284	159	165	34	856	364,854	803
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	25	11,884	1,145	2	7	2	11	3	27	33,962	949
WRA 07 Upper Mississippi	-	-	-	-	-	-	-	-	-	-	-
WRA 08 Lower Mississippi	2,120	1,433,187	989	292	339	484	578	427	1,403	643,147	852
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	-	-	-	-	-	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	679	257,524	836	103	260	125	155	36	323	100,849	311
WRA 12 Texas-Gulf	2,929	1,060,941	718	659	751	838	493	188	1,247	827,733	248
WRA 13 Rio Grande	215	58,351	1,201	98	38	51	16	12	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	455	232,122	1,330	44	122	135	106	48	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-
WRA 18 California	1,292	757,008	1,332	315	211	341	247	178	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Sugarbeets for sugar										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre (tons)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre (tons)
				1 to 24 acres	25 to 49 acres	50 to 99 acres	100 to 249 acres	250 acres or more			
U.S. TOTAL . . . . . 2003 . .	2,499	561,837	29	47	63	381	1,430	578	87	21,851	18
1998 . .	2,802	624,636	26	38	328	639	(NA)	(NA)	42	6,473	20
2003 DATA											
Alabama	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-
Arkansas	-	-	-	-	-	-	-	-	-	-	-
California	866	129,594	38	-	26	7	772	61	-	-	-
Colorado	203	34,667	24	-	-	96	67	40	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-
Florida	-	-	-	-	-	-	-	-	-	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-
Idaho	760	246,887	29	13	27	138	307	275	-	-	-
Illinois	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-
Michigan	56	(D)	21	26	8	4	10	8	66	14,177	18
Minnesota	10	2,792	24	-	-	-	3	7	10	3,342	21
Mississippi	-	-	-	-	-	-	-	-	-	-	-
Missouri	-	-	-	-	-	-	-	-	-	-	-
Montana	328	72,403	24	4	-	86	133	105	-	-	-
Nebraska	40	10,105	22	-	-	1	37	2	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-
North Dakota	50	14,594	(D)	1	-	8	19	22	11	4,332	20
Ohio	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	-	-	-	-	-	-	-	-	-	-	-
Oregon	67	9,954	29	3	2	23	24	15	-	-	-
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-
Tennessee	-	-	-	-	-	-	-	-	-	-	-
Texas	-	-	-	-	-	-	-	-	-	-	-
Utah	1	(D)	(D)	-	-	-	-	1	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-
Washington	4	3,481	27	-	-	-	-	4	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-
Wyoming	114	31,757	22	-	-	18	58	38	-	-	-
Water Resources Areas											
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	-	-	-	-	-	-	-	-	-	-	-
WRA 04 Great Lakes	56	(D)	21	26	8	4	10	8	66	14,177	18
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	8	2,222	22	-	-	-	3	5	8	1,912	18
WRA 08 Lower Mississippi	-	-	-	-	-	-	-	-	-	-	-
WRA 09 Souris-Red-Rainy	12	2,249	25	1	-	2	5	4	13	5,762	21
WRA 10 Missouri	725	161,847	(D)	4	-	207	309	205	-	-	-
WRA 11 Arkansas-White-Red	-	-	-	-	-	-	-	-	-	-	-
WRA 12 Texas-Gulf	-	-	-	-	-	-	-	-	-	-	-
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	1	(D)	(D)	-	-	-	-	1	-	-	-
WRA 17 Pacific Northwest	831	260,322	29	16	29	161	331	294	-	-	-
WRA 18 California	866	129,594	38	-	26	7	772	61	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Tobacco										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre (pounds)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre (pounds)
				Less than 5 acres	5 to 9 acres	10 to 24 acres	25 to 49 acres	50 acres or more			
U.S. TOTAL . . . . . 2003 . .	1,533	35,304	2,411	229	315	547	257	185	687	15,626	1,914
1998 . .	3,957	121,059	2,427	522	809	(NA)	(NA)	(NA)	991	27,248	2,085
2003 DATA											
Alabama	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-
Arkansas	-	-	-	-	-	-	-	-	-	-	-
California	-	-	-	-	-	-	-	-	-	-	-
Colorado	-	-	-	-	-	-	-	-	-	-	-
Connecticut	8	780	1,605	1	-	1	2	4	2	(D)	(D)
Delaware	-	-	-	-	-	-	-	-	-	-	-
Florida	59	1,560	1,198	-	-	21	38	-	-	-	-
Georgia	198	10,776	2,394	-	-	24	93	81	106	2,089	1,868
Hawaii	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-
Illinois	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	19	95	2,041
Iowa	-	-	-	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-
Kentucky	576	6,931	2,861	168	165	179	54	10	119	963	2,444
Louisiana	-	-	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-
Maryland	3	(D)	1,954	-	2	-	-	1	-	-	-
Massachusetts	11	698	883	-	-	-	5	6	-	-	-
Michigan	-	-	-	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-
Missouri	-	-	-	-	-	-	-	-	-	-	-
Montana	-	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-
North Carolina	351	9,517	2,402	17	19	214	35	66	236	9,120	1,810
North Dakota	-	-	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	14	7	1,200
Oklahoma	-	-	-	-	-	-	-	-	-	-	-
Oregon	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	3	18	2,411	-	3	-	-	-	35	370	1,800
Rhode Island	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-
Tennessee	136	(D)	2,964	43	41	33	12	7	60	570	2,521
Texas	-	-	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-
Virginia	188	3,296	2,370	-	85	75	18	10	95	2,199	2,058
Washington	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	1	(D)	(D)
Wyoming	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas											
WRA 01 New England	19	1,478	1,264	1	-	1	7	10	2	(D)	(D)
WRA 02 Mid-Atlantic	15	141	2,091	-	14	-	-	1	44	550	1,702
WRA 03 South Atlantic-Gulf	787	25,104	2,320	17	95	334	184	157	411	13,109	1,873
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	547	6,165	2,721	183	162	146	41	15	178	1,320	2,479
WRA 06 Tennessee	119	1,465	3,419	28	41	31	17	2	44	399	2,060
WRA 07 Upper Mississippi	-	-	-	-	-	-	-	-	1	(D)	(D)
WRA 08 Lower Mississippi	46	951	3,088	-	3	35	8	-	7	35	500
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	-	-	-	-	-	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	-	-	-	-	-	-	-	-	-	-	-
WRA 12 Texas-Gulf	-	-	-	-	-	-	-	-	-	-	-
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-
WRA 18 California	-	-	-	-	-	-	-	-	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Potatoes										
	Irrigated								Non-irrigated		
	Farms	Acres harvested	Average yield per acre (cwt)	Farms by acres harvested					Farms	Acres harvested	Average yield per acre (cwt)
				Less than 15 acres	15 to 99 acres	100 to 249 acres	250 to 499 acres	500 acres or more			
U.S. TOTAL . . . . . 2003 . .	3,423	1,032,604	394	942	671	709	549	552	488	26,275	276
1998 . .	4,792	1,185,764	370	961	1,228	(NA)	(NA)	(NA)	543	22,943	231
2003 DATA											
Alabama	4	490	198	-	2	2	-	-	7	210	281
Alaska	15	440	109	11	3	-	1	-	17	48	30
Arizona	10	4,699	264	-	-	7	1	2	-	-	-
Arkansas	-	-	-	-	-	-	-	-	-	-	-
California	118	49,065	366	-	4	67	4	43	-	-	-
Colorado	217	68,254	375	-	60	47	68	42	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-
Delaware	4	1,590	250	-	1	-	-	3	2	(D)	(D)
Florida	93	49,833	252	-	8	9	29	47	-	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-
Idaho	722	338,912	349	-	134	239	169	180	-	-	-
Illinois	53	6,119	389	41	6	4	-	2	1	(D)	(D)
Indiana	63	1,906	246	52	3	4	4	-	41	104	254
Iowa	29	116	247	27	2	-	-	-	18	11	61
Kansas	8	3,100	326	-	-	-	8	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-
Maine	59	(D)	(D)	37	4	12	3	3	83	4,811	279
Maryland	19	1,924	264	2	8	8	1	-	6	15	130
Massachusetts	32	(D)	(D)	31	1	-	-	-	-	-	-
Michigan	187	43,188	365	92	8	52	18	17	8	737	322
Minnesota	66	48,297	427	2	9	15	14	26	1	(D)	(D)
Mississippi	-	-	-	-	-	-	-	-	-	-	-
Missouri	13	6,981	288	-	5	4	-	4	5	550	281
Montana	58	12,845	331	7	4	19	28	-	-	-	-
Nebraska	99	16,840	424	92	-	-	2	5	-	-	-
Nevada	3	(D)	(D)	-	-	-	-	3	-	-	-
New Hampshire	18	9	182	18	-	-	-	-	3	3	100
New Jersey	44	1,063	231	36	5	3	-	-	13	1,240	244
New Mexico	1	(D)	(D)	-	-	-	1	-	-	-	-
New York	297	5,082	307	249	28	15	5	-	49	5,067	272
North Carolina	2	(D)	(D)	2	-	-	-	-	17	9	150
North Dakota	84	44,339	389	14	10	20	11	29	9	3,609	236
Ohio	38	663	343	35	2	-	-	1	32	225	255
Oklahoma	2	(D)	(D)	1	-	-	1	-	-	-	-
Oregon	284	44,788	490	11	197	37	18	21	3	1,050	400
Pennsylvania	97	2,365	321	72	17	6	2	-	103	3,129	260
Rhode Island	1	(D)	(D)	-	-	1	-	-	-	-	-
South Carolina	2	(D)	(D)	-	2	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-
Tennessee	2	(D)	(D)	2	-	-	-	-	-	-	-
Texas	29	13,435	358	-	13	1	4	11	-	-	-
Utah	7	1,341	347	3	-	1	3	-	-	-	-
Vermont	15	8	107	15	-	-	-	-	12	49	20
Virginia	73	3,465	319	61	2	4	4	2	4	310	176
Washington	359	165,889	535	-	90	90	112	67	3	2,700	347
West Virginia	4	12	70	4	-	-	-	-	-	-	-
Wisconsin	190	81,839	413	25	43	40	38	44	51	2,173	267
Wyoming	2	(D)	(D)	-	-	2	-	-	-	-	-
Water Resources Areas											
WRA 01 New England	120	5,375	297	96	5	13	3	3	86	4,814	279
WRA 02 Mid-Atlantic	342	12,525	293	252	48	29	8	5	93	6,791	263
WRA 03 South Atlantic-Gulf	101	50,407	251	2	12	11	29	47	24	219	276
WRA 04 Great Lakes	423	68,947	370	240	47	62	43	31	98	4,371	281
WRA 05 Ohio	121	(D)	(D)	104	6	7	3	1	107	1,488	206
WRA 06 Tennessee	2	(D)	(D)	2	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	254	95,930	419	98	32	44	30	50	34	628	252
WRA 08 Lower Mississippi	9	6,481	286	-	5	-	-	4	5	550	281
WRA 09 Souris-Red-Rainy	63	40,064	406	8	7	20	5	23	9	3,609	236
WRA 10 Missouri	215	53,998	400	114	12	29	37	23	9	9	63
WRA 11 Arkansas-White-Red	17	11,598	377	1	-	1	9	6	-	-	-
WRA 12 Texas-Gulf	23	5,708	287	-	13	-	5	5	-	-	-
WRA 13 Rio Grande	206	63,812	371	-	56	47	65	38	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	10	4,699	264	-	-	7	1	2	-	-	-
WRA 16 Great Basin	10	8,627	409	3	-	1	3	3	-	-	-
WRA 17 Pacific Northwest	1,178	543,854	416	11	239	362	299	267	6	3,750	362
WRA 18 California	314	57,030	373	-	186	76	8	44	-	-	-
WRA 19 Alaska	15	440	109	11	3	-	1	-	17	48	30
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Land in vegetables								
	Irrigated							Non-irrigated	
	Farms	Acres harvested	Farms by acres harvested					Farms	Acres harvested
			Less than 5 acres	5 to 24 acres	25 to 99 acres	100 to 249 acres	250 acres or more		
U.S. TOTAL . . . . . 2003 . .	17,807	2,081,358	7,111	3,856	2,828	2,509	1,503	3,068	137,765
1998 . .	20,088	2,309,550	8,339	4,440	(NA)	(NA)	(NA)	2,510	121,124
2003 DATA									
Alabama	162	2,613	74	66	20	1	1	22	788
Alaska	33	133	28	4	1	-	-	4	2
Arizona	313	132,799	205	5	20	23	60	-	-
Arkansas	201	6,959	-	100	101	-	-	-	-
California	3,253	926,839	688	696	237	1,015	617	7	1,178
Colorado	105	18,996	8	-	1	87	9	-	-
Connecticut	111	842	71	31	9	-	-	61	1,720
Delaware	109	19,201	25	13	28	22	21	17	4,391
Florida	375	120,306	-	229	50	18	78	1	(D)
Georgia	499	73,994	115	115	111	103	55	95	7,574
Hawaii	332	3,943	203	105	16	7	1	-	-
Idaho	426	26,811	3	85	286	26	26	-	-
Illinois	199	19,638	53	52	39	32	23	53	2,033
Indiana	447	17,508	190	132	78	31	16	116	3,681
Iowa	187	1,809	114	55	18	-	-	79	678
Kansas	8	2,600	-	-	-	4	4	74	74
Kentucky	179	1,024	112	58	9	-	-	70	371
Louisiana	178	3,785	103	51	19	3	2	5	690
Maine	254	1,471	235	8	11	-	-	141	535
Maryland	294	17,052	95	93	57	34	15	41	1,298
Massachusetts	284	1,124	220	63	1	-	-	50	1,203
Michigan	683	60,860	257	197	94	65	70	218	11,327
Minnesota	304	14,641	115	96	63	14	16	60	1,926
Mississippi	1	(D)	-	-	-	1	-	-	-
Missouri	305	12,606	164	110	9	17	5	128	8,068
Montana	173	828	162	10	-	1	-	-	-
Nebraska	93	592	92	-	-	-	1	-	-
Nevada	15	411	11	2	-	2	-	-	-
New Hampshire	98	507	61	34	3	-	-	31	247
New Jersey	537	32,206	204	134	110	51	38	145	5,648
New Mexico	620	26,222	442	50	55	35	38	-	-
New York	608	30,393	281	172	76	58	21	181	25,384
North Carolina	521	18,833	252	174	42	38	15	203	6,175
North Dakota	6	48	-	6	-	-	-	4	8
Ohio	308	7,047	195	85	17	4	7	146	3,424
Oklahoma	23	4,315	-	1	18	2	2	2	(D)
Oregon	268	45,032	11	1	153	59	44	8	(D)
Pennsylvania	855	10,704	425	319	97	13	1	385	9,005
Rhode Island	32	130	24	7	1	-	-	18	146
South Carolina	520	10,049	351	139	21	2	7	253	5,682
South Dakota	50	247	23	27	-	-	-	23	345
Tennessee	175	6,905	95	55	22	-	3	58	3,371
Texas	1,453	107,257	396	13	527	464	53	13	5,200
Utah	380	6,669	158	130	90	-	2	-	-
Vermont	91	349	73	15	3	-	-	49	273
Virginia	355	8,086	289	30	15	10	11	119	2,047
Washington	952	153,551	373	3	229	210	137	1	(D)
West Virginia	25	(D)	17	7	1	-	-	12	15
Wisconsin	389	122,813	98	60	70	57	104	175	9,328
Wyoming	18	252	-	18	-	-	-	-	-
Water Resources Areas									
WRA 01 New England	836	4,298	664	144	28	-	-	336	4,032
WRA 02 Mid-Atlantic	2,179	94,707	982	614	337	154	92	667	23,107
WRA 03 South Atlantic-Gulf	1,809	222,153	669	602	225	157	156	460	24,552
WRA 04 Great Lakes	1,334	123,913	456	456	179	117	126	541	40,957
WRA 05 Ohio	931	17,936	648	167	80	21	15	263	4,278
WRA 06 Tennessee	488	6,775	258	184	39	5	2	221	2,170
WRA 07 Upper Mississippi	951	124,873	317	250	178	97	109	291	11,687
WRA 08 Lower Mississippi	428	17,455	110	169	125	21	3	32	7,525
WRA 09 Souris-Red-Rainy	32	1,588	23	6	-	2	1	-	-
WRA 10 Missouri	487	11,638	406	66	4	4	7	37	1,143
WRA 11 Arkansas-White-Red	278	20,602	60	104	23	81	10	187	4,388
WRA 12 Texas-Gulf	1,451	105,724	396	15	525	464	51	13	5,200
WRA 13 Rio Grande	605	29,934	442	46	47	32	38	-	-
WRA 14 Upper Colorado	25	1,744	5	2	8	10	-	-	-
WRA 15 Lower Colorado	406	137,762	216	5	94	25	66	-	-
WRA 16 Great Basin	303	3,947	153	132	14	2	2	-	-
WRA 17 Pacific Northwest	1,643	224,939	387	89	668	292	207	9	7,545
WRA 18 California	3,256	927,294	688	696	237	1,018	617	7	1,178
WRA 19 Alaska	33	133	28	4	1	-	-	4	2
WRA 20 Hawaii	332	3,943	203	105	16	7	1	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Sweet corn [3]								
	Irrigated							Non-irrigated	
	Farms	Acres harvested	Farms by acres harvested					Farms	Acres harvested
			Less than 5 acres	5 to 24 acres	25 to 49 acres	50 to 99 acres	100 acres or more		
U.S. TOTAL . . . . . 2003 . .	4,753	285,291	2,389	1,147	351	298	568	1,087	21,153
1998 . .	4,387	311,801	1,681	1,275	349	(NA)	(NA)	683	18,399
2003 DATA									
Alabama	28	166	19	7	2	-	-	-	-
Alaska	8	2	8	-	-	-	-	-	-
Arizona	7	200	3	3	-	-	1	-	-
Arkansas	101	1,010	-	101	-	-	-	-	-
California	393	22,539	344	2	-	12	35	-	-
Colorado	76	757	12	53	10	1	-	-	-
Connecticut	7	185	-	4	3	-	-	28	968
Delaware	43	8,499	-	7	1	7	28	2	(D)
Florida	12	14,630	-	3	-	-	9	-	-
Georgia	15	11,724	3	-	-	2	10	57	1,307
Hawaii	25	406	12	9	-	1	3	-	-
Idaho	255	14,996	-	72	108	45	30	-	-
Illinois	55	6,879	1	12	9	13	20	25	823
Indiana	90	2,613	19	33	22	11	5	76	399
Iowa	54	780	27	18	-	9	-	45	574
Kansas	8	2,100	-	-	-	-	8	74	15
Kentucky	23	117	21	-	2	-	-	21	126
Louisiana	4	16	4	-	-	-	-	-	-
Maine	83	698	67	7	4	5	-	39	236
Maryland	109	6,147	24	35	9	19	22	7	118
Massachusetts	112	362	67	44	-	1	-	13	685
Michigan	213	6,456	110	36	30	31	6	61	844
Minnesota	188	7,953	92	55	2	18	21	32	1,047
Mississippi	1	(D)	-	1	-	-	-	-	-
Missouri	111	496	52	55	4	-	-	52	130
Montana	7	8	7	-	-	-	-	-	-
Nebraska	93	482	92	-	-	-	1	-	-
Nevada	11	11	11	-	-	-	-	-	-
New Hampshire	35	236	15	19	-	1	-	9	138
New Jersey	179	4,726	85	57	19	8	10	40	1,832
New Mexico	4	28	2	2	-	-	-	-	-
New York	200	5,717	59	93	5	30	13	102	2,904
North Carolina	146	1,903	17	125	-	2	2	52	666
North Dakota	6	24	6	-	-	-	-	4	8
Ohio	140	1,665	103	27	4	2	4	91	764
Oklahoma	4	234	-	-	2	2	-	2	(D)
Oregon	97	14,325	11	-	25	24	37	-	-
Pennsylvania	338	2,829	202	92	42	2	-	143	1,267
Rhode Island	5	(D)	4	1	-	-	-	4	16
South Carolina	133	561	123	9	-	-	1	-	-
South Dakota	27	102	27	-	-	-	-	-	-
Tennessee	24	(D)	18	5	-	-	1	19	203
Texas	14	14	14	-	-	-	-	-	-
Utah	281	1,146	156	123	-	2	-	-	-
Vermont	12	(D)	11	-	1	-	-	7	33
Virginia	129	241	124	3	-	2	-	3	75
Washington	642	83,292	373	18	34	26	191	-	-
West Virginia	15	32	11	4	-	-	-	-	-
Wisconsin	188	56,881	33	10	13	22	110	79	3,590
Wyoming	2	(D)	-	2	-	-	-	-	-
Water Resources Areas									
WRA 01 New England	248	1,531	158	75	8	7	-	99	2,075
WRA 02 Mid-Atlantic	766	24,248	373	204	75	43	71	166	4,224
WRA 03 South Atlantic-Gulf	234	28,348	171	35	2	4	22	109	1,973
WRA 04 Great Lakes	434	27,629	152	135	39	62	46	274	5,377
WRA 05 Ohio	234	3,486	165	28	26	10	5	143	985
WRA 06 Tennessee	190	786	76	114	-	-	-	18	(D)
WRA 07 Upper Mississippi	439	56,090	130	115	18	59	117	136	4,688
WRA 08 Lower Mississippi	118	2,007	11	106	-	-	1	1	(D)
WRA 09 Souris-Red-Rainy	29	47	29	-	-	-	-	-	-
WRA 10 Missouri	141	760	134	2	4	-	1	13	98
WRA 11 Arkansas-White-Red	172	2,923	56	104	2	2	8	128	1,531
WRA 12 Texas-Gulf	16	34	14	2	-	-	-	-	-
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	16	486	5	-	10	1	-	-	-
WRA 15 Lower Colorado	18	211	14	3	-	-	1	-	-
WRA 16 Great Basin	278	1,145	153	123	-	2	-	-	-
WRA 17 Pacific Northwest	994	112,613	384	90	167	95	258	-	-
WRA 18 California	393	22,539	344	2	-	12	35	-	-
WRA 19 Alaska	8	2	8	-	-	-	-	-	-
WRA 20 Hawaii	25	406	12	9	-	1	3	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Tomatoes [3]								
	Irrigated							Non-irrigated	
	Farms	Acres harvested	Farms by acres harvested					Farms	Acres harvested
			Less than 5 acres	5 to 24 acres	25 to 49 acres	50 to 99 acres	100 acres or more		
U.S. TOTAL . . . . . 2003 . .	7,322	427,812	5,430	415	103	764	610	364	2,167
1998 . .	5,223	308,476	3,730	499	162	(NA)	(NA)	218	2,276
2003 DATA									
Alabama	68	641	48	8	6	6	-	-	-
Alaska	11	3	11	-	-	-	-	-	-
Arizona	139	139	139	-	-	-	-	-	-
Arkansas	201	1,404	101	100	-	-	-	-	-
California	1,942	354,804	688	4	44	689	517	3	270
Colorado	57	176	57	-	-	-	-	-	-
Connecticut	51	58	48	3	-	-	-	10	29
Delaware	4	3	4	-	-	-	-	-	-
Florida	38	37,783	-	-	-	4	34	-	-
Georgia	132	4,217	112	-	-	14	6	-	-
Hawaii	52	669	47	4	-	-	1	-	-
Idaho	-	-	-	-	-	-	-	-	-
Illinois	77	292	75	-	-	-	2	1	(D)
Indiana	237	3,509	207	7	-	9	14	23	659
Iowa	123	97	123	-	-	-	-	17	(D)
Kansas	-	-	-	-	-	-	-	74	59
Kentucky	112	235	91	21	-	-	-	28	25
Louisiana	103	57	103	-	-	-	-	-	-
Maine	104	61	104	-	-	-	-	2	(D)
Maryland	198	957	155	34	4	4	1	2	(D)
Massachusetts	131	72	131	-	-	-	-	5	(D)
Michigan	226	3,721	205	8	2	1	10	30	420
Minnesota	170	337	148	22	-	-	-	23	23
Mississippi	-	-	-	-	-	-	-	-	-
Missouri	60	14	60	-	-	-	-	-	-
Montana	7	3	7	-	-	-	-	-	-
Nebraska	92	18	92	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-
New Hampshire	37	13	37	-	-	-	-	-	-
New Jersey	316	2,093	244	46	14	10	2	16	236
New Mexico	2	(D)	2	-	-	-	-	-	-
New York	406	1,075	376	25	3	2	-	19	93
North Carolina	133	4,713	109	-	4	17	3	34	20
North Dakota	-	-	-	-	-	-	-	-	-
Ohio	142	1,045	128	9	-	1	4	13	13
Oklahoma	-	-	-	-	-	-	-	-	-
Oregon	2	(D)	-	-	-	-	2	-	-
Pennsylvania	392	1,526	369	15	-	3	5	48	171
Rhode Island	13	11	13	-	-	-	-	-	-
South Carolina	130	976	122	6	-	-	2	9	9
South Dakota	27	13	27	-	-	-	-	-	-
Tennessee	27	1,709	3	10	10	2	2	7	108
Texas	475	986	382	80	13	-	-	-	-
Utah	273	409	273	-	-	-	-	-	-
Vermont	31	10	31	-	-	-	-	-	-
Virginia	97	3,594	76	11	3	2	5	-	-
Washington	374	99	373	1	-	-	-	-	-
West Virginia	24	20	24	-	-	-	-	-	-
Wisconsin	86	50	85	1	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-
Water Resources Areas									
WRA 01 New England	341	215	338	3	-	-	-	17	56
WRA 02 Mid-Atlantic	1,084	8,298	914	117	21	19	13	66	437
WRA 03 South Atlantic-Gulf	384	47,053	293	14	8	24	45	43	29
WRA 04 Great Lakes	549	5,206	505	23	5	4	12	62	502
WRA 05 Ohio	447	2,050	400	37	2	1	7	47	39
WRA 06 Tennessee	215	2,931	177	7	10	19	2	4	48
WRA 07 Upper Mississippi	435	3,021	394	22	-	8	11	45	666
WRA 08 Lower Mississippi	314	1,490	211	103	-	-	-	3	60
WRA 09 Souris-Red-Rainy	23	2	23	-	-	-	-	-	-
WRA 10 Missouri	143	(D)	143	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	117	190	117	-	-	-	-	74	59
WRA 12 Texas-Gulf	475	986	382	80	13	-	-	-	-
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	2	(D)	2	-	-	-	-	-	-
WRA 15 Lower Colorado	139	139	139	-	-	-	-	-	-
WRA 16 Great Basin	273	409	273	-	-	-	-	-	-
WRA 17 Pacific Northwest	374	99	373	1	-	-	-	-	-
WRA 18 California	1,944	355,004	688	4	44	689	519	3	270
WRA 19 Alaska	11	3	11	-	-	-	-	-	-
WRA 20 Hawaii	52	669	47	4	-	-	1	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Lettuce and romaine [3]								
	Irrigated							Non-irrigated	
	Farms	Acres harvested	Farms by acres harvested					Farms	Acres harvested
			Less than 5 acres	5 to 24 acres	25 to 49 acres	50 to 99 acres	100 acres or more		
U.S. TOTAL . . . . . 2003 . .	2,659	276,705	1,652	58	40	14	895	75	340
1998 . .	1,520	267,886	671	205	78	(NA)	(NA)	85	95
2003 DATA									
Alabama	7	1	7	-	-	-	-	-	-
Alaska	8	3	8	-	-	-	-	-	-
Arizona	52	75,742	-	2	-	-	50	-	-
Arkansas	-	-	-	-	-	-	-	-	-
California	846	191,396	-	4	24	1	817	-	-
Colorado	5	3,268	-	-	-	-	5	-	-
Connecticut	21	39	20	-	1	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-
Florida	4	(D)	-	3	-	-	1	-	-
Georgia	-	-	-	-	-	-	-	-	-
Hawaii	53	182	46	5	1	1	-	-	-
Idaho	-	-	-	-	-	-	-	-	-
Illinois	27	4	27	-	-	-	-	-	-
Indiana	26	10	26	-	-	-	-	-	-
Iowa	35	16	35	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-
Maine	3	13	1	2	-	-	-	-	-
Maryland	28	104	24	4	-	-	-	-	-
Massachusetts	32	3	32	-	-	-	-	32	128
Michigan	79	162	77	-	-	2	-	26	3
Minnesota	46	9	46	-	-	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-	-
Missouri	52	10	52	-	-	-	-	-	-
Montana	4	(Z)	4	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-
New Hampshire	21	8	21	-	-	-	-	-	-
New Jersey	67	1,533	33	24	5	2	3	-	-
New Mexico	-	-	-	-	-	-	-	-	-
New York	209	1,326	178	14	6	8	3	14	202
North Carolina	126	1,611	111	-	-	-	15	-	-
North Dakota	-	-	-	-	-	-	-	-	-
Ohio	45	(D)	44	-	-	-	1	-	-
Oklahoma	-	-	-	-	-	-	-	-	-
Oregon	-	-	-	-	-	-	-	-	-
Pennsylvania	56	75	55	-	1	-	-	3	8
Rhode Island	8	2	8	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-
South Dakota	2	(D)	2	-	-	-	-	-	-
Tennessee	-	-	-	-	-	-	-	-	-
Texas	382	76	382	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-
Vermont	13	66	11	-	2	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-
Washington	373	112	373	-	-	-	-	-	-
West Virginia	13	4	13	-	-	-	-	-	-
Wisconsin	16	3	16	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-
Water Resources Areas									
WRA 01 New England	93	131	88	2	3	-	-	32	128
WRA 02 Mid-Atlantic	308	2,801	245	42	5	10	6	8	142
WRA 03 South Atlantic-Gulf	28	2,013	9	3	-	-	16	-	-
WRA 04 Great Lakes	185	776	176	-	6	2	1	32	63
WRA 05 Ohio	58	54	57	-	1	-	-	3	8
WRA 06 Tennessee	109	109	109	-	-	-	-	-	-
WRA 07 Upper Mississippi	101	28	101	-	-	-	-	-	-
WRA 08 Lower Mississippi	-	-	-	-	-	-	-	-	-
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	58	13	58	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	-	-	-	-	-	-	-	-	-
WRA 12 Texas-Gulf	382	76	382	-	-	-	-	-	-
WRA 13 Rio Grande	5	3,268	-	-	-	-	5	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	52	75,742	-	2	-	-	50	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	373	112	373	-	-	-	-	-	-
WRA 18 California	846	191,396	-	4	24	1	817	-	-
WRA 19 Alaska	8	3	8	-	-	-	-	-	-
WRA 20 Hawaii	53	182	46	5	1	1	-	-	-

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Land in bearing and non-bearing orchards, vineyards, and nut trees									Other crops			
	Irrigated							Non-irrigated		Irrigated		Non-irrigated	
	Farms	Acres harvested	Farms by acres harvested: Less than 5 acres	5 to 14 acres	15 to 49 acres	50 to 99 acres	100 acres or more	Farms	Acres harvested	Farms	Acres harvested	Farms	Acres harvested
U.S. TOTAL . . . . . 2003 . .	59,559	4,104,946	18,758	13,329	15,319	4,714	7,439	2,542	119,778	13,181	1,444,893	2,377	751,369
1998 . .	57,118	4,445,374	13,588	15,369	15,567	(NA)	(NA)	2,192	145,354	8,067	1,332,330	1,892	356,891
2003 DATA													
Alabama	109	1,654	56	20	21	9	3	46	2,019	99	792	17	1,761
Alaska	4	20	-	4	-	-	-	-	-	16	121	-	-
Arizona	1,174	31,450	556	399	147	33	39	-	-	56	17,268	-	-
Arkansas	223	1,632	100	123	-	-	-	-	-	27	1,995	5	75
California	34,560	2,749,578	8,593	7,601	9,785	3,169	5,412	25	8,849	2,539	162,920	457	25,728
Colorado	109	8,100	-	-	92	-	17	-	-	151	27,678	143	16,779
Connecticut	13	174	1	7	5	-	-	16	852	73	103	25	(D)
Delaware	4	281	-	-	-	4	-	4	475	-	-	-	-
Florida	6,627	748,362	1,718	1,805	1,658	555	891	631	25,066	298	397,549	4	2,676
Georgia	902	72,278	168	228	360	62	84	156	17,782	67	3,016	8	1,050
Hawaii	328	5,887	237	73	8	4	6	39	6,347	558	35,232	30	1,251
Idaho	765	3,991	502	251	3	-	9	-	-	633	67,826	31	9,769
Illinois	54	834	27	-	27	-	-	2	(D)	209	20,444	53	2,044
Indiana	19	4	19	-	-	-	-	-	-	100	11,968	52	11,137
Iowa	26	60	26	-	-	-	-	18	532	124	3,603	55	2,178
Kansas	152	3,234	74	-	74	4	-	-	-	338	44,825	73	17,177
Kentucky	50	135	42	7	-	1	-	15	331	112	210	14	1,078
Louisiana	93	2,682	66	-	-	15	12	13	112	180	15,886	101	122,123
Maine	3	(D)	-	2	-	-	1	69	349	200	200	-	-
Maryland	8	318	-	2	4	-	2	12	172	98	794	-	-
Massachusetts	48	579	31	-	14	3	-	11	436	106	215	38	148
Michigan	362	10,180	139	78	76	33	36	374	23,484	182	459	8	1,200
Minnesota	142	2,456	46	22	68	5	1	90	1,839	59	15,860	53	7,141
Mississippi	4	370	-	2	-	-	2	15	1,040	333	3,330	4	735
Missouri	82	4,316	52	-	4	8	18	4	800	35	8,960	16	3,217
Montana	324	1,296	324	-	-	-	-	-	-	25	4,811	3	750
Nebraska	91	182	91	-	-	-	-	-	-	591	130,318	222	119,623
Nevada	51	51	51	-	-	-	-	-	-	11	7,891	-	-
New Hampshire	24	102	20	3	1	-	-	13	233	21	42	8	330
New Jersey	66	1,333	37	9	11	3	6	59	2,124	160	552	8	712
New Mexico	1,939	32,331	1,590	115	168	28	38	-	-	43	11,138	-	-
New York	208	6,783	54	60	67	10	17	167	14,459	333	1,205	13	505
North Carolina	270	1,906	-	268	-	2	-	17	204	443	1,244	27	1,493
North Dakota	-	-	-	-	-	-	-	-	-	13	1,197	74	24,064
Ohio	109	485	81	20	8	-	-	39	387	167	249	1	(D)
Oklahoma	108	108	108	-	-	-	-	-	-	29	9,125	1	(D)
Oregon	382	37,600	3	132	149	11	87	6	1,050	1,082	142,558	590	311,588
Pennsylvania	170	2,550	112	19	17	18	4	190	6,324	368	410	36	342
Rhode Island	19	113	12	6	1	-	-	-	-	9	33	1	(D)
South Carolina	36	4,857	-	10	18	2	6	18	892	125	2,233	-	-
South Dakota	27	595	-	4	23	-	-	-	-	22	6,841	50	4,070
Tennessee	3	24	-	3	-	-	-	38	302	258	556	36	36
Texas	2,882	45,893	1,605	382	790	75	30	383	766	905	121,914	61	37,884
Utah	323	4,938	155	74	91	-	3	-	-	183	17,767	3	3,900
Vermont	32	(D)	18	14	-	-	-	12	335	74	112	6	474
Virginia	95	894	58	9	28	-	-	9	27	115	343	-	-
Washington	6,456	313,285	1,932	1,555	1,596	660	713	-	-	1,367	128,688	14	13,907
West Virginia	16	186	5	6	5	-	-	14	1,894	39	39	6	6
Wisconsin	67	591	49	16	-	-	2	37	100	160	3,936	29	3,188
Wyoming	-	-	-	-	-	-	-	-	-	45	10,437	1	(D)
Water Resources Areas													
WRA 01 New England	115	1,144	70	20	21	3	1	111	2,110	460	682	72	598
WRA 02 Mid-Atlantic	441	10,558	180	102	103	30	26	372	20,388	801	2,375	50	1,528
WRA 03 South Atlantic-Gulf	7,935	828,879	1,935	2,331	2,057	628	984	868	45,963	1,389	408,188	56	6,980
WRA 04 Great Lakes	554	12,507	272	100	103	38	41	506	28,070	370	2,777	26	3,575
WRA 05 Ohio	171	607	140	20	10	1	-	61	1,338	677	7,843	81	6,193
WRA 06 Tennessee	12	202	7	3	-	2	-	20	212	174	390	7	1,057
WRA 07 Upper Mississippi	254	3,512	115	38	95	5	1	103	2,076	461	32,810	176	11,106
WRA 08 Lower Mississippi	173	4,482	15	125	4	15	14	35	1,278	164	19,768	111	123,270
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	21	11,551	47	17,755
WRA 10 Missouri	262	7,369	143	4	97	-	18	13	1,331	997	202,816	494	153,968
WRA 11 Arkansas-White-Red	345	1,268	333	-	-	12	-	-	-	411	69,808	84	21,858
WRA 12 Texas-Gulf	2,020	28,248	1,147	-	790	75	8	383	766	702	89,362	48	37,338
WRA 13 Rio Grande	2,750	48,253	2,046	497	119	28	60	-	-	104	7,229	-	-
WRA 14 Upper Colorado	116	8,118	7	-	92	-	17	-	-	18	10,669	-	-
WRA 15 Lower Colorado	1,382	35,174	567	473	270	33	39	-	-	56	17,268	-	-
WRA 16 Great Basin	210	2,970	190	-	17	-	3	-	-	179	23,912	10	5,468
WRA 17 Pacific Northwest	7,927	356,171	2,761	1,938	1,748	671	809	6	1,050	3,081	338,820	628	333,696
WRA 18 California	34,560	2,749,578	8,593	7,601	9,785	3,169	5,412	25	8,849	2,542	163,272	457	25,728
WRA 19 Alaska	4	20	-	4	-	-	-	-	-	16	121	-	-
WRA 20 Hawaii	328	5,887	237	73	8	4	6	39	6,347	558	35,232	30	1,251

See footnote(s) at end of table.

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Table 27. **Crops Harvested from Irrigated Farms: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Berries, bearing and non-bearing				Pastureland, all types			
	Irrigated		Non-irrigated		Irrigated		Non-irrigated	
	Farms	Acres harvested	Farms	Acres harvested	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	8,947	229,542	743	21,705	50,372	3,634,133	72,773	90,306,759
1998 . .	8,212	142,776	526	8,338	53,314	3,929,831	(X)	(X)
2003 DATA								
Alabama	75	427	-	-	27	1,281	270	47,536
Alaska	5	7	-	-	8	16	12	518
Arizona	-	-	-	-	807	19,661	603	298,157
Arkansas	223	1,329	-	-	251	7,411	713	61,116
California	388	65,019	-	-	5,826	511,534	5,224	4,158,937
Colorado	4	12	-	-	3,061	353,836	4,796	5,393,971
Connecticut	60	289	12	86	2	(D)	66	1,956
Delaware	-	-	-	-	2	(D)	29	903
Florida	368	5,685	-	-	888	66,308	1,762	1,067,924
Georgia	233	3,247	-	-	144	8,077	1,022	115,897
Hawaii	10	22	-	-	54	2,907	123	142,322
Idaho	-	-	-	-	8,868	377,431	4,053	2,284,511
Illinois	94	148	-	-	1	(D)	199	15,409
Indiana	61	467	-	-	2	(D)	358	11,172
Iowa	86	324	18	46	10	460	187	10,975
Kansas	-	-	-	-	58	11,663	2,351	1,881,915
Kentucky	35	99	-	-	-	-	559	62,554
Louisiana	66	1,944	-	-	62	3,678	494	130,589
Maine	105	10,782	50	6,120	6	(D)	89	2,436
Maryland	34	119	-	-	31	510	208	4,178
Massachusetts	459	13,090	42	(D)	38	312	123	1,498
Michigan	652	15,094	140	1,265	50	1,460	381	16,004
Minnesota	218	1,014	23	46	31	278	515	47,334
Mississippi	333	333	-	-	2	(D)	397	12,582
Missouri	124	1,886	13	1,950	69	480	569	161,770
Montana	-	-	-	-	3,660	450,858	5,465	17,985,730
Nebraska	-	-	-	-	603	84,179	10,136	8,003,873
Nevada	40	40	-	-	657	151,777	722	3,076,431
New Hampshire	47	153	-	-	-	-	37	345
New Jersey	182	7,720	48	321	-	-	147	2,841
New Mexico	-	-	-	-	2,616	127,222	2,386	5,601,165
New York	244	1,950	68	211	6	360	326	9,263
North Carolina	357	6,239	56	2,593	193	10,141	472	48,592
North Dakota	-	-	-	-	12	1,221	322	480,965
Ohio	264	792	9	17	18	394	191	5,354
Oklahoma	110	330	-	-	318	42,758	1,244	1,576,507
Oregon	1,907	31,021	132	1,320	7,722	417,729	5,516	5,951,110
Pennsylvania	373	1,189	73	7,290	18	354	642	23,472
Rhode Island	10	159	4	204	-	-	15	83
South Carolina	148	762	-	-	145	833	443	23,157
South Dakota	23	115	-	-	108	4,257	1,025	1,820,809
Tennessee	113	698	36	27	21	2,016	288	31,236
Texas	386	17,202	-	-	2,709	225,292	7,056	10,245,710
Utah	74	1,776	-	-	5,842	281,944	3,904	4,500,535
Vermont	42	244	1	(D)	-	-	91	1,492
Virginia	5	56	-	-	77	770	526	42,697
Washington	494	13,843	-	-	3,091	96,416	3,162	2,459,069
West Virginia	21	69	18	129	-	-	50	948
Wisconsin	474	23,849	-	-	29	1,092	420	27,475
Wyoming	-	-	-	-	2,229	366,895	3,084	12,455,736
Water Resources Areas								
WRA 01 New England	702	24,553	109	6,491	46	518	380	7,319
WRA 02 Mid-Atlantic	756	10,207	184	7,761	125	1,930	1,328	48,101
WRA 03 South Atlantic-Gulf	1,370	16,528	56	2,593	1,399	86,660	4,269	1,305,723
WRA 04 Great Lakes	895	16,912	153	1,303	52	1,480	817	29,386
WRA 05 Ohio	335	1,328	37	178	36	(D)	1,379	108,303
WRA 06 Tennessee	179	419	-	-	8	(D)	367	29,472
WRA 07 Upper Mississippi	768	25,746	54	2,042	66	1,364	1,108	107,303
WRA 08 Lower Mississippi	221	1,640	18	18	194	8,305	945	180,221
WRA 09 Souris-Red-Rainy	45	224	-	-	5	706	230	47,573
WRA 10 Missouri	84	655	-	-	5,210	746,094	21,487	42,197,560
WRA 11 Arkansas-White-Red	284	2,388	-	-	1,829	213,836	6,042	8,183,281
WRA 12 Texas-Gulf	386	17,202	-	-	2,064	137,638	5,154	3,770,036
WRA 13 Rio Grande	4	12	-	-	1,871	106,371	1,882	6,901,978
WRA 14 Upper Colorado	-	-	-	-	4,751	460,156	4,037	4,358,947
WRA 15 Lower Colorado	-	-	-	-	1,177	38,749	991	933,996
WRA 16 Great Basin	114	1,816	-	-	4,981	318,791	3,760	6,733,466
WRA 17 Pacific Northwest	2,401	44,864	132	1,320	19,863	897,017	13,007	10,972,169
WRA 18 California	388	65,019	-	-	6,633	609,171	5,455	4,249,085
WRA 19 Alaska	5	7	-	-	8	16	12	518
WRA 20 Hawaii	10	22	-	-	54	2,907	123	142,322

[1] Includes both dry hay and haylage and greenchop yields in 2003, with no conversion to a dry weight basis made for the haylage and greenchop yields.
[2] Includes both dry hay and haylage, grass silage, and greenchop yields in 2003, with no conversion to a dry weight basis made for the haylage, grass silage, and greenchop yields.
[3] Included in land in vegetables.

Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Corn for grain or seed											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	32,267	9,749,748	178	1.2	22,697	7,594,846	180	1.2	8,934	2,129,107	176	1.3
1998 . .	36,826	10,617,766	163	1.2	19,375	5,251,984	167	1.1	10,674	1,960,473	148	1.5
2003 DATA												
Alabama	79	10,269	162	0.5	78	(D)	(D)	0.5	1	(D)	(D)	(D)
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	29	10,642	186	3.4	10	6,629	182	3.0	19	4,013	192	4.0
Arkansas	546	192,564	150	0.7	181	54,999	147	0.6	365	137,565	151	0.8
California	1,204	198,869	177	2.4	3	(D)	185	1.0	566	172,299	190	2.6
Colorado	1,649	555,870	176	1.7	851	440,028	178	1.7	798	115,842	169	1.9
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	159	33,892	150	0.5	159	33,892	150	0.5	-	-	-	-
Florida	20	3,610	125	1.0	20	3,610	125	1.0	-	-	-	-
Georgia	723	97,735	158	0.4	716	96,713	158	0.4	7	1,022	155	0.2
Hawaii	3	545	(D)	1.9	2	(D)	(D)	(D)	-	-	-	-
Idaho	575	51,352	171	2.8	205	22,514	164	2.4	370	28,838	177	3.2
Illinois	838	222,459	174	0.6	834	221,589	174	0.6	4	870	173	0.6
Indiana	627	157,415	169	0.5	621	156,160	170	0.5	6	1,255	117	0.8
Iowa	346	71,262	171	0.5	324	69,708	171	0.5	22	1,554	179	0.8
Kansas	3,022	1,231,918	178	1.4	2,543	1,151,539	179	1.4	479	80,379	161	1.3
Kentucky	49	6,626	160	0.5	47	(D)	(D)	0.5	2	(D)	(D)	(D)
Louisiana	380	126,920	159	0.6	72	32,419	157	0.5	308	94,501	160	0.6
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	109	18,884	164	0.3	109	18,884	164	0.3	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	655	185,788	165	0.5	655	185,788	165	0.5	-	-	-	-
Minnesota	981	177,272	169	0.6	981	177,272	169	0.6	-	-	-	-
Mississippi	275	129,105	164	0.6	134	71,058	159	0.6	141	58,047	170	0.7
Missouri	942	304,295	158	0.6	550	151,974	151	0.6	392	152,321	164	0.7
Montana	103	7,473	140	2.4	4	1,040	87	1.8	99	6,433	148	2.5
Nebraska	14,103	4,605,499	186	1.2	9,874	3,516,514	185	1.2	4,229	1,088,985	187	1.3
Nevada	2	(D)	(D)	(D)	-	-	-	-	2	(D)	(D)	(D)
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	18	1,988	158	0.3	18	1,988	158	0.3	-	-	-	-
New Mexico	72	42,166	195	2.3	62	(D)	(D)	1.9	10	(D)	(D)	2.7
New York	6	445	177	0.4	6	445	177	0.4	-	-	-	-
North Carolina	117	9,282	128	0.5	115	(D)	(D)	0.5	2	(D)	(D)	(D)
North Dakota	236	57,865	143	0.9	215	56,055	145	0.9	21	1,810	95	1.4
Ohio	9	3,188	143	1.6	9	3,188	143	1.6	-	-	-	-
Oklahoma	329	91,178	166	1.5	312	89,988	166	1.5	17	1,190	180	0.3
Oregon	120	16,002	196	2.5	24	8,298	223	2.8	96	7,704	167	2.3
Pennsylvania	11	806	130	0.2	11	806	130	0.2	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	89	13,998	150	0.4	79	13,898	150	0.4	10	100	100	2.0
South Dakota	715	142,149	169	1.0	632	132,408	170	0.9	83	9,741	151	1.4
Tennessee	48	5,886	161	0.5	29	5,601	161	0.5	19	285	160	0.4
Texas	1,740	749,465	184	1.6	1,338	659,285	190	1.6	402	90,180	136	1.2
Utah	142	12,352	163	2.8	18	2,902	169	3.4	124	9,450	161	2.6
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	80	11,260	164	0.3	80	11,260	164	0.3	-	-	-	-
Washington	339	62,815	186	2.1	179	44,776	189	2.0	160	18,039	180	2.2
West Virginia	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Wisconsin	476	85,477	171	0.7	476	85,477	171	0.7	-	-	-	-
Wyoming	299	42,832	123	1.2	119	16,024	138	1.1	180	26,808	114	1.3
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	361	65,691	157	0.4	361	65,691	157	0.4	-	-	-	-
WRA 03 South Atlantic-Gulf	1,058	135,301	153	0.4	1,038	133,599	153	0.4	20	1,702	136	0.5
WRA 04 Great Lakes	876	232,977	167	0.5	876	232,977	167	0.5	-	-	-	-
WRA 05 Ohio	472	119,781	164	0.5	472	119,781	164	0.5	-	-	-	-
WRA 06 Tennessee	32	5,570	173	0.6	32	5,570	173	(D)	-	-	-	-
WRA 07 Upper Mississippi	2,438	511,169	172	0.6	2,409	504,123	172	0.6	29	7,046	159	0.6
WRA 08 Lower Mississippi	1,656	628,121	158	0.6	536	227,738	154	0.6	1,120	400,383	161	0.7
WRA 09 Souris-Red-Rainy	295	63,095	153	0.8	295	63,095	153	0.8	-	-	-	-
WRA 10 Missouri	18,076	5,741,365	183	1.2	12,661	4,467,124	183	1.2	5,415	1,274,241	182	1.3
WRA 11 Arkansas-White-Red	3,358	1,604,807	184	1.5	2,889	1,489,963	185	1.5	469	114,844	171	1.4
WRA 12 Texas-Gulf	1,042	264,572	153	1.4	673	194,108	166	1.4	369	70,464	117	1.1
WRA 13 Rio Grande	11	1,683	197	2.8	11	1,683	197	2.8	-	-	-	-
WRA 14 Upper Colorado	184	22,616	181	2.2	7	2,092	190	2.2	177	20,524	180	2.2
WRA 15 Lower Colorado	32	12,605	186	3.3	11	8,152	183	3.0	21	4,453	191	4.0
WRA 16 Great Basin	135	10,812	(D)	2.5	13	2,242	(D)	3.7	122	8,570	158	2.2
WRA 17 Pacific Northwest	1,034	130,169	181	2.4	408	75,588	185	2.2	626	54,581	176	2.7
WRA 18 California	1,204	198,869	177	2.4	3	(D)	185	1.0	566	172,299	190	2.6
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	3	545	(D)	1.9	2	(D)	(D)	(D)	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Corn for silage or greenchop											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre (tons, green)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (tons, green)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (tons, green)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	10,118	1,312,660	25	2.2	4,624	602,353	24	1.6	5,484	709,141	26	2.7
1998 . .	10,280	922,970	23	2.2	3,093	332,523	22	1.4	6,776	514,546	23	2.7
2003 DATA												
Alabama	33	1,571	14	0.6	33	1,571	14	0.6	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	75	15,564	26	4.6	2	(D)	(D)	(D)	73	(D)	(D)	4.7
Arkansas	12	2,063	20	0.7	-	-	-	-	12	2,063	20	0.7
California	2,214	466,109	28	3.0	65	5,970	32	2.5	2,145	460,071	28	3.0
Colorado	601	77,149	24	1.4	170	33,218	26	1.7	431	43,931	22	1.3
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Florida	66	20,008	18	0.8	63	19,408	18	0.8	3	600	14	0.9
Georgia	142	23,492	19	0.4	142	23,492	19	0.4	-	-	-	-
Hawaii	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
Idaho	1,064	127,652	27	2.3	401	89,729	27	2.2	663	37,923	26	2.5
Illinois	6	244	17	0.8	6	244	17	0.8	-	-	-	-
Indiana	47	5,891	21	0.4	44	5,711	21	0.4	3	180	20	(D)
Iowa	8	550	20	0.3	8	550	20	0.3	-	-	-	-
Kansas	569	66,310	20	1.2	477	63,902	20	1.2	91	2,350	18	1.6
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Maine	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Maryland	8	1,693	18	0.2	8	1,693	18	0.2	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	102	13,910	21	0.4	102	13,910	21	0.4	-	-	-	-
Minnesota	163	9,652	19	0.5	163	9,652	19	0.5	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	23	2,273	21	0.3	22	(D)	(D)	0.3	1	(D)	(D)	(D)
Montana	361	36,314	25	1.5	41	4,290	23	1.4	320	32,024	25	1.5
Nebraska	1,437	78,738	21	1.2	653	52,214	21	1.1	784	26,524	22	1.4
Nevada	38	3,613	26	3.7	2	(D)	(D)	(D)	36	(D)	(D)	3.8
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	298	76,214	25	2.7	153	46,870	25	2.5	140	28,304	25	2.9
New York	6	582	26	0.1	6	582	26	0.1	-	-	-	-
North Carolina	24	763	20	0.5	24	763	20	0.5	-	-	-	-
North Dakota	96	7,479	14	1.1	57	5,133	13	1.0	39	2,346	17	1.3
Ohio	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Oklahoma	46	14,633	22	2.1	43	14,033	22	2.1	3	600	17	1.8
Oregon	726	52,991	28	1.9	654	47,545	28	1.8	72	5,446	29	2.9
Pennsylvania	8	172	19	0.1	8	172	19	0.1	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	20	2,080	20	1.4	20	2,080	20	1.4	-	-	-	-
South Dakota	131	10,739	14	1.3	76	5,005	14	0.9	55	5,734	15	1.7
Tennessee	9	879	31	0.5	9	879	31	0.5	-	-	-	-
Texas	412	81,523	26	1.5	383	79,328	26	1.4	29	2,195	17	2.0
Utah	624	38,921	23	2.6	181	13,349	21	2.6	443	25,572	23	2.6
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	14	867	24	0.5	14	867	24	0.5	-	-	-	-
Washington	457	43,416	25	1.9	400	36,790	25	1.9	57	6,626	29	2.2
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	88	5,947	20	0.6	88	5,947	20	0.6	-	-	-	-
Wyoming	181	21,399	22	1.9	97	13,035	23	1.4	84	8,364	21	2.8
Water Resources Areas												
WRA 01 New England	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
WRA 02 Mid-Atlantic	32	2,811	20	0.2	32	2,811	20	0.2	-	-	-	-
WRA 03 South Atlantic-Gulf	258	47,206	19	0.7	255	46,606	19	0.7	3	600	14	0.9
WRA 04 Great Lakes	151	19,387	21	0.4	151	19,387	21	0.4	-	-	-	-
WRA 05 Ohio	17	1,493	(D)	(D)	14	1,313	21	0.4	3	180	(D)	0.5
WRA 06 Tennessee	33	1,488	26	0.6	33	1,488	26	0.6	-	-	-	-
WRA 07 Upper Mississippi	239	16,036	20	0.5	239	16,036	20	0.5	-	-	-	-
WRA 08 Lower Mississippi	16	2,688	19	0.6	3	(D)	17	0.4	13	(D)	20	0.7
WRA 09 Souris-Red-Rainy	27	2,178	20	1.0	27	2,178	20	1.0	-	-	-	-
WRA 10 Missouri	2,692	222,176	22	1.4	1,219	122,338	22	1.3	1,473	99,838	22	1.5
WRA 11 Arkansas-White-Red	693	108,944	22	1.5	535	98,930	22	1.5	157	9,956	(D)	1.7
WRA 12 Texas-Gulf	303	75,909	26	1.6	299	74,766	26	1.6	4	1,143	26	3.0
WRA 13 Rio Grande	232	48,202	24	2.8	92	20,663	(D)	2.7	135	26,499	25	2.9
WRA 14 Upper Colorado	257	17,593	24	1.4	37	1,509	20	2.4	220	16,084	24	1.3
WRA 15 Lower Colorado	75	15,564	26	4.6	2	(D)	(D)	(D)	73	(D)	(D)	4.7
WRA 16 Great Basin	624	40,997	23	2.7	161	13,700	21	2.6	463	27,297	24	2.7
WRA 17 Pacific Northwest	2,252	223,619	27	2.1	1,457	173,384	27	2.0	795	50,235	27	2.5
WRA 18 California	2,214	466,109	28	3.0	65	5,970	32	2.5	2,145	460,071	28	3.0
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Sorghum for grain or speed											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	6,134	1,108,375	75	1.0	3,213	748,698	76	0.9	2,870	344,016	75	1.1
1998 . .	4,998	615,981	80	1.1	1,437	221,544	72	1.0	3,228	317,809	85	1.1
2003 DATA												
Alabama	3	(D)	(D)	(D)	3	(D)	(D)	(D)	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	28	6,490	79	4.3	3	678	45	2.0	25	5,812	83	4.6
Arkansas	326	58,081	90	0.6	81	23,167	96	0.5	245	34,914	86	0.6
California	4	3,525	(D)	(D)	3	(D)	85	0.5	1	(D)	(D)	(D)
Colorado	231	14,184	68	0.7	123	10,088	75	0.7	108	4,096	51	0.7
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	48	5,008	61	0.5	48	5,008	61	0.5	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	5	(D)	(D)	(D)	5	(D)	(D)	(D)	-	-	-	-
Illinois	3	(D)	(D)	(D)	3	(D)	(D)	(D)	-	-	-	-
Indiana	3	260	96	(D)	3	260	96	(D)	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	1,564	183,365	93	0.9	1,048	153,212	93	0.9	516	30,153	94	0.9
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	38	6,771	88	0.4	6	1,917	(D)	0.1	32	4,854	(D)	0.5
Maine	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Mississippi	31	6,692	91	0.4	18	(D)	95	0.4	13	(D)	85	0.4
Missouri	57	7,380	89	0.5	25	3,173	80	0.5	32	4,207	95	(D)
Montana	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska	945	44,148	113	1.3	259	11,791	121	0.9	686	32,357	110	1.4
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	145	33,510	58	1.6	99	27,975	53	1.3	46	5,535	84	2.6
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	166	27,770	73	1.3	85	21,659	78	1.2	81	6,111	53	1.4
Oregon	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Tennessee	3	(D)	(D)	(D)	2	(D)	(D)	(D)	1	(D)	(D)	(D)
Texas	2,502	708,288	68	1.0	1,367	482,486	70	0.9	1,084	210,141	65	1.0
Utah	11	610	78	1.7	11	610	78	1.7	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	13	650	30	0.8	13	650	30	0.8	-	-	-	-
Water Resources Areas												
WRA 01 New England	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	51	5,159	61	0.5	51	5,159	61	0.5	-	-	-	-
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	5	560	100	0.7	5	560	100	0.7	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	4	(D)	(D)	0.5	3	50	(D)	0.8	1	(D)	(D)	(D)
WRA 08 Lower Mississippi	416	72,994	90	0.5	120	29,424	94	0.4	296	43,570	87	0.6
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	1,560	95,097	102	1.1	730	55,004	97	0.9	830	40,093	109	1.3
WRA 11 Arkansas-White-Red	2,285	471,966	82	1.1	1,378	358,596	85	1.1	907	113,370	74	1.2
WRA 12 Texas-Gulf	1,710	442,673	60	0.8	894	294,952	60	0.8	765	132,060	60	0.9
WRA 13 Rio Grande	44	7,512	(D)	2.4	6	(D)	(D)	(D)	38	(D)	(D)	(D)
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	35	7,260	84	4.2	3	678	45	2.0	32	6,582	88	4.4
WRA 16 Great Basin	11	610	78	(D)	11	610	78	1.7	-	-	-	-
WRA 17 Pacific Northwest	7	494	88	(D)	7	494	88	(D)	-	-	-	-
WRA 18 California	4	3,525	(D)	(D)	3	(D)	85	0.5	1	(D)	(D)	(D)
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Wheat for grain or seed											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	13,531	3,268,658	76	1.5	8,471	2,392,949	71	1.2	4,989	874,069	88	2.1
1998 . .	14,696	3,351,941	75	1.4	7,632	1,962,314	75	1.2	5,930	992,784	79	2.0
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	275	122,144	103	3.5	11	12,198	90	2.9	261	109,317	104	3.6
Arkansas	46	8,770	53	0.5	14	1,540	57	0.7	32	7,230	52	0.5
California	1,038	406,582	90	2.2	188	75,947	68	1.7	849	330,458	95	2.3
Colorado	1,129	156,198	70	1.1	778	123,273	67	1.0	351	32,925	81	1.8
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	29	3,908	51	0.2	29	3,908	51	0.2	-	-	-	-
Florida	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	79	16,444	50	0.4	75	15,364	50	0.4	4	1,080	58	0.5
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	2,479	501,472	101	1.7	1,081	412,449	100	1.6	1,398	89,023	109	2.1
Illinois	13	2,357	81	0.5	13	2,357	81	0.5	-	-	-	-
Indiana	27	3,153	68	0.3	27	3,153	68	0.3	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	1,710	414,516	57	0.9	1,482	382,900	58	0.9	228	31,616	49	0.7
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	20	(D)	41	0.6	4	(D)	30	0.7	16	(D)	50	0.5
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	11	812	39	0.2	11	812	39	0.2	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	56	8,936	64	0.3	54	(D)	(D)	0.3	2	(D)	(D)	(D)
Minnesota	63	4,463	62	0.6	55	4,223	62	0.6	8	240	56	1.0
Mississippi	3	1,800	(D)	(D)	1	(D)	(D)	(D)	2	(D)	(D)	(D)
Missouri	28	7,983	65	0.4	23	6,308	67	0.3	5	1,675	59	0.6
Montana	709	119,455	65	1.1	338	67,351	64	1.1	371	52,104	67	1.0
Nebraska	580	110,254	59	0.9	515	101,481	58	0.9	65	8,773	77	1.1
Nevada	15	8,871	85	2.0	3	8,086	86	1.9	12	785	75	2.9
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	6	284	52	0.2	6	284	52	0.2	-	-	-	-
New Mexico	160	81,782	61	2.0	117	50,331	58	1.9	43	31,451	67	2.2
New York	54	54	50	0.2	-	-	-	-	-	-	-	-
North Carolina	36	938	53	(D)	36	938	53	0.3	-	-	-	-
North Dakota	80	17,724	64	0.9	38	7,571	60	0.7	42	10,153	66	1.1
Ohio	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
Oklahoma	587	131,691	48	1.0	447	122,816	48	1.0	140	8,875	46	1.2
Oregon	831	143,046	94	1.6	601	112,984	93	1.4	230	30,062	99	2.1
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	6	1,390	48	0.2	6	1,390	48	0.2	-	-	-	-
South Dakota	19	3,118	60	0.7	14	1,918	66	0.6	5	1,200	50	0.9
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	2,008	657,126	49	1.0	1,610	588,708	50	1.0	385	67,638	39	1.2
Utah	529	44,182	94	1.7	233	17,370	76	1.5	296	26,812	105	1.9
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	7	850	54	0.4	7	850	54	(D)	-	-	-	-
Washington	832	277,624	111	1.7	605	248,502	109	1.7	227	29,122	127	1.8
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	11	554	63	0.5	11	554	63	0.5	-	-	-	-
Wyoming	54	8,312	66	1.1	37	6,242	72	1.0	17	2,070	50	1.3
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	104	5,548	50	0.3	50	5,494	50	0.3	-	-	-	-
WRA 03 South Atlantic-Gulf	124	19,132	50	0.3	120	18,052	50	0.3	4	1,080	58	(D)
WRA 04 Great Lakes	60	9,017	64	0.3	58	(D)	(D)	0.3	2	(D)	(D)	(D)
WRA 05 Ohio	24	3,784	68	0.4	24	3,784	68	(D)	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	44	4,411	73	0.5	44	4,411	73	0.5	-	-	-	-
WRA 08 Lower Mississippi	95	19,913	60	0.5	42	10,048	66	0.6	53	9,865	53	0.5
WRA 09 Souris-Red-Rainy	68	6,367	57	0.6	59	5,778	60	0.5	9	589	29	1.0
WRA 10 Missouri	2,873	442,583	64	0.9	2,062	349,500	63	0.9	811	93,083	70	1.0
WRA 11 Arkansas-White-Red	3,037	981,745	53	1.0	2,431	872,536	54	1.0	606	109,209	48	1.1
WRA 12 Texas-Gulf	980	241,519	46	1.2	813	213,751	45	1.1	154	26,988	46	1.8
WRA 13 Rio Grande	38	8,227	80	2.3	22	(D)	(D)	2.3	16	(D)	(D)	2.3
WRA 14 Upper Colorado	59	14,343	84	2.9	1	(D)	(D)	(D)	58	(D)	(D)	2.9
WRA 15 Lower Colorado	275	122,144	103	3.5	11	12,198	90	2.9	261	109,317	104	3.6
WRA 16 Great Basin	590	59,675	90	1.7	282	32,078	77	1.5	308	27,597	104	1.9
WRA 17 Pacific Northwest	4,059	916,892	103	1.7	2,205	769,165	102	1.6	1,854	147,727	111	2.0
WRA 18 California	1,101	413,358	90	2.2	247	82,123	69	1.7	853	331,058	95	2.3
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Barley for grain or seed											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	4,654	991,277	96	1.5	2,591	705,961	95	1.3	2,059	283,636	97	1.9
1998 . .	8,982	999,322	90	1.6	3,503	573,912	93	1.3	4,634	291,174	88	2.2
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Arizona	102	23,564	105	2.7	8	3,080	121	2.6	94	20,484	103	2.8
Arkansas	-	-	-	-	-	-	-	-	-	-	-	-
California	130	29,781	98	1.8	96	20,799	92	1.6	30	7,302	114	2.1
Colorado	398	82,734	124	1.7	238	59,720	128	1.5	160	23,014	113	2.2
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	8	1,553	52	0.7	8	1,553	52	0.7	-	-	-	-
Florida	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	1,758	438,399	97	1.4	1,182	375,711	97	1.3	576	62,688	94	1.4
Illinois	-	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Kansas	18	3,330	95	0.4	18	3,330	95	0.4	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	5	805	(D)	0.1	5	805	(D)	0.1	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	12	168	60	0.3	12	168	60	0.3	-	-	-	-
Minnesota	13	560	73	0.5	13	560	73	0.5	-	-	-	-
Mississippi	3	1,370	40	0.2	-	-	-	-	3	1,370	40	(D)
Missouri	4	180	50	0.2	-	-	-	-	4	180	50	0.2
Montana	953	292,443	85	1.2	500	198,989	85	1.1	453	93,454	87	1.5
Nebraska	20	1,493	41	0.7	19	(D)	(D)	0.6	1	(D)	(D)	(D)
Nevada	7	1,492	90	4.7	4	1,215	(D)	5.1	3	277	(D)	3.2
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota	30	4,353	89	0.8	17	(D)	75	0.6	13	(D)	107	1.1
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	11	275	95	0.2	11	275	95	0.2	-	-	-	-
Oregon	162	18,684	85	1.7	64	9,701	79	1.2	98	8,983	92	2.3
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
Texas	-	-	-	-	-	-	-	-	-	-	-	-
Utah	582	31,112	92	2.0	259	12,407	81	1.6	323	18,705	100	2.2
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
Washington	35	2,978	70	1.3	17	2,233	56	1.3	18	745	114	1.3
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	3	102	48	0.5	3	102	48	0.5	-	-	-	-
Wyoming	394	54,978	105	2.5	111	10,638	85	1.6	283	44,340	110	2.7
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	14	2,513	62	0.5	14	2,513	62	0.5	-	-	-	-
WRA 03 South Atlantic-Gulf	-	-	-	-	-	-	-	-	-	-	-	-
WRA 04 Great Lakes	13	208	57	0.4	13	208	57	0.4	-	-	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
WRA 07 Upper Mississippi	15	622	70	0.5	15	622	70	0.5	-	-	-	-
WRA 08 Lower Mississippi	7	1,550	41	0.2	-	-	-	-	7	1,550	41	0.2
WRA 09 Souris-Red-Rainy	9	1,426	71	0.3	9	1,426	71	0.3	-	-	-	-
WRA 10 Missouri	1,417	365,828	90	1.4	546	206,184	85	1.1	871	159,644	96	1.9
WRA 11 Arkansas-White-Red	29	3,605	95	0.4	29	3,605	95	0.4	-	-	-	-
WRA 12 Texas-Gulf	-	-	-	-	-	-	-	-	-	-	-	-
WRA 13 Rio Grande	200	53,632	131	1.5	200	53,632	131	1.5	-	-	-	-
WRA 14 Upper Colorado	179	(D)	(D)	2.4	137	(D)	(D)	1.5	42	3,725	126	3.5
WRA 15 Lower Colorado	102	23,564	105	2.7	8	3,080	121	2.6	94	20,484	103	2.8
WRA 16 Great Basin	917	44,278	79	1.8	600	25,967	65	1.4	317	18,311	100	2.2
WRA 17 Pacific Northwest	1,593	446,051	97	1.4	902	378,785	98	1.3	691	67,266	94	1.5
WRA 18 California	156	39,640	93	1.8	115	25,304	88	1.5	37	12,656	103	2.2
WRA 19 Alaska	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Soybeans for beans											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (bushels)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	21,072	5,347,078	48	0.8	13,900	2,838,717	50	0.8	7,168	2,507,973	45	0.8
1998 . .	19,830	4,516,540	42	0.8	9,754	1,621,345	49	0.7	7,746	2,193,134	36	1.0
2003 DATA												
Alabama	5	448	45	0.4	5	448	45	0.4	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas	3,182	1,686,946	43	0.8	354	219,628	43	0.6	2,828	1,467,318	43	0.8
California	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	12	2,200	51	1.4	12	2,200	51	1.4	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	103	10,561	44	0.3	103	10,561	44	0.3	-	-	-	-
Florida	13	3,820	43	0.8	13	3,820	43	0.8	-	-	-	-
Georgia	137	16,027	48	0.4	131	14,981	48	0.4	6	1,046	51	0.2
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	627	101,897	46	0.6	611	100,832	46	0.6	16	1,065	51	0.5
Indiana	475	75,040	43	0.4	465	73,120	44	0.4	10	1,920	36	0.5
Iowa	284	53,757	42	0.4	275	52,144	42	0.4	9	1,613	45	0.6
Kansas	1,669	311,032	52	1.1	1,218	263,950	52	1.1	451	47,082	48	1.1
Kentucky	29	4,691	55	0.5	27	(D)	(D)	0.5	2	(D)	(D)	(D)
Louisiana	220	74,566	41	0.6	34	11,777	42	0.5	186	62,789	41	0.6
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	84	9,832	40	0.3	84	9,832	40	0.3	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	426	72,371	43	0.4	426	72,371	43	0.4	-	-	-	-
Minnesota	655	102,854	43	0.6	647	102,606	43	0.6	8	248	45	1.0
Mississippi	568	399,348	47	0.6	147	67,220	45	0.6	421	332,128	47	0.7
Missouri	1,013	309,081	43	0.5	509	126,695	43	0.5	504	182,386	42	0.6
Montana	15	1,684	(D)	1.9	4	520	(D)	1.5	11	1,164	40	2.1
Nebraska	10,033	1,858,359	55	1.0	7,395	1,464,681	55	1.0	2,638	393,678	56	1.0
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	33	1,148	41	0.3	33	1,148	41	0.3	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	122	(D)	41	0.4	120	(D)	(D)	0.4	2	(D)	(D)	(D)
North Dakota	103	17,113	38	0.7	103	17,113	38	0.7	-	-	-	-
Ohio	3	370	53	(D)	3	370	53	(D)	-	-	-	-
Oklahoma	79	13,563	45	1.0	72	12,033	47	1.0	7	1,530	31	0.7
Oregon	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	3	108	40	0.2	3	108	40	0.2	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	30	5,737	44	0.4	30	5,737	44	0.4	-	-	-	-
South Dakota	559	100,662	43	0.8	547	97,358	44	0.8	12	3,304	41	0.8
Tennessee	22	5,054	49	0.6	22	5,054	49	0.6	-	-	-	-
Texas	263	64,850	33	0.9	202	54,460	34	0.9	57	10,002	29	1.2
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	24	2,660	45	0.3	24	2,660	45	0.3	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Wisconsin	279	36,717	41	0.6	279	36,717	41	0.6	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	245	24,049	42	0.3	245	24,049	42	0.3	-	-	-	-
WRA 03 South Atlantic-Gulf	307	30,696	46	0.5	299	29,150	46	0.4	8	1,546	49	0.5
WRA 04 Great Lakes	573	93,949	43	0.4	573	93,949	43	0.4	-	-	-	-
WRA 05 Ohio	328	55,584	47	0.5	325	55,404	47	0.5	3	180	36	0.5
WRA 06 Tennessee	6	468	47	0.6	6	468	47	0.6	-	-	-	-
WRA 07 Upper Mississippi	1,722	257,389	43	0.6	1,684	250,772	43	0.6	38	6,617	48	0.5
WRA 08 Lower Mississippi	4,174	2,152,432	44	0.7	701	339,379	43	0.6	3,473	1,813,053	44	0.8
WRA 09 Souris-Red-Rainy	163	26,663	40	0.5	155	26,415	39	0.5	8	248	45	1.0
WRA 10 Missouri	11,366	2,122,388	54	1.0	8,551	1,700,891	54	1.0	2,815	421,497	55	1.0
WRA 11 Arkansas-White-Red	2,065	566,267	44	0.9	1,285	306,564	47	1.0	780	259,703	41	0.8
WRA 12 Texas-Gulf	123	17,193	38	1.0	76	11,676	41	1.0	43	5,129	31	1.2
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-	-
WRA 18 California	-	-	-	-	-	-	-	-	-	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Beans, dry edible											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre (cwt)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	2,697	458,265	23	1.6	1,422	284,874	22	1.2	1,238	173,279	23	2.2
1998 . .	5,464	655,572	20	1.5	1,947	326,657	19	1.2	3,085	235,335	21	1.9
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	17	2,430	20	1.8	10	1,930	20	1.8	7	500	21	1.9
Arkansas	13	1,300	20	0.8	-	-	-	-	13	1,300	20	0.8
California	313	76,179	23	2.7	31	6,061	27	2.3	282	70,118	23	2.8
Colorado	218	38,975	26	1.5	191	36,596	26	1.5	27	2,379	24	1.1
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Florida	9	3,330	21	1.7	7	(D)	(D)	1.2	2	(D)	(D)	(D)
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	637	69,066	22	2.0	218	36,708	22	2.0	419	32,358	21	2.1
Illinois	-	-	-	-	-	-	-	-	-	-	-	-
Indiana	4	760	33	0.4	4	760	33	0.4	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	130	20,236	21	1.2	104	18,156	21	1.2	26	2,080	20	1.1
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	60	9,177	21	0.3	60	9,177	21	0.3	-	-	-	-
Minnesota	67	24,230	21	0.6	67	24,230	21	0.6	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	10	724	35	0.5	6	(D)	(D)	0.5	4	(D)	(D)	(D)
Montana	61	8,314	23	1.6	14	1,822	22	1.4	47	6,492	23	1.7
Nebraska	403	81,800	22	0.9	356	62,349	21	0.9	47	19,451	28	1.0
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
New Jersey	4	27	19	0.3	4	27	19	0.3	-	-	-	-
New Mexico	19	10,770	19	1.9	12	10,620	19	1.9	7	150	24	2.6
New York	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota	55	12,129	19	0.7	52	11,834	19	0.7	3	295	20	0.7
Ohio	3	3	10	0.4	-	-	-	-	-	-	-	-
Oklahoma	12	2,330	12	0.3	12	2,330	12	0.3	-	-	-	-
Oregon	76	6,984	16	1.5	27	2,585	10	1.0	49	4,399	19	1.8
Pennsylvania	33	99	18	0.5	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	1	(D)	(D)	(D)	-	-	-	-	-	-	-	-
South Dakota	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	80	26,982	22	0.9	71	23,382	23	0.9	9	3,600	19	0.7
Utah	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	3	99	16	0.1	3	99	16	0.1	-	-	-	-
Washington	207	23,657	25	1.8	132	17,853	25	1.9	75	5,804	26	1.4
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	4	7,600	24	1.2	4	7,600	24	1.2	-	-	-	-
Wyoming	249	27,973	24	2.2	28	5,832	25	1.1	221	22,141	24	2.4
Water Resources Areas												
WRA 01 New England	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
WRA 02 Mid-Atlantic	9	320	21	0.2	9	320	21	0.2	-	-	-	-
WRA 03 South Atlantic-Gulf	10	3,340	21	1.7	7	1,330	25	(D)	2	(D)	(D)	(D)
WRA 04 Great Lakes	61	9,302	21	0.3	61	9,302	21	0.3	-	-	-	-
WRA 05 Ohio	38	(D)	(D)	0.3	2	(D)	(D)	(D)	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	51	25,543	23	0.8	51	25,543	23	0.8	-	-	-	-
WRA 08 Lower Mississippi	23	2,024	25	(D)	6	(D)	35	0.5	17	(D)	22	0.8
WRA 09 Souris-Red-Rainy	62	15,343	20	0.7	62	15,343	20	0.7	-	-	-	-
WRA 10 Missouri	1,064	180,481	23	1.3	693	127,643	23	1.1	371	52,838	25	1.7
WRA 11 Arkansas-White-Red	22	9,432	29	0.9	22	9,432	29	0.9	-	-	-	-
WRA 12 Texas-Gulf	77	22,774	18	1.0	68	19,174	18	1.0	9	3,600	19	0.7
WRA 13 Rio Grande	12	1,070	18	1.9	5	920	17	1.8	7	150	24	(D)
WRA 14 Upper Colorado	11	9,376	19	(D)	11	9,376	19	(D)	-	-	-	-
WRA 15 Lower Colorado	17	2,430	20	1.8	10	1,930	(D)	1.8	7	500	(D)	1.9
WRA 16 Great Basin	10	932	25	2.1	10	932	25	2.1	-	-	-	-
WRA 17 Pacific Northwest	913	99,155	22	1.9	372	56,734	23	1.9	541	42,421	22	2.0
WRA 18 California	315	76,319	23	2.7	31	6,061	27	2.3	284	70,258	23	2.8
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Rice											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre (cwt)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	6,836	2,994,757	69	2.3	111	47,838	71	1.7	6,725	2,946,919	69	2.3
1998 . .	8,791	3,473,384	59	2.4	44	6,960	60	0.9	8,689	3,439,212	59	2.4
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas	3,080	1,322,891	68	1.8	20	6,880	79	1.7	3,060	1,316,011	68	1.8
California	1,175	595,932	78	4.1	21	7,332	93	4.8	1,154	588,600	78	4.1
Colorado	-	-	-	-	-	-	-	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	1	(D)	(D)	(D)	-	-	-	-	1	(D)	(D)	(D)
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	2	(D)	(D)	(D)	-	-	-	-	2	(D)	(D)	(D)
Indiana	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	1	(D)	(D)	(D)	-	-	-	-	1	(D)	(D)	(D)
Louisiana	1,165	439,565	61	1.7	42	10,946	61	1.6	1,123	428,619	61	1.7
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi	344	194,212	69	2.0	1	(D)	(D)	(D)	343	(D)	(D)	2.0
Missouri	301	129,931	60	1.4	2	(D)	(D)	(D)	299	(D)	(D)	1.4
Montana	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	-	-	-	-	-	-	-	-	-	-	-	-
Oregon	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	3	275	60	2.4	-	-	-	-	3	275	60	2.4
Texas	764	308,522	67	2.3	25	22,000	66	0.6	739	286,522	67	2.4
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	1	(D)	(D)	(D)	-	-	-	-	1	(D)	(D)	(D)
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	2	(D)	(D)	(D)	-	-	-	-	2	(D)	(D)	(D)
WRA 08 Lower Mississippi	4,057	1,809,141	67	1.8	65	18,506	68	1.7	3,992	1,790,635	67	1.8
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	-	-	-	-	-	-	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	837	278,268	65	1.8	-	-	-	-	837	278,268	65	1.8
WRA 12 Texas-Gulf	764	308,522	67	2.3	25	22,000	66	0.6	739	286,522	67	2.4
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-	-
WRA 18 California	1,175	595,932	78	4.1	21	7,332	93	4.8	1,154	588,600	78	4.1
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Other small grains (oats, rye, etc.)								
				Method of distribution					
				Sprinkler system only			Gravity flow only		
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	2,829	240,304	1.4	1,636	138,153	1.1	1,193	102,151	1.7
1998 . .	3,900	218,531	1.7	1,357	100,969	1.4	2,427	105,047	2.0
2003 DATA									
Alabama	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-
Arizona	18	2,240	4.2	-	-	-	18	2,240	4.2
Arkansas	5	1,900	2.0	-	-	-	5	1,900	2.0
California	350	62,285	1.7	56	11,959	0.9	294	50,326	1.9
Colorado	150	9,854	1.2	80	9,143	1.0	70	711	3.1
Connecticut	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-
Florida	17	2,388	0.5	17	2,388	0.5	-	-	-
Georgia	30	2,537	0.2	30	2,537	0.2	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-
Idaho	134	12,981	1.7	69	9,294	2.0	65	3,687	1.2
Illinois	2	(D)	(D)	2	(D)	(D)	-	-	-
Indiana	7	35	0.5	7	35	0.5	-	-	-
Iowa	2	(D)	(D)	2	(D)	(D)	-	-	-
Kansas	23	2,843	0.4	23	2,843	0.4	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-
Michigan	14	1,203	0.2	14	1,203	0.2	-	-	-
Minnesota	58	1,269	0.5	58	1,269	0.5	-	-	-
Mississippi	4	2,042	0.5	1	(D)	(D)	3	(D)	(D)
Missouri	-	-	-	-	-	-	-	-	-
Montana	400	18,734	1.4	163	7,694	1.4	237	11,040	1.4
Nebraska	176	13,448	0.9	156	9,958	1.0	20	3,490	0.9
Nevada	39	2,771	2.3	14	1,226	2.3	25	1,545	2.3
New Hampshire	-	-	-	-	-	-	-	-	-
New Jersey	3	15	0.4	3	15	0.4	-	-	-
New Mexico	46	5,154	1.3	39	4,144	1.2	7	1,010	(D)
New York	-	-	-	-	-	-	-	-	-
North Carolina	20	2,478	(D)	20	2,478	(D)	-	-	-
North Dakota	16	1,670	0.9	13	1,394	1.1	3	276	0.2
Ohio	-	-	-	-	-	-	-	-	-
Oklahoma	39	5,317	0.5	39	5,317	0.5	-	-	-
Oregon	129	18,493	1.5	106	15,960	1.3	23	2,533	2.9
Pennsylvania	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-
South Dakota	66	3,265	1.0	12	(D)	1.2	54	(D)	1.0
Tennessee	-	-	-	-	-	-	-	-	-
Texas	187	25,180	0.7	132	20,052	0.8	55	5,128	0.3
Utah	522	18,398	1.8	328	11,840	1.9	194	6,558	1.7
Vermont	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-
Washington	150	11,879	1.2	143	11,357	1.2	7	522	1.7
West Virginia	-	-	-	-	-	-	-	-	-
Wisconsin	16	1,756	0.6	16	1,756	0.6	-	-	-
Wyoming	206	9,975	1.5	93	2,730	0.5	113	7,245	1.8
Water Resources Areas									
WRA 01 New England	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	3	15	0.4	3	15	0.4	-	-	-
WRA 03 South Atlantic-Gulf	67	7,403	0.4	67	7,403	0.4	-	-	-
WRA 04 Great Lakes	28	2,491	0.4	28	2,491	0.4	-	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	40	1,411	0.7	40	1,411	0.7	-	-	-
WRA 08 Lower Mississippi	9	3,942	1.2	1	(D)	(D)	8	(D)	1.2
WRA 09 Souris-Red-Rainy	29	435	0.5	29	435	(D)	-	-	-
WRA 10 Missouri	748	45,687	1.2	344	22,302	1.1	404	23,385	1.4
WRA 11 Arkansas-White-Red	127	15,340	0.5	72	(D)	0.6	55	(D)	(D)
WRA 12 Texas-Gulf	105	12,120	0.6	105	12,120	0.6	-	-	-
WRA 13 Rio Grande	101	15,820	1.0	95	15,234	1.1	6	586	(D)
WRA 14 Upper Colorado	350	11,133	1.8	222	9,108	1.6	128	2,025	2.7
WRA 15 Lower Colorado	19	2,280	4.1	1	(D)	(D)	18	(D)	4.2
WRA 16 Great Basin	349	15,792	1.7	174	7,929	1.8	175	7,863	1.6
WRA 17 Pacific Northwest	490	41,601	1.5	385	34,445	1.4	105	7,156	1.9
WRA 18 California	364	64,834	1.7	70	14,508	1.0	294	50,326	1.9
WRA 19 Alaska	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Alfalfa and alfalfa mixtures (dry hay, haylage, and greenchop)											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre [1] (tons, dry)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre [1] (tons, dry)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre [1] (tons, dry)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	46,290	6,221,542	5.0	2.3	23,498	3,558,500	4.8	1.9	22,760	2,657,248	5.2	2.8
1998 . .	55,247	6,513,077	5.1	2.4	19,908	2,567,488	5.1	2.0	31,324	3,032,524	5.2	2.7
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	803	210,084	8.2	5.8	58	28,823	7.6	4.4	745	181,261	8.3	6.0
Arkansas	-	-	-	-	-	-	-	-	-	-	-	-
California	2,638	1,008,458	7.1	3.7	469	192,635	5.6	2.4	2,143	810,499	7.5	4.1
Colorado	6,144	629,406	3.5	1.5	2,197	312,630	3.8	1.7	3,947	316,776	3.1	1.4
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	4	58	4.0	0.2	4	58	4.0	0.2	-	-	-	-
Florida	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	20	847	4.5	0.3	20	847	4.5	0.3	-	-	-	-
Hawaii	3	59	3.7	2.2	1	(D)	(D)	(D)	-	-	-	-
Idaho	7,192	758,734	4.9	2.0	4,214	563,319	4.8	2.0	2,978	195,415	5.0	2.2
Illinois	3	42	4.9	(D)	3	42	4.9	(D)	-	-	-	-
Indiana	36	2,278	5.2	0.4	36	2,278	5.2	0.4	-	-	-	-
Iowa	23	687	5.9	0.5	12	297	5.8	0.4	11	390	6.0	0.6
Kansas	925	207,977	5.5	1.3	791	196,354	5.6	1.4	134	11,623	3.8	1.1
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Maryland	5	222	6.2	0.2	5	222	6.2	0.2	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	69	4,574	6.4	0.3	69	4,574	6.4	0.3	-	-	-	-
Minnesota	363	24,620	5.2	0.6	363	24,620	5.2	0.6	-	-	-	-
Mississippi	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
Missouri	197	6,117	4.4	0.3	197	6,117	4.4	0.3	-	-	-	-
Montana	5,393	714,722	3.3	1.4	2,098	390,163	3.5	1.3	3,295	324,559	3.0	1.4
Nebraska	2,901	350,700	5.2	1.1	2,284	307,189	5.3	1.1	617	43,511	4.6	1.1
Nevada	1,077	279,644	4.6	3.0	339	170,202	4.7	3.1	738	109,442	4.5	2.9
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
New Mexico	2,505	163,932	5.7	2.8	486	(D)	(D)	2.6	2,018	86,514	5.6	2.9
New York	4	171	4.8	0.1	4	171	4.8	0.1	-	-	-	-
North Carolina	56	1,744	3.1	0.5	56	1,744	3.1	0.5	-	-	-	-
North Dakota	205	23,090	4.0	1.1	135	18,641	4.1	1.1	70	4,449	3.8	1.0
Ohio	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Oklahoma	310	37,928	4.0	1.3	271	35,166	4.0	1.3	39	2,762	3.5	1.6
Oregon	2,773	376,702	4.7	2.2	2,227	295,820	4.8	2.1	546	80,882	4.3	2.3
Pennsylvania	13	526	5.2	0.2	13	526	5.2	0.2	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	719	97,064	3.9	1.2	290	34,538	5.2	1.1	429	62,526	3.3	1.2
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	588	98,021	5.9	2.1	427	80,611	5.8	1.7	161	17,410	6.7	3.5
Utah	6,217	494,119	4.3	2.3	3,033	311,774	4.2	2.3	3,184	182,345	4.5	2.4
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	13	229	3.7	0.3	13	229	3.7	0.3	-	-	-	-
Washington	2,258	354,087	6.5	2.2	2,110	331,706	6.5	2.2	145	21,964	5.9	2.3
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	218	17,294	4.8	0.5	218	17,294	4.8	0.5	-	-	-	-
Wyoming	2,608	356,195	3.0	1.7	1,048	151,275	3.3	1.5	1,560	204,920	2.7	1.8
Water Resources Areas												
WRA 01 New England	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
WRA 02 Mid-Atlantic	37	1,191	4.7	(D)	37	1,191	4.7	(D)	-	-	-	-
WRA 03 South Atlantic-Gulf	76	2,591	3.6	0.4	76	2,591	3.6	0.4	-	-	-	-
WRA 04 Great Lakes	141	10,911	5.6	0.4	141	10,911	5.6	0.4	-	-	-	-
WRA 05 Ohio	16	1,667	5.1	0.4	16	1,667	5.1	0.4	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	503	33,615	5.2	0.6	494	33,345	5.2	0.6	9	270	8.0	0.7
WRA 08 Lower Mississippi	52	2,515	2.7	0.2	52	2,515	2.7	0.2	-	-	-	-
WRA 09 Souris-Red-Rainy	111	(D)	(D)	0.6	105	8,800	4.1	0.6	6	(D)	(D)	1.0
WRA 10 Missouri	13,474	1,632,462	3.9	1.4	6,150	936,673	4.4	1.3	7,324	695,789	3.2	1.5
WRA 11 Arkansas-White-Red	1,956	386,818	4.2	1.2	1,082	249,731	5.2	1.4	873	(D)	(D)	1.0
WRA 12 Texas-Gulf	347	55,062	6.2	1.7	332	54,746	6.2	1.7	15	316	5.6	2.6
WRA 13 Rio Grande	2,731	257,571	5.4	2.5	602	162,889	5.2	2.2	2,129	94,682	5.6	3.0
WRA 14 Upper Colorado	4,542	350,919	3.1	1.7	2,304	205,847	(D)	1.6	2,238	145,072	(D)	1.9
WRA 15 Lower Colorado	1,065	235,152	7.9	5.6	236	46,679	6.6	4.0	829	188,473	8.2	5.9
WRA 16 Great Basin	5,674	703,226	4.5	2.5	2,247	438,667	4.5	2.6	3,427	264,559	4.6	2.5
WRA 17 Pacific Northwest	12,640	1,473,044	5.1	2.0	8,878	1,153,169	5.2	2.0	3,759	319,458	4.7	2.1
WRA 18 California	2,920	1,065,717	7.0	3.7	743	248,994	5.5	2.4	2,151	811,399	7.5	4.1
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	3	59	3.7	2.2	1	(D)	(D)	(D)	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	All other hay (dry hay, haylage, grass silage, and greenchop)											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre [2] (tons, dry)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre [2] (tons, dry)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre [2] (tons, dry)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	27,667	3,253,729	2.8	1.7	12,173	1,115,276	3.6	1.4	15,476	2,136,083	2.4	1.8
1998 . .	23,562	3,008,815	2.5	1.9	5,204	420,925	3.4	1.3	17,333	2,291,804	2.3	2.0
2003 DATA												
Alabama	55	2,722	7.2	0.4	55	2,722	7.2	0.4	-	-	-	-
Alaska	13	1,456	2.2	0.5	13	1,456	2.2	0.5	-	-	-	-
Arizona	335	42,051	4.9	3.6	28	5,360	4.5	2.9	307	36,691	4.9	3.7
Arkansas	355	17,870	4.7	0.3	321	16,192	4.8	0.3	34	1,678	3.4	0.3
California	1,885	344,531	4.6	2.5	382	81,418	3.3	1.7	1,503	263,113	4.9	2.8
Colorado	4,554	472,776	2.1	1.7	946	72,849	2.5	1.1	3,608	399,927	2.1	1.8
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	5	390	3.9	0.3	5	390	3.9	0.3	-	-	-	-
Florida	274	16,275	3.6	0.8	180	11,325	3.9	0.9	92	4,490	3.2	0.6
Georgia	257	11,478	3.9	0.3	257	11,478	3.9	0.3	-	-	-	-
Hawaii	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
Idaho	1,353	103,573	2.6	1.6	632	52,983	2.9	1.9	721	50,590	2.2	1.2
Illinois	4	583	1.4	1.1	4	583	1.4	1.1	-	-	-	-
Indiana	9	288	4.9	0.2	9	288	4.9	0.2	-	-	-	-
Iowa	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Kansas	384	36,567	6.3	1.1	267	30,578	6.2	1.2	117	5,989	6.8	0.8
Kentucky	7	413	4.4	0.5	7	413	4.4	0.5	-	-	-	-
Louisiana	31	2,598	6.2	0.1	31	2,598	6.2	0.1	-	-	-	-
Maine	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Maryland	15	1,361	3.6	0.6	15	1,361	3.6	0.6	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	5	337	5.0	0.4	5	337	5.0	0.4	-	-	-	-
Minnesota	91	3,071	3.1	0.4	91	3,071	3.1	0.4	-	-	-	-
Mississippi	6	2,836	2.5	0.7	2	(D)	(D)	(D)	4	(D)	(D)	0.6
Missouri	41	3,849	2.7	0.4	41	3,849	2.7	0.4	-	-	-	-
Montana	2,329	383,511	2.1	1.3	675	56,363	2.3	1.2	1,654	327,148	2.0	1.4
Nebraska	934	131,811	2.8	1.0	745	122,823	2.9	1.0	189	8,988	1.5	1.0
Nevada	460	175,166	1.7	1.9	92	21,662	2.8	1.9	368	153,504	1.6	1.9
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	4	82	3.2	0.2	4	82	3.2	0.2	-	-	-	-
New Mexico	1,094	84,439	3.2	1.9	327	50,548	3.4	1.8	767	33,891	2.8	1.9
New York	9	1,350	7.3	0.1	4	1,200	8.0	0.1	-	-	-	-
North Carolina	409	21,237	4.5	0.5	409	21,237	4.5	0.5	-	-	-	-
North Dakota	36	3,847	3.0	0.8	21	832	6.3	1.0	15	3,015	2.1	0.8
Ohio	15	260	2.0	1.3	1	(D)	(D)	(D)	14	(D)	(D)	1.3
Oklahoma	412	37,697	3.6	0.9	406	36,795	3.7	0.9	6	902	2.3	1.5
Oregon	3,337	364,205	2.4	1.8	2,361	135,652	3.1	1.7	965	226,793	2.0	1.8
Pennsylvania	5	288	4.2	0.7	5	288	4.2	0.7	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	12	256	3.0	2.5	12	256	3.0	2.5	-	-	-	-
South Dakota	190	17,368	2.7	1.0	82	7,253	3.5	1.3	108	10,115	2.1	0.8
Tennessee	7	221	1.9	0.4	7	221	1.9	0.4	-	-	-	-
Texas	2,612	202,243	3.9	1.1	1,506	169,390	4.2	1.1	1,106	32,853	2.5	1.3
Utah	2,290	128,599	2.5	2.1	704	49,956	3.1	2.1	1,586	78,643	2.1	2.1
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	27	378	2.5	0.3	27	378	2.5	0.3	-	-	-	-
Washington	1,690	155,568	5.4	2.4	1,216	109,125	5.3	1.7	474	46,443	5.5	4.1
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	27	2,178	6.1	0.7	27	2,178	6.1	0.7	-	-	-	-
Wyoming	2,084	477,049	1.5	1.4	246	27,827	2.5	2.0	1,838	449,222	1.5	1.3
Water Resources Areas												
WRA 01 New England	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
WRA 02 Mid-Atlantic	38	2,229	3.7	0.5	38	2,229	3.7	0.5	-	-	-	-
WRA 03 South Atlantic-Gulf	1,017	53,764	4.2	0.6	921	47,778	4.3	0.6	94	5,526	(D)	0.7
WRA 04 Great Lakes	15	2,097	6.3	0.2	10	1,947	6.6	0.2	-	-	-	-
WRA 05 Ohio	39	1,073	3.8	0.6	25	(D)	4.3	(D)	14	(D)	2.0	(D)
WRA 06 Tennessee	4	470	2.2	(D)	4	470	2.2	0.9	-	-	-	-
WRA 07 Upper Mississippi	98	5,997	3.6	0.6	98	5,997	3.6	0.6	-	-	-	-
WRA 08 Lower Mississippi	274	11,974	4.1	0.2	238	9,496	4.4	0.2	36	2,478	2.9	0.2
WRA 09 Souris-Red-Rainy	34	2,478	2.5	0.9	32	(D)	(D)	0.6	2	(D)	(D)	(D)
WRA 10 Missouri	5,653	893,951	2.1	1.5	1,784	227,620	2.8	1.1	3,869	666,331	1.9	1.6
WRA 11 Arkansas-White-Red	1,611	218,456	3.5	1.1	1,043	140,128	4.2	1.0	568	78,328	2.3	1.4
WRA 12 Texas-Gulf	2,425	167,018	4.1	1.2	1,429	141,200	4.4	1.1	996	25,818	2.4	1.2
WRA 13 Rio Grande	943	80,944	2.9	1.8	236	32,631	3.8	2.2	707	48,313	2.2	1.6
WRA 14 Upper Colorado	4,060	447,883	1.8	1.4	935	49,040	(D)	1.4	3,125	398,843	1.7	1.4
WRA 15 Lower Colorado	399	46,467	4.7	3.6	42	7,272	3.9	3.4	357	39,195	4.8	3.6
WRA 16 Great Basin	2,192	279,799	1.9	1.9	362	49,986	3.2	2.1	1,830	229,813	1.6	1.8
WRA 17 Pacific Northwest	6,730	671,174	3.1	1.8	4,372	299,042	3.8	1.6	2,347	370,372	2.5	2.0
WRA 18 California	2,119	366,444	4.4	2.5	588	97,230	3.2	1.8	1,531	269,214	4.9	2.7
WRA 19 Alaska	13	1,456	2.2	0.5	13	1,456	2.2	0.5	-	-	-	-
WRA 20 Hawaii	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Peanuts for nuts											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre (pounds)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (pounds)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (pounds)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	2,117	384,867	3,600	0.8	2,048	361,840	3,580	0.8	69	23,027	3,921	0.6
1998 . .	3,207	502,801	3,296	1.1	3,167	496,400	3,294	1.1	18	2,143	3,004	2.7
2003 DATA												
Alabama	37	9,048	3,675	0.7	37	9,048	3,675	0.7	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas	5	(D)	3,500	1.0	5	(D)	3,500	1.0	-	-	-	-
California	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	-	-	-	-	-	-	-	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	126	22,797	3,786	0.6	126	22,797	3,786	0.6	-	-	-	-
Georgia	871	140,081	3,889	0.4	842	124,647	3,852	0.4	29	15,434	4,184	0.3
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	-	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	-	-	-	-	-	-	-	-	-	-	-	-
Montana	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	38	15,333	2,287	1.5	35	14,308	2,256	1.4	3	1,025	2,723	2.8
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	23	2,861	3,412	0.2	23	2,861	3,412	0.2	-	-	-	-
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	265	26,616	3,136	1.1	254	25,118	3,126	1.1	11	1,498	3,303	1.2
Oregon	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	11	2,535	3,659	0.3	11	2,535	3,659	0.3	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	733	163,228	3,524	1.1	707	158,158	3,523	1.1	26	5,070	3,546	1.1
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	6	588	(D)	(D)	6	588	(D)	(D)	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	1,074	177,910	3,854	0.4	1,045	162,476	3,823	0.4	29	15,434	4,184	0.3
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
WRA 08 Lower Mississippi	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	-	-	-	-	-	-	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	375	37,203	3,241	1.1	339	30,755	3,191	1.1	36	6,448	3,477	1.1
WRA 12 Texas-Gulf	662	166,436	3,397	1.2	658	165,291	3,400	1.1	4	1,145	2,878	2.7
WRA 13 Rio Grande	4	(D)	(D)	(D)	4	(D)	(D)	(D)	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-	-
WRA 18 California	-	-	-	-	-	-	-	-	-	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	All cotton - con.							
					Method of distribution			
					Sprinkler system only			
	Farms	Irrigated acres harvested	Average yield per acre (lbs, lint)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (lbs, lint)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	8,621	4,080,054	996	1.4	4,454	2,020,759	879	0.9
1998 . .	10,952	4,881,801	769	1.5	3,697	1,552,854	708	1.1
2003 DATA								
Alabama	54	21,244	1,092	0.8	53	(D)	(D)	0.8
Alaska	-	-	-	-	-	-	-	-
Arizona	453	231,296	1,331	4.2	12	(D)	(D)	3.1
Arkansas	794	633,598	959	0.7	302	269,089	912	0.6
California	1,292	757,008	1,332	2.9	179	95,779	1,211	2.7
Colorado	-	-	-	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-
Florida	14	7,938	844	0.9	14	7,938	844	0.9
Georgia	736	230,553	995	0.4	707	211,035	993	0.4
Hawaii	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-
Illinois	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-
Kansas	54	30,736	845	0.9	46	29,664	841	0.9
Kentucky	-	-	-	-	-	-	-	-
Louisiana	438	153,209	1,010	0.6	65	37,718	1,091	0.6
Maine	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-
Mississippi	514	427,271	1,065	0.5	281	246,128	1,045	0.5
Missouri	390	217,464	920	0.5	200	105,721	888	0.4
Montana	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-
New Mexico	261	48,958	1,054	2.2	152	(D)	1,028	1.9
New York	-	-	-	-	-	-	-	-
North Carolina	66	9,540	903	0.3	64	(D)	(D)	0.3
North Dakota	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-
Oklahoma	170	59,588	1,105	1.1	71	15,714	783	1.0
Oregon	-	-	-	-	-	-	-	-
Pennsylvania	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-
South Carolina	34	8,616	960	0.4	29	8,266	(D)	0.4
South Dakota	-	-	-	-	-	-	-	-
Tennessee	16	9,680	1,042	0.4	16	9,680	1,042	0.4
Texas	3,335	1,233,355	728	1.0	2,263	904,607	733	0.9
Utah	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-
Water Resources Areas								
WRA 01 New England	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	906	269,037	990	0.5	869	248,459	988	0.5
WRA 04 Great Lakes	-	-	-	-	-	-	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-
WRA 06 Tennessee	25	11,884	1,145	0.8	25	11,884	1,145	0.8
WRA 07 Upper Mississippi	-	-	-	-	-	-	-	-
WRA 08 Lower Mississippi	2,120	1,433,187	989	0.6	834	661,364	966	0.5
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-
WRA 10 Missouri	-	-	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	679	257,524	836	0.9	353	129,690	847	0.9
WRA 12 Texas-Gulf	2,929	1,060,941	718	1.0	2,116	838,285	724	1.0
WRA 13 Rio Grande	215	58,351	1,201	2.4	66	(D)	(D)	2.4
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	455	232,122	1,330	4.2	12	(D)	(D)	3.1
WRA 16 Great Basin	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-
WRA 18 California	1,292	757,008	1,332	2.9	179	95,779	1,211	2.7
WRA 19 Alaska	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	All cotton							
	Method of distribution							
	Gravity flow only				Drip, trickle, or low-flow micro irrigation			
	Farms	Acres	Average yield per acres (lbs, lint)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (lbs, lint)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	4,024	2,012,813	1,112	1.8	143	46,482	997	1.6
1998 . .	4,841	1,925,875	835	2.1	(NA)	(NA)	(NA)	(NA)
2003 DATA								
Alabama	-	-	-	-	1	(D)	(D)	(D)
Alaska	-	-	-	-	-	-	-	-
Arizona	429	206,037	1,318	4.3	12	(D)	(D)	3.6
Arkansas	492	364,509	994	0.7	-	-	-	-
California	1,109	653,801	1,350	2.9	4	7,428	1,281	3.0
Colorado	-	-	-	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-
Florida	-	-	-	-	-	-	-	-
Georgia	29	19,518	1,022	0.3	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-
Illinois	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-
Kansas	8	1,072	949	1.1	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-
Louisiana	373	115,491	984	0.5	-	-	-	-
Maine	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-
Mississippi	233	181,143	1,092	0.5	-	-	-	-
Missouri	190	111,743	951	0.6	-	-	-	-
Montana	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-
New Mexico	109	(D)	1,104	2.7	-	-	-	-
New York	-	-	-	-	-	-	-	-
North Carolina	2	(D)	(D)	(D)	-	-	-	-
North Dakota	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-
Oklahoma	99	43,874	1,221	1.2	-	-	-	-
Oregon	-	-	-	-	-	-	-	-
Pennsylvania	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-
South Carolina	5	350	(D)	(D)	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-
Tennessee	-	-	-	-	-	-	-	-
Texas	946	298,078	707	1.1	126	30,670	790	(D)
Utah	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-
Water Resources Areas								
WRA 01 New England	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	36	(D)	(D)	0.4	1	(D)	(D)	(D)
WRA 04 Great Lakes	-	-	-	-	-	-	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	-	-	-	-	-	-	-	-
WRA 08 Lower Mississippi	1,286	771,823	1,009	0.6	-	-	-	-
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-
WRA 10 Missouri	-	-	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	326	127,834	824	0.8	-	-	-	-
WRA 12 Texas-Gulf	687	191,986	681	1.1	126	30,670	790	(D)
WRA 13 Rio Grande	149	(D)	(D)	2.4	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	431	206,863	1,316	4.3	12	(D)	(D)	3.6
WRA 16 Great Basin	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-
WRA 18 California	1,109	653,801	1,350	2.9	4	7,428	1,281	3.0
WRA 19 Alaska	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Sugarbeets for sugar											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre (tons)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (tons)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (tons)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	2,499	561,837	29	2.7	1,592	365,676	30	2.4	907	196,161	28	3.2
1998 . .	2,802	624,636	26	2.5	1,067	297,943	26	2.0	1,608	287,358	25	3.0
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas	-	-	-	-	-	-	-	-	-	-	-	-
California	866	129,594	38	3.2	689	79,662	40	2.3	177	49,932	35	4.6
Colorado	203	34,667	24	1.6	120	25,262	25	1.6	83	9,405	22	1.6
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	760	246,887	29	2.7	614	224,490	29	2.7	146	22,397	30	3.2
Illinois	-	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	56	(D)	21	0.5	52	(D)	22	0.5	4	1,064	21	0.3
Minnesota	10	2,792	24	(D)	10	2,792	24	(D)	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	-	-	-	-	-	-	-	-	-	-	-	-
Montana	328	72,403	24	2.2	26	9,254	20	1.4	302	63,149	25	2.3
Nebraska	40	10,105	22	1.3	21	5,765	20	1.6	19	4,340	24	0.9
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota	50	14,594	(D)	2.2	12	2,039	(D)	0.8	38	12,555	23	2.4
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	-	-	-	-	-	-	-	-	-	-	-	-
Oregon	67	9,954	29	2.7	35	5,676	25	2.3	32	4,278	33	3.3
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	-	-	-	-	-	-	-	-	-	-	-	-
Utah	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	4	3,481	27	1.4	4	3,481	27	1.4	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	114	31,757	22	3.9	8	2,716	23	2.5	106	29,041	22	4.0
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	-	-	-	-	-	-	-	-	-	-	-	-
WRA 04 Great Lakes	56	(D)	21	0.5	52	(D)	22	0.5	4	1,064	21	0.3
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	8	2,222	22	0.6	8	2,222	22	0.6	-	-	-	-
WRA 08 Lower Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
WRA 09 Souris-Red-Rainy	12	2,249	25	(D)	12	2,249	25	(D)	-	-	-	-
WRA 10 Missouri	725	161,847	(D)	2.3	177	43,357	(D)	1.6	548	118,490	24	2.6
WRA 11 Arkansas-White-Red	-	-	-	-	-	-	-	-	-	-	-	-
WRA 12 Texas-Gulf	-	-	-	-	-	-	-	-	-	-	-	-
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
WRA 17 Pacific Northwest	831	260,322	29	2.7	653	233,647	29	2.7	178	26,675	31	3.2
WRA 18 California	866	129,594	38	3.2	689	79,662	40	2.3	177	49,932	35	4.6
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Tobacco											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre (pounds)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (pounds)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (pounds)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	1,533	35,304	2,411	0.4	1,522	35,089	2,413	0.4	-	-	-	-
1998 . .	3,957	121,059	2,427	0.5	3,881	119,741	2,430	0.5	20	130	1,902	0.4
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas	-	-	-	-	-	-	-	-	-	-	-	-
California	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	-	-	-	-	-	-	-	-	-	-	-	-
Connecticut	8	780	1,605	0.4	6	672	1,619	0.4	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	59	1,560	1,198	0.9	59	1,560	1,198	0.9	-	-	-	-
Georgia	198	10,776	2,394	0.4	196	10,732	2,393	0.4	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	-	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	576	6,931	2,861	0.3	569	6,868	2,859	0.3	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	3	(D)	1,954	(D)	3	(D)	1,954	(D)	-	-	-	-
Massachusetts	11	698	883	0.2	11	698	883	0.2	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	-	-	-	-	-	-	-	-	-	-	-	-
Montana	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	351	9,517	2,402	0.3	351	9,517	2,402	0.3	-	-	-	-
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	-	-	-	-	-	-	-	-	-	-	-	-
Oregon	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	3	18	2,411	0.1	3	18	2,411	0.1	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	136	(D)	2,964	(D)	136	(D)	2,964	(D)	-	-	-	-
Texas	-	-	-	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	188	3,296	2,370	0.5	188	3,296	2,370	0.5	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	19	1,478	1,264	0.3	17	1,370	1,244	0.3	-	-	-	-
WRA 02 Mid-Atlantic	15	141	2,091	0.3	15	141	2,091	0.3	-	-	-	-
WRA 03 South Atlantic-Gulf	787	25,104	2,320	0.4	785	25,060	2,319	0.4	-	-	-	-
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	547	6,165	2,721	0.3	540	6,102	2,718	0.3	-	-	-	-
WRA 06 Tennessee	119	1,465	3,419	0.3	119	1,465	3,419	0.3	-	-	-	-
WRA 07 Upper Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
WRA 08 Lower Mississippi	46	951	3,088	0.4	46	951	3,088	0.4	-	-	-	-
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	-	-	-	-	-	-	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	-	-	-	-	-	-	-	-	-	-	-	-
WRA 12 Texas-Gulf	-	-	-	-	-	-	-	-	-	-	-	-
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-	-
WRA 18 California	-	-	-	-	-	-	-	-	-	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Potatoes											
					Method of distribution							
					Sprinkler system only				Gravity flow only			
	Farms	Irrigated acres harvested	Average yield per acre (cwt)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre	Farms	Acres	Average yield per acre (cwt)	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	3,423	1,032,604	394	1.8	2,850	948,226	401	1.8	243	83,658	308	1.9
1998 . .	4,792	1,185,764	370	1.8	3,730	1,062,338	377	1.7	809	78,850	283	2.5
2003 DATA												
Alabama	4	490	198	0.3	4	490	198	0.3	-	-	-	-
Alaska	15	440	109	0.5	12	437	109	0.5	-	-	-	-
Arizona	10	4,699	264	3.3	5	3,456	246	3.4	4	893	316	3.0
Arkansas	-	-	-	-	-	-	-	-	-	-	-	-
California	118	49,065	366	2.5	112	46,865	366	2.5	6	2,200	371	2.8
Colorado	217	68,254	375	1.5	217	68,254	375	1.5	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	4	1,590	250	0.2	4	1,590	250	0.2	-	-	-	-
Florida	93	49,833	252	1.3	10	4,664	320	1.6	83	45,169	245	1.3
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	722	338,912	349	2.1	680	317,730	351	2.1	42	21,182	322	2.7
Illinois	53	6,119	389	0.3	39	6,098	390	0.3	-	-	-	-
Indiana	63	1,906	246	0.7	25	1,885	247	0.7	-	-	-	-
Iowa	29	116	247	0.5	20	107	263	0.5	9	9	50	0.5
Kansas	8	3,100	326	0.6	8	3,100	326	0.6	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	59	(D)	(D)	(D)	26	(D)	(D)	(D)	-	-	-	-
Maryland	19	1,924	264	0.5	17	1,923	264	0.5	-	-	-	-
Massachusetts	32	(D)	(D)	0.1	1	(D)	(D)	(D)	31	(D)	(D)	0.5
Michigan	187	43,188	365	0.8	161	43,032	362	0.8	-	-	-	-
Minnesota	66	48,297	427	0.8	62	46,434	430	0.8	4	1,863	338	0.9
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	13	6,981	288	2.0	13	6,981	288	2.0	-	-	-	-
Montana	58	12,845	331	1.6	58	12,845	331	1.6	-	-	-	-
Nebraska	99	16,840	424	1.6	97	(D)	(D)	1.6	2	(D)	(D)	(D)
Nevada	3	(D)	(D)	3.4	1	(D)	(D)	(D)	2	(D)	(D)	(D)
New Hampshire	18	9	182	0.2	10	7	178	0.2	-	-	-	-
New Jersey	44	1,063	231	0.2	44	1,063	231	0.2	-	-	-	-
New Mexico	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
New York	297	5,082	307	0.3	189	5,023	309	0.3	-	-	-	-
North Carolina	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
North Dakota	84	44,339	389	0.9	78	44,330	389	0.9	-	-	-	-
Ohio	38	663	343	(D)	23	651	346	(D)	-	-	-	-
Oklahoma	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Oregon	284	44,788	490	2.4	268	42,844	491	2.4	16	1,944	458	2.4
Pennsylvania	97	2,365	321	0.2	90	2,351	322	0.2	-	-	-	-
Rhode Island	1	(D)	(D)	(D)	1	(D)	(D)	(D)	-	-	-	-
South Carolina	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	2	(D)	(D)	(D)	-	-	-	-	-	-	-	-
Texas	29	13,435	358	1.8	25	11,635	356	1.8	4	1,800	374	1.5
Utah	7	1,341	347	2.6	7	1,341	347	(D)	-	-	-	-
Vermont	15	8	107	0.5	5	5	150	0.5	-	-	-	-
Virginia	73	3,465	319	0.2	16	3,436	321	0.2	-	-	-	-
Washington	359	165,889	535	2.3	319	159,094	533	2.3	40	6,795	584	2.2
West Virginia	4	12	70	0.9	4	12	70	0.9	-	-	-	-
Wisconsin	190	81,839	413	0.9	190	81,839	413	0.9	-	-	-	-
Wyoming	2	(D)	(D)	(D)	2	(D)	(D)	(D)	-	-	-	-
Water Resources Areas												
WRA 01 New England	120	5,375	297	0.7	43	5,334	297	0.7	31	(D)	(D)	0.5
WRA 02 Mid-Atlantic	342	12,525	293	0.3	220	12,450	294	0.3	-	-	-	-
WRA 03 South Atlantic-Gulf	101	50,407	251	1.3	18	5,238	310	1.4	83	45,169	245	1.3
WRA 04 Great Lakes	423	68,947	370	0.8	382	68,779	368	0.8	-	-	-	-
WRA 05 Ohio	121	(D)	(D)	(D)	45	(D)	(D)	0.5	-	-	-	-
WRA 06 Tennessee	2	(D)	(D)	(D)	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	254	95,930	419	0.9	212	95,894	419	0.9	9	9	50	0.5
WRA 08 Lower Mississippi	9	6,481	286	2.1	9	6,481	286	2.1	-	-	-	-
WRA 09 Souris-Red-Rainy	63	40,064	406	0.8	59	38,201	410	0.8	4	1,863	338	0.9
WRA 10 Missouri	215	53,998	400	1.4	207	53,189	399	1.4	2	(D)	(D)	(D)
WRA 11 Arkansas-White-Red	17	11,598	377	1.8	17	11,598	377	1.8	-	-	-	-
WRA 12 Texas-Gulf	23	5,708	287	1.0	19	3,908	247	0.8	4	1,800	374	1.5
WRA 13 Rio Grande	206	63,812	371	1.5	206	63,812	371	1.5	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	10	4,699	264	3.3	5	3,456	246	3.4	4	893	316	3.0
WRA 16 Great Basin	10	8,627	409	3.3	8	(D)	(D)	2.9	2	(D)	(D)	(D)
WRA 17 Pacific Northwest	1,178	543,854	416	2.2	1,080	513,933	418	2.2	98	29,921	390	2.6
WRA 18 California	314	57,030	373	2.5	308	54,830	373	2.4	6	2,200	371	2.8
WRA 19 Alaska	15	440	109	0.5	12	437	109	0.5	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Land in vegetables											
				Method of distribution								
				Sprinkler system only			Gravity flow only			Drip, trickle, or low-flow micro irrigation		
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	17,807	2,081,358	2.1	8,846	1,108,281	1.6	3,510	696,317	2.8	5,451	276,759	1.9
1998 . .	20,088	2,309,550	2.1	8,672	1,136,066	1.5	3,303	608,085	3.0	(NA)	(NA)	(NA)
2003 DATA												
Alabama	162	2,613	1.2	49	1,506	0.7	14	97	0.7	99	1,009	2.1
Alaska	33	133	0.9	18	104	0.9	-	-	-	15	29	0.6
Arizona	313	132,799	3.6	21	33,740	4.0	75	87,597	3.5	217	11,462	2.8
Arkansas	201	6,959	1.1	-	-	-	-	-	-	201	6,959	1.1
California	3,253	926,839	2.9	1,852	438,769	2.4	993	430,121	3.2	408	57,949	3.8
Colorado	105	18,996	1.6	25	8,856	1.4	80	10,140	1.8	-	-	-
Connecticut	111	842	0.3	55	586	0.3	-	-	-	56	257	0.6
Delaware	109	19,201	0.3	90	17,439	0.3	-	-	-	19	1,762	0.3
Florida	375	120,306	1.5	98	8,842	1.0	69	36,439	1.8	208	75,025	1.5
Georgia	499	73,994	0.7	403	52,086	0.6	-	-	-	96	21,908	1.1
Hawaii	332	3,943	1.5	108	545	1.6	17	26	4.3	207	3,372	1.4
Idaho	426	26,811	2.3	56	8,606	1.6	370	18,205	2.7	-	-	-
Illinois	199	19,638	0.6	158	19,464	0.6	14	70	0.1	27	104	0.7
Indiana	447	17,508	0.5	174	11,581	0.5	26	332	0.6	247	5,595	0.5
Iowa	187	1,809	0.4	89	1,500	0.3	26	51	0.5	72	259	0.7
Kansas	8	2,600	1.0	8	2,600	1.0	-	-	-	-	-	-
Kentucky	179	1,024	0.6	53	278	0.5	21	146	0.2	105	600	0.8
Louisiana	178	3,785	0.3	69	1,236	0.2	58	2,345	0.4	51	204	0.1
Maine	254	1,471	0.3	116	1,035	0.2	-	-	-	138	436	0.5
Maryland	294	17,052	0.5	74	13,045	0.5	24	120	0.1	196	3,887	0.6
Massachusetts	284	1,124	0.6	153	901	0.5	31	25	(D)	100	198	1.1
Michigan	683	60,860	0.4	534	56,599	0.4	7	490	0.5	142	3,771	0.5
Minnesota	304	14,641	0.7	255	12,908	0.6	3	(D)	1.7	46	(D)	0.5
Mississippi	1	(D)	(D)	-	-	-	1	(D)	(D)	-	-	-
Missouri	305	12,606	0.3	192	11,792	0.3	53	706	0.7	60	108	0.8
Montana	173	828	1.0	170	801	0.9	3	27	3.0	-	-	-
Nebraska	93	592	0.9	93	592	0.9	-	-	-	-	-	-
Nevada	15	411	3.0	13	(D)	2.9	2	(D)	(D)	-	-	-
New Hampshire	98	507	0.6	50	320	0.6	2	(D)	(D)	46	(D)	0.6
New Jersey	537	32,206	0.6	367	24,981	0.5	28	122	0.5	142	7,103	0.8
New Mexico	620	26,222	2.9	17	4,598	2.1	590	16,474	3.3	13	5,150	2.5
New York	608	30,393	0.3	414	22,432	0.4	-	-	-	194	7,962	0.3
North Carolina	521	18,833	0.9	145	10,086	0.4	3	300	0.2	373	8,447	1.5
North Dakota	6	48	(D)	6	48	0.4	-	-	-	-	-	-
Ohio	308	7,047	0.3	113	4,397	0.2	14	(D)	1.3	181	2,623	0.3
Oklahoma	23	4,315	0.5	22	(D)	0.5	1	(D)	(D)	-	-	-
Oregon	268	45,032	1.8	212	37,364	1.6	48	6,426	2.7	8	1,242	2.9
Pennsylvania	855	10,704	0.4	409	7,848	0.4	5	124	0.4	441	2,732	0.3
Rhode Island	32	130	0.7	9	29	0.2	4	(D)	3.0	19	(D)	0.6
South Carolina	520	10,049	1.0	25	4,032	1.2	-	-	-	495	6,017	0.8
South Dakota	50	247	0.9	27	178	0.9	23	69	0.8	-	-	-
Tennessee	175	6,905	0.7	87	4,408	(D)	21	63	0.7	67	2,434	0.8
Texas	1,453	107,257	0.9	913	34,038	1.1	433	56,947	0.6	107	16,272	1.3
Utah	380	6,669	2.1	5	166	4.5	298	3,542	1.3	77	2,961	3.0
Vermont	91	349	0.5	40	236	0.4	-	-	-	51	113	0.6
Virginia	355	8,086	0.4	158	3,811	0.5	-	-	-	197	4,275	0.3
Washington	952	153,551	2.2	549	116,661	2.1	142	23,275	2.5	261	13,615	2.6
West Virginia	25	(D)	1.8	4	56	0.8	1	(D)	(D)	20	(D)	0.4
Wisconsin	389	122,813	0.6	340	122,446	0.6	-	-	-	49	367	0.8
Wyoming	18	252	4.4	8	40	2.0	10	212	4.9	-	-	-
Water Resources Areas												
WRA 01 New England	836	4,298	0.4	414	3,054	0.4	37	47	1.1	385	1,197	0.6
WRA 02 Mid-Atlantic	2,179	94,707	0.5	1,187	74,426	0.4	58	394	0.9	934	19,887	0.5
WRA 03 South Atlantic-Gulf	1,809	222,153	1.2	717	75,533	0.7	86	36,836	1.8	1,006	109,783	1.4
WRA 04 Great Lakes	1,334	123,913	0.4	997	110,434	0.5	7	490	0.5	330	12,989	0.4
WRA 05 Ohio	931	17,936	0.4	275	(D)	0.4	64	(D)	0.6	592	7,543	0.5
WRA 06 Tennessee	488	6,775	0.6	97	1,664	0.3	18	18	0.1	373	5,093	0.7
WRA 07 Upper Mississippi	951	124,873	0.6	732	123,998	0.6	32	97	0.3	187	778	0.6
WRA 08 Lower Mississippi	428	17,455	0.7	105	7,276	0.5	61	2,948	0.4	262	7,231	1.1
WRA 09 Souris-Red-Rainy	32	1,588	1.6	29	(D)	0.4	3	(D)	1.7	-	-	-
WRA 10 Missouri	487	11,638	0.7	382	11,103	0.7	44	332	3.5	61	203	0.8
WRA 11 Arkansas-White-Red	278	20,602	1.3	142	11,050	0.9	128	9,548	1.8	8	4	0.1
WRA 12 Texas-Gulf	1,451	105,724	0.8	920	35,271	1.1	424	54,181	0.5	107	16,272	1.3
WRA 13 Rio Grande	605	29,934	2.7	13	7,853	1.4	579	16,931	3.4	13	5,150	2.5
WRA 14 Upper Colorado	25	1,744	1.8	3	247	3.8	19	1,496	1.5	3	1	3.0
WRA 15 Lower Colorado	406	137,762	3.5	33	34,021	4.0	82	89,319	3.5	291	14,422	2.8
WRA 16 Great Basin	303	3,947	1.5	5	386	3.0	298	3,561	1.3	-	-	-
WRA 17 Pacific Northwest	1,643	224,939	2.1	816	162,406	1.9	558	47,676	2.6	269	14,857	2.7
WRA 18 California	3,256	927,294	2.9	1,853	438,994	2.4	995	430,351	3.2	408	57,949	3.8
WRA 19 Alaska	33	133	0.9	18	104	0.9	-	-	-	15	29	0.6
WRA 20 Hawaii	332	3,943	1.5	108	545	1.6	17	26	4.3	207	3,372	1.4

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Sweet corn [3]											
				Method of distribution								
				Sprinkler system only			Gravity flow only			Drip, trickle, or low-flow micro irrigation		
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	4,753	285,291	1.5	2,534	225,347	1.2	1,239	47,562	2.4	980	12,382	1.8
1998 . .	4,387	311,801	1.4	3,046	258,787	1.2	940	37,083	2.9	(NA)	(NA)	(NA)
2003 DATA												
Alabama	28	166	0.3	21	82	0.4	-	-	-	7	84	0.3
Alaska	8	2	0.2	4	(Z)	0.5	-	-	-	4	2	0.1
Arizona	7	200	3.3	-	-	-	7	200	3.3	-	-	-
Arkansas	101	1,010	1.1	-	-	-	101	1,010	1.1	-	-	-
California	393	22,539	3.3	5	(D)	5.0	387	17,656	3.4	1	(D)	(D)
Colorado	76	757	1.6	13	102	(D)	63	655	1.5	-	-	-
Connecticut	7	185	0.2	7	185	0.2	-	-	-	-	-	-
Delaware	43	8,499	0.3	43	8,499	0.3	-	-	-	-	-	-
Florida	12	14,630	1.2	3	60	1.5	7	(D)	0.9	2	(D)	(D)
Georgia	15	11,724	1.1	15	11,724	1.1	-	-	-	-	-	-
Hawaii	25	406	0.6	-	-	-	-	-	-	25	406	0.6
Idaho	255	14,996	2.0	29	6,450	1.7	226	8,546	2.3	-	-	-
Illinois	55	6,879	0.6	55	6,879	0.6	-	-	-	-	-	-
Indiana	90	2,613	0.4	71	2,480	0.4	-	-	-	19	133	1.0
Iowa	54	780	0.3	54	780	0.3	-	-	-	-	-	-
Kansas	8	2,100	1.8	8	2,100	1.8	-	-	-	-	-	-
Kentucky	23	117	0.5	23	117	0.5	-	-	-	-	-	-
Louisiana	4	16	0.2	-	-	-	4	16	0.2	-	-	-
Maine	83	698	0.2	83	698	0.2	-	-	-	-	-	-
Maryland	109	6,147	0.5	73	5,935	0.5	-	-	-	36	212	0.4
Massachusetts	112	362	0.5	44	284	0.4	31	(D)	(D)	37	(D)	0.9
Michigan	213	6,456	0.3	187	6,352	0.3	-	-	-	26	104	0.7
Minnesota	188	7,953	0.6	188	7,953	0.6	-	-	-	-	-	-
Mississippi	1	(D)	(D)	-	-	-	1	(D)	(D)	-	-	-
Missouri	111	496	0.7	60	190	0.3	51	306	1.0	-	-	-
Montana	7	8	1.5	7	8	1.5	-	-	-	-	-	-
Nebraska	93	482	(D)	93	482	(D)	-	-	-	-	-	-
Nevada	11	11	1.0	11	11	1.0	-	-	-	-	-	-
New Hampshire	35	236	0.6	30	211	0.6	2	(D)	(D)	3	(D)	1.0
New Jersey	179	4,726	0.4	158	4,380	0.3	-	-	-	21	346	1.1
New Mexico	4	28	3.2	2	(D)	(D)	2	(D)	(D)	-	-	-
New York	200	5,717	0.5	144	4,901	0.5	-	-	-	56	816	0.2
North Carolina	146	1,903	0.5	37	(D)	0.3	-	-	-	109	(D)	0.8
North Dakota	6	24	0.8	6	24	0.8	-	-	-	-	-	-
Ohio	140	1,665	0.3	62	1,521	0.2	-	-	-	78	144	0.5
Oklahoma	4	234	0.8	4	234	0.8	-	-	-	-	-	-
Oregon	97	14,325	1.4	86	14,314	1.4	11	11	2.5	-	-	-
Pennsylvania	338	2,829	0.3	165	2,085	0.3	3	42	0.3	170	702	0.3
Rhode Island	5	(D)	(D)	1	(D)	(D)	-	-	-	4	(D)	0.1
South Carolina	133	561	0.6	133	561	0.6	-	-	-	-	-	-
South Dakota	27	102	1.0	27	102	1.0	-	-	-	-	-	-
Tennessee	24	(D)	(D)	22	(D)	(D)	-	-	-	2	(D)	(D)
Texas	14	14	0.4	14	14	0.4	-	-	-	-	-	-
Utah	281	1,146	0.9	5	106	2.6	273	1,039	0.7	3	1	3.0
Vermont	12	(D)	(D)	7	(D)	(D)	-	-	-	5	(D)	0.5
Virginia	129	241	0.3	11	168	0.3	-	-	-	118	73	0.4
Washington	642	83,292	2.3	331	74,258	2.2	68	(D)	2.9	243	(D)	(D)
West Virginia	15	32	0.4	4	28	0.4	-	-	-	11	4	0.5
Wisconsin	188	56,881	0.6	188	56,881	0.6	-	-	-	-	-	-
Wyoming	2	(D)	(D)	-	-	-	2	(D)	(D)	-	-	-
Water Resources Areas												
WRA 01 New England	248	1,531	0.4	166	1,421	0.3	33	13	0.3	49	96	0.9
WRA 02 Mid-Atlantic	766	24,248	0.4	474	22,914	0.4	3	42	(D)	289	1,292	0.5
WRA 03 South Atlantic-Gulf	234	28,348	1.1	218	(D)	1.0	7	(D)	0.9	9	(D)	(D)
WRA 04 Great Lakes	434	27,629	0.5	375	26,656	0.5	-	-	-	59	973	0.3
WRA 05 Ohio	234	3,486	0.3	124	3,379	0.3	-	-	-	110	107	0.6
WRA 06 Tennessee	190	786	0.7	21	83	0.3	-	-	-	169	703	0.8
WRA 07 Upper Mississippi	439	56,090	0.6	420	55,957	0.6	-	-	-	19	133	1.0
WRA 08 Lower Mississippi	118	2,007	0.7	12	(D)	(D)	106	(D)	1.1	-	-	-
WRA 09 Souris-Red-Rainy	29	47	0.6	29	47	0.6	-	-	-	-	-	-
WRA 10 Missouri	141	760	1.0	139	(D)	1.0	2	(D)	(D)	-	-	-
WRA 11 Arkansas-White-Red	172	2,923	1.6	68	2,352	1.7	104	571	1.2	-	-	-
WRA 12 Texas-Gulf	16	34	1.6	16	34	1.6	-	-	-	-	-	-
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	16	486	1.7	1	(D)	(D)	12	(D)	1.6	3	1	3.0
WRA 15 Lower Colorado	18	211	3.2	11	11	(D)	7	200	3.3	-	-	-
WRA 16 Great Basin	278	1,145	0.9	5	106	2.6	273	1,039	0.7	-	-	-
WRA 17 Pacific Northwest	994	112,613	2.1	446	95,022	2.0	305	(D)	2.5	243	(D)	(D)
WRA 18 California	393	22,539	3.3	5	(D)	5.0	387	17,656	3.4	1	(D)	(D)
WRA 19 Alaska	8	2	0.2	4	(Z)	0.5	-	-	-	4	2	0.1
WRA 20 Hawaii	25	406	0.6	-	-	-	-	-	-	25	406	0.6

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Tomatoes [3]											
				Method of distribution								
				Sprinkler system only			Gravity flow only			Drip, trickle, or low-flow micro irrigation		
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	7,322	427,812	2.6	2,177	81,267	2.7	1,262	228,028	3.1	3,883	118,517	1.6
1998 . .	5,223	308,476	2.3	1,494	30,001	1.5	930	152,262	2.6	(NA)	(NA)	(NA)
2003 DATA												
Alabama	68	641	2.6	15	37	0.3	7	(D)	1.3	46	601	2.7
Alaska	11	3	0.5	4	(Z)	0.5	-	-	-	7	2	0.5
Arizona	139	139	2.1	-	-	-	-	-	-	139	139	2.1
Arkansas	201	1,404	1.3	-	-	-	-	-	-	201	1,404	1.3
California	1,942	354,804	2.8	131	70,433	3.0	782	218,064	3.1	1,029	66,306	1.8
Colorado	57	176	1.5	4	17	1.0	53	159	1.5	-	-	-
Connecticut	51	58	0.3	21	26	0.2	-	-	-	30	33	0.3
Delaware	4	3	0.2	1	(D)	(D)	-	-	-	3	3	0.2
Florida	38	37,783	1.5	2	(D)	(D)	10	(D)	1.2	26	28,253	1.6
Georgia	132	4,217	1.2	56	56	0.3	-	-	-	76	4,161	1.3
Hawaii	52	669	(D)	8	8	1.0	-	-	-	44	661	(D)
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	77	292	0.6	29	204	0.7	14	28	(D)	34	60	0.4
Indiana	237	3,509	0.5	75	3,401	0.5	19	4	0.7	143	104	(D)
Iowa	123	97	0.6	45	55	0.2	26	21	0.9	52	21	1.1
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	112	235	0.7	7	4	1.0	21	32	0.3	84	200	0.7
Louisiana	103	57	0.1	51	(D)	0.2	1	(D)	(D)	51	51	0.1
Maine	104	61	0.4	69	26	0.2	-	-	-	35	35	0.5
Maryland	198	957	0.7	4	160	0.5	-	-	-	194	797	0.8
Massachusetts	131	72	0.6	38	38	0.4	31	3	0.5	62	31	0.8
Michigan	226	3,721	0.5	194	3,061	0.4	-	-	-	32	660	1.2
Minnesota	170	337	0.4	124	291	0.4	-	-	-	46	46	0.3
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	60	14	0.8	52	10	1.0	-	-	-	8	4	0.1
Montana	7	3	1.4	3	(Z)	1.0	-	-	-	4	2	1.5
Nebraska	92	18	0.5	92	18	0.5	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	37	13	0.2	18	9	0.2	-	-	-	19	4	0.3
New Jersey	316	2,093	0.6	184	972	0.5	-	-	-	132	1,121	0.7
New Mexico	2	(D)	(D)	-	-	-	2	(D)	(D)	-	-	-
New York	406	1,075	0.6	203	351	0.4	-	-	-	203	724	0.7
North Carolina	133	4,713	2.1	-	-	-	-	-	-	133	4,713	2.1
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	142	1,045	0.3	37	51	0.2	-	-	-	105	994	0.3
Oklahoma	-	-	-	-	-	-	-	-	-	-	-	-
Oregon	2	(D)	(D)	-	-	-	2	(D)	(D)	-	-	-
Pennsylvania	392	1,526	0.4	64	741	0.6	-	-	-	328	786	0.3
Rhode Island	13	11	1.5	-	-	-	4	4	3.0	9	7	0.6
South Carolina	130	976	0.9	-	-	-	-	-	-	130	976	0.9
South Dakota	27	13	0.9	27	13	0.9	-	-	-	-	-	-
Tennessee	27	1,709	0.9	6	21	0.5	-	-	-	21	1,688	0.9
Texas	475	986	1.5	382	38	0.5	17	568	1.9	76	380	1.0
Utah	273	409	0.6	-	-	-	273	409	0.6	-	-	-
Vermont	31	10	0.6	11	6	0.7	-	-	-	20	5	0.4
Virginia	97	3,594	0.3	15	153	0.5	-	-	-	82	3,442	0.3
Washington	374	99	2.3	133	27	3.0	-	-	-	241	72	2.1
West Virginia	24	20	0.3	2	(D)	(D)	-	-	-	22	(D)	0.3
Wisconsin	86	50	0.4	70	34	0.5	-	-	-	16	16	0.3
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	341	215	0.5	146	98	0.3	35	7	1.9	160	110	0.5
WRA 02 Mid-Atlantic	1,084	8,298	0.4	294	2,106	0.5	-	-	-	790	6,192	0.4
WRA 03 South Atlantic-Gulf	384	47,053	1.6	82	1,097	2.9	17	8,534	1.2	285	37,423	1.7
WRA 04 Great Lakes	549	5,206	0.5	404	3,352	0.4	-	-	-	145	1,854	0.8
WRA 05 Ohio	447	2,050	0.6	93	1,188	0.7	40	35	0.3	314	828	0.6
WRA 06 Tennessee	215	2,931	0.7	3	3	0.2	-	-	-	212	2,928	0.7
WRA 07 Upper Mississippi	435	3,021	0.4	242	2,832	0.4	32	47	0.5	161	142	(D)
WRA 08 Lower Mississippi	314	1,490	1.3	54	(D)	0.4	1	(D)	(D)	259	1,466	1.3
WRA 09 Souris-Red-Rainy	23	2	0.4	23	2	0.4	-	-	-	-	-	-
WRA 10 Missouri	143	(D)	0.7	122	(D)	0.7	8	(D)	(D)	13	11	0.9
WRA 11 Arkansas-White-Red	117	190	1.4	56	27	1.0	53	159	1.5	8	4	0.1
WRA 12 Texas-Gulf	475	986	1.5	382	38	0.5	17	568	1.9	76	380	1.0
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	2	(D)	(D)	-	-	-	2	(D)	(D)	-	-	-
WRA 15 Lower Colorado	139	139	2.1	-	-	-	-	-	-	139	139	2.1
WRA 16 Great Basin	273	409	0.6	-	-	-	273	409	0.6	-	-	-
WRA 17 Pacific Northwest	374	99	(D)	133	27	3.0	-	-	-	241	72	2.1
WRA 18 California	1,944	355,004	2.8	131	70,433	3.0	784	218,264	3.1	1,029	66,306	1.8
WRA 19 Alaska	11	3	0.5	4	(Z)	0.5	-	-	-	7	2	0.5
WRA 20 Hawaii	52	669	(D)	8	8	1.0	-	-	-	44	661	(D)

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Lettuce and romaine [3]											
				Method of distribution								
				Sprinkler system only			Gravity flow only			Drip, trickle, or low-flow micro irrigation		
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	2,659	276,705	2.7	1,761	162,184	2.3	152	92,361	3.1	746	22,160	4.2
1998 . .	1,520	267,886	2.1	1,182	157,704	1.7	134	54,136	2.9	(NA)	(NA)	(NA)
2003 DATA												
Alabama	7	1	1.3	-	-	-	7	1	1.3	-	-	-
Alaska	8	3	0.8	1	(D)	(D)	-	-	-	7	(D)	0.5
Arizona	52	75,742	3.6	15	24,774	3.8	37	50,968	3.4	-	-	-
Arkansas	-	-	-	-	-	-	-	-	-	-	-	-
California	846	191,396	2.4	730	128,811	2.1	99	41,392	2.6	17	21,193	4.4
Colorado	5	3,268	1.1	5	3,268	1.1	-	-	-	-	-	-
Connecticut	21	39	0.2	3	(D)	(D)	-	-	-	18	(D)	0.1
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	4	(D)	(D)	3	(D)	1.5	-	-	-	1	(D)	(D)
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	53	182	1.1	22	(D)	1.0	-	-	-	31	(D)	1.2
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	27	4	1.0	27	4	1.0	-	-	-	-	-	-
Indiana	26	10	0.1	19	10	0.1	-	-	-	7	1	0.5
Iowa	35	16	0.5	17	11	0.5	9	1	0.5	9	5	0.6
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	3	13	0.2	3	13	0.2	-	-	-	-	-	-
Maryland	28	104	0.8	2	(D)	(D)	-	-	-	26	(D)	1.1
Massachusetts	32	3	0.5	32	3	0.5	-	-	-	-	-	-
Michigan	79	162	0.3	53	149	0.3	-	-	-	26	13	0.7
Minnesota	46	9	0.6	46	9	0.6	-	-	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	52	10	0.1	52	10	0.1	-	-	-	-	-	-
Montana	4	(Z)	1.5	4	(Z)	1.5	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	21	8	0.2	13	(D)	(D)	-	-	-	8	(D)	0.3
New Jersey	67	1,533	0.5	41	1,501	0.5	-	-	-	26	32	0.7
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	209	1,326	0.4	93	1,234	0.4	-	-	-	116	92	0.4
North Carolina	126	1,611	0.5	15	1,500	0.5	-	-	-	111	111	(D)
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	45	(D)	(D)	16	(D)	(D)	-	-	-	29	4	0.2
Oklahoma	-	-	-	-	-	-	-	-	-	-	-	-
Oregon	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	56	75	0.3	4	(D)	(D)	-	-	-	52	(D)	0.1
Rhode Island	8	2	0.4	4	2	0.5	-	-	-	4	1	0.1
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	2	(D)	(D)	2	(D)	(D)	-	-	-	-	-	-
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	382	76	0.5	382	76	0.5	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	13	66	0.3	8	66	0.3	-	-	-	5	1	0.5
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	373	112	2.1	133	40	3.0	-	-	-	240	72	1.6
West Virginia	13	4	0.4	-	-	-	-	-	-	13	4	0.4
Wisconsin	16	3	0.5	16	3	0.5	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	93	131	0.3	58	122	0.3	-	-	-	35	9	0.2
WRA 02 Mid-Atlantic	308	2,801	0.4	84	2,570	0.4	-	-	-	224	231	0.6
WRA 03 South Atlantic-Gulf	28	2,013	0.8	18	(D)	0.5	7	1	1.3	3	(D)	(D)
WRA 04 Great Lakes	185	776	0.2	137	760	0.2	-	-	-	48	16	0.6
WRA 05 Ohio	58	54	0.4	35	48	0.4	-	-	-	23	6	0.3
WRA 06 Tennessee	109	109	0.8	-	-	-	-	-	-	109	109	(D)
WRA 07 Upper Mississippi	101	28	0.7	83	22	0.7	9	1	0.5	9	5	0.6
WRA 08 Lower Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	58	13	0.3	58	13	(D)	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	-	-	-	-	-	-	-	-	-	-	-	-
WRA 12 Texas-Gulf	382	76	0.5	382	76	0.5	-	-	-	-	-	-
WRA 13 Rio Grande	5	3,268	1.1	5	3,268	1.1	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	52	75,742	3.6	15	24,774	3.8	37	50,968	3.4	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	373	112	2.1	133	40	3.0	-	-	-	240	72	1.6
WRA 18 California	846	191,396	2.4	730	128,811	2.1	99	41,392	2.6	17	21,193	4.4
WRA 19 Alaska	8	3	0.8	1	(D)	(D)	-	-	-	7	(D)	0.5
WRA 20 Hawaii	53	182	1.1	22	(D)	1.0	-	-	-	31	(D)	1.2

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Berries, bearing and non-bearing											
				Method of distribution								
				Sprinkler system only			Gravity flow only			Drip, trickle, or low-flow micro irrigation		
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	8,947	229,542	2.1	4,323	112,719	2.3	203	7,008	3.6	4,421	109,815	1.7
1998 . .	8,212	142,776	2.0	4,555	109,162	2.3	1,143	3,455	2.6	(NA)	(NA)	(NA)
2003 DATA												
Alabama	75	427	1.0	14	87	0.4	-	-	-	61	340	1.1
Alaska	5	7	0.3	1	(D)	(D)	-	-	-	4	(D)	0.1
Arizona	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas	223	1,329	1.0	-	-	-	-	-	-	223	1,329	1.0
California	388	65,019	2.3	3	(D)	3.0	1	(D)	(D)	384	58,717	2.2
Colorado	4	12	2.1	4	12	2.1	-	-	-	-	-	-
Connecticut	60	289	0.6	28	80	0.8	-	-	-	32	210	0.5
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	368	5,685	1.5	248	1,817	0.7	-	-	-	120	3,868	1.8
Georgia	233	3,247	0.3	60	1,180	0.3	-	-	-	173	2,067	0.3
Hawaii	10	22	1.0	-	-	-	-	-	-	10	22	1.0
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	94	148	0.7	54	57	0.8	-	-	-	40	90	0.7
Indiana	61	467	0.3	40	461	0.3	-	-	-	21	6	0.4
Iowa	86	324	0.6	53	277	0.4	8	4	0.5	25	43	1.8
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	35	99	0.8	7	49	1.0	7	1	1.5	21	49	0.5
Louisiana	66	1,944	1.5	-	-	-	-	-	-	66	1,944	1.5
Maine	105	10,782	0.7	102	(D)	0.5	-	-	-	3	(D)	(D)
Maryland	34	119	0.4	2	(D)	(D)	-	-	-	32	(D)	0.4
Massachusetts	459	13,090	6.7	378	11,578	7.0	40	1,411	4.6	41	101	1.7
Michigan	652	15,094	0.7	487	12,279	0.8	-	-	-	165	2,815	0.4
Minnesota	218	1,014	0.3	149	911	0.4	-	-	-	69	104	0.3
Mississippi	333	333	0.1	-	-	-	-	-	-	333	333	0.1
Missouri	124	1,886	0.2	-	-	-	51	102	0.2	73	1,784	0.2
Montana	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	40	40	0.1	-	-	-	-	-	-	40	40	0.1
New Hampshire	47	153	(D)	22	101	(D)	-	-	-	25	52	0.8
New Jersey	182	7,720	2.0	110	5,546	2.4	1	(D)	(D)	71	(D)	0.9
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	244	1,950	0.5	106	925	0.7	-	-	-	138	1,025	0.3
North Carolina	357	6,239	0.4	197	5,943	0.4	-	-	-	160	296	0.4
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	264	792	0.8	88	384	0.4	-	-	-	176	408	1.2
Oklahoma	110	330	0.9	-	-	-	-	-	-	110	330	0.9
Oregon	1,907	31,021	2.0	1,172	28,078	1.9	-	-	-	735	2,943	2.8
Pennsylvania	373	1,189	0.7	138	(D)	0.8	-	-	-	235	(D)	0.6
Rhode Island	10	159	(D)	2	(D)	(D)	-	-	-	8	(D)	0.7
South Carolina	148	762	1.1	23	458	1.5	-	-	-	125	304	0.3
South Dakota	23	115	1.0	-	-	-	-	-	-	23	115	1.0
Tennessee	113	698	0.6	66	417	0.4	-	-	-	47	281	0.9
Texas	386	17,202	1.5	-	-	-	4	12	0.5	382	17,190	1.5
Utah	74	1,776	0.8	-	-	-	74	1,776	(D)	-	-	-
Vermont	42	244	0.9	9	18	1.2	-	-	-	33	226	0.9
Virginia	5	56	0.6	-	-	-	-	-	-	5	56	0.6
Washington	494	13,843	1.1	339	8,190	1.4	-	-	-	155	5,653	0.7
West Virginia	21	69	0.9	-	-	-	-	-	-	21	69	0.9
Wisconsin	474	23,849	3.4	421	21,871	3.3	17	(D)	7.0	36	(D)	1.0
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	702	24,553	3.9	538	(D)	4.5	40	1,411	4.6	124	(D)	(D)
WRA 02 Mid-Atlantic	756	10,207	1.6	260	6,312	2.2	1	(D)	(D)	495	(D)	0.7
WRA 03 South Atlantic-Gulf	1,370	16,528	0.8	542	9,485	0.5	-	-	-	828	7,043	1.2
WRA 04 Great Lakes	895	16,912	0.7	660	13,871	0.8	-	-	-	235	3,041	0.4
WRA 05 Ohio	335	1,328	0.6	119	789	0.4	7	1	1.5	209	539	1.0
WRA 06 Tennessee	179	419	0.9	11	63	0.3	-	-	-	168	356	1.0
WRA 07 Upper Mississippi	768	25,746	3.2	576	22,299	3.3	25	(D)	7.0	167	(D)	0.5
WRA 08 Lower Mississippi	221	1,640	0.8	44	295	0.4	-	-	-	177	1,345	0.9
WRA 09 Souris-Red-Rainy	45	224	0.3	45	224	0.3	-	-	-	-	-	-
WRA 10 Missouri	84	655	0.3	9	72	0.5	-	-	-	75	583	(D)
WRA 11 Arkansas-White-Red	284	2,388	1.5	-	-	-	51	102	0.2	233	2,286	1.5
WRA 12 Texas-Gulf	386	17,202	1.5	-	-	-	4	12	0.5	382	17,190	1.5
WRA 13 Rio Grande	4	12	2.1	4	12	2.1	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	114	1,816	0.8	-	-	-	74	1,776	(D)	40	40	0.1
WRA 17 Pacific Northwest	2,401	44,864	1.7	1,511	36,268	1.8	-	-	-	890	8,596	1.4
WRA 18 California	388	65,019	2.3	3	(D)	3.0	1	(D)	(D)	384	58,717	2.2
WRA 19 Alaska	5	7	0.3	1	(D)	(D)	-	-	-	4	(D)	0.1
WRA 20 Hawaii	10	22	1.0	-	-	-	-	-	-	10	22	1.0

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Land in bearing and non-bearing orchards, vineyards, and nut trees											
				Method of distribution								
				Sprinkler system only			Gravity flow only			Drip, trickle, or low-flow micro irrigation		
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	59,559	4,104,946	2.2	14,427	967,874	2.4	13,795	831,109	2.8	31,337	2,305,963	1.8
1998 . .	57,118	4,445,374	2.3	11,973	659,778	2.1	17,652	1,395,158	2.9	(NA)	(NA)	(NA)
2003 DATA												
Alabama	109	1,654	0.5	23	522	0.4	6	48	1.7	80	1,084	0.5
Alaska	4	20	0.5	-	-	-	-	-	-	4	20	0.5
Arizona	1,174	31,450	5.2	-	-	-	669	22,552	5.6	505	8,898	4.1
Arkansas	223	1,632	1.0	100	200	1.0	-	-	-	123	1,432	1.0
California	34,560	2,749,578	2.4	6,079	568,829	2.6	8,388	718,279	2.7	20,093	1,462,470	2.2
Colorado	109	8,100	4.3	-	-	-	109	8,100	4.3	-	-	-
Connecticut	13	174	0.5	-	-	-	-	-	-	13	174	0.5
Delaware	4	281	0.6	-	-	-	-	-	-	4	281	0.6
Florida	6,627	748,362	1.2	1,600	73,151	1.2	15	6,376	1.7	5,012	668,835	1.2
Georgia	902	72,278	0.4	172	16,722	0.6	-	-	-	730	55,556	0.4
Hawaii	328	5,887	1.2	103	908	1.5	-	-	-	225	4,979	1.2
Idaho	765	3,991	1.9	255	1,763	1.0	259	1,726	3.3	251	502	0.6
Illinois	54	834	1.0	27	8	0.4	-	-	-	27	826	1.0
Indiana	19	4	0.8	19	4	0.8	-	-	-	-	-	-
Iowa	26	60	0.9	17	42	0.2	-	-	-	9	18	2.7
Kansas	152	3,234	0.6	148	3,034	0.5	-	-	-	4	200	1.8
Kentucky	50	135	0.5	7	(D)	2.6	7	(D)	(D)	36	131	0.4
Louisiana	93	2,682	0.3	30	1,140	0.4	-	-	-	63	1,542	0.2
Maine	3	(D)	0.3	3	(D)	0.3	-	-	-	-	-	-
Maryland	8	318	0.1	-	-	-	-	-	-	8	318	0.1
Massachusetts	48	579	0.7	11	468	0.7	31	3	0.5	6	108	0.3
Michigan	362	10,180	0.3	62	1,889	0.3	-	-	-	300	8,291	0.3
Minnesota	142	2,456	0.4	74	784	0.4	-	-	-	68	1,672	0.4
Mississippi	4	370	0.5	2	(D)	(D)	2	(D)	(D)	-	-	-
Missouri	82	4,316	0.2	8	840	0.5	-	-	-	74	3,476	0.1
Montana	324	1,296	0.5	-	-	-	162	648	0.1	162	648	0.8
Nebraska	91	182	0.1	-	-	-	-	-	-	91	182	0.1
Nevada	51	51	0.6	11	11	1.0	-	-	-	40	40	0.5
New Hampshire	24	102	0.7	12	51	0.3	-	-	-	12	51	1.1
New Jersey	66	1,333	0.7	35	474	0.7	4	144	2.0	27	715	0.4
New Mexico	1,939	32,331	4.2	23	498	1.5	1,812	28,313	4.6	104	3,520	1.5
New York	208	6,783	0.6	16	1,948	0.3	-	-	-	192	4,835	0.8
North Carolina	270	1,906	0.4	18	326	0.4	-	-	-	252	1,580	0.4
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	109	485	0.4	53	81	0.4	-	-	-	56	404	0.4
Oklahoma	108	108	1.4	-	-	-	-	-	-	108	108	1.4
Oregon	382	37,600	2.1	211	32,033	2.1	12	1,884	4.0	159	3,683	1.5
Pennsylvania	170	2,550	0.7	72	434	0.3	3	6	2.0	95	2,110	0.8
Rhode Island	19	113	0.8	9	61	0.7	-	-	-	10	52	0.9
South Carolina	36	4,857	0.8	14	420	0.5	-	-	-	22	4,437	0.9
South Dakota	27	595	1.0	4	20	0.8	-	-	-	23	575	1.0
Tennessee	3	24	0.2	-	-	-	-	-	-	3	24	0.2
Texas	2,882	45,893	2.0	790	7,965	2.6	1,323	29,599	2.1	769	8,329	1.3
Utah	323	4,938	3.1	77	527	4.0	169	831	2.8	77	3,580	3.1
Vermont	32	(D)	0.6	5	(D)	1.0	-	-	-	27	80	0.5
Virginia	95	894	0.7	-	-	-	-	-	-	95	894	0.7
Washington	6,456	313,285	2.4	4,308	251,792	2.5	824	12,590	1.0	1,324	48,903	2.1
West Virginia	16	186	0.4	11	35	0.9	-	-	-	5	151	0.2
Wisconsin	67	591	0.3	18	342	0.3	-	-	-	49	249	0.4
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	115	1,144	0.6	35	740	0.6	31	3	0.5	49	401	0.6
WRA 02 Mid-Atlantic	441	10,558	0.7	123	2,797	0.4	4	144	2.0	314	7,618	0.7
WRA 03 South Atlantic-Gulf	7,935	828,879	1.1	1,825	90,991	1.1	21	6,424	1.7	6,089	731,464	1.1
WRA 04 Great Lakes	554	12,507	0.4	101	2,369	0.3	-	-	-	453	10,138	0.4
WRA 05 Ohio	171	607	0.5	58	(D)	(D)	10	(D)	(D)	103	527	0.5
WRA 06 Tennessee	12	202	0.2	2	(D)	(D)	-	-	-	10	(D)	0.6
WRA 07 Upper Mississippi	254	3,512	0.5	134	836	0.4	-	-	-	120	2,676	0.6
WRA 08 Lower Mississippi	173	4,482	0.5	36	(D)	0.4	2	(D)	(D)	135	2,872	0.6
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	262	7,369	0.4	82	3,720	0.5	-	-	-	180	3,649	0.3
WRA 11 Arkansas-White-Red	345	1,268	0.6	174	(D)	0.9	-	-	-	171	(D)	0.6
WRA 12 Texas-Gulf	2,020	28,248	1.7	408	6,628	2.9	843	13,291	1.4	769	8,329	1.3
WRA 13 Rio Grande	2,750	48,253	3.7	403	1,827	1.3	2,292	44,621	3.9	55	1,805	2.0
WRA 14 Upper Colorado	116	8,118	4.3	5	17	4.4	111	8,101	4.3	-	-	-
WRA 15 Lower Colorado	1,382	35,174	4.9	85	529	3.9	669	22,552	5.6	628	12,093	3.5
WRA 16 Great Basin	210	2,970	3.0	-	-	-	167	830	2.8	43	2,140	3.1
WRA 17 Pacific Northwest	7,927	356,171	2.4	4,774	285,588	2.5	1,257	16,848	1.6	1,896	53,736	2.0
WRA 18 California	34,560	2,749,578	2.4	6,079	568,829	2.6	8,388	718,279	2.7	20,093	1,462,470	2.2
WRA 19 Alaska	4	20	0.5	-	-	-	-	-	-	4	20	0.5
WRA 20 Hawaii	328	5,887	1.2	103	908	1.5	-	-	-	225	4,979	1.2

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Other crops								
				Method of distribution					
				Sprinkler system only			Gravity flow only		
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	13,181	1,444,893	1.7	7,383	609,372	1.3	2,662	745,605	1.9
1998 . .	8,067	1,332,330	2.5	3,554	496,304	2.0	3,616	461,450	2.8
2003 DATA									
Alabama	99	792	0.5	72	758	0.5	-	-	-
Alaska	16	121	6.7	15	(D)	8.8	1	(D)	(D)
Arizona	56	17,268	3.8	1	(D)	(D)	54	16,584	3.9
Arkansas	27	1,995	0.7	-	-	-	27	1,995	0.7
California	2,539	162,920	2.8	60	21,765	2.2	1,157	120,225	2.9
Colorado	151	27,678	0.8	93	22,368	0.7	58	5,310	1.1
Connecticut	73	103	1.0	44	72	1.0	-	-	-
Delaware	-	-	-	-	-	-	-	-	-
Florida	298	397,549	1.4	6	3,606	1.2	292	393,943	1.4
Georgia	67	3,016	0.5	9	2,940	0.5	-	-	-
Hawaii	558	35,232	4.6	217	432	0.8	57	273	2.4
Idaho	633	67,826	2.8	370	24,547	2.8	263	43,279	2.8
Illinois	209	20,444	0.8	181	20,374	0.8	14	42	0.2
Indiana	100	11,968	0.5	79	11,581	0.5	2	(D)	(D)
Iowa	124	3,603	0.5	79	3,182	0.4	19	359	0.7
Kansas	338	44,825	1.0	321	41,995	1.0	17	2,830	1.2
Kentucky	112	210	0.5	70	98	0.2	-	-	-
Louisiana	180	15,886	0.7	51	(D)	(D)	78	(D)	0.8
Maine	200	200	0.6	132	132	0.6	-	-	-
Maryland	98	794	0.2	75	771	0.2	-	-	-
Massachusetts	106	215	0.8	70	124	0.6	-	-	-
Michigan	182	459	0.4	132	409	0.4	-	-	-
Minnesota	59	15,860	1.5	43	1,784	0.6	16	14,076	1.6
Mississippi	333	3,330	1.3	333	3,330	1.3	-	-	-
Missouri	35	8,960	0.5	27	7,001	0.4	8	1,959	0.8
Montana	25	4,811	1.1	15	3,080	1.3	10	1,731	0.8
Nebraska	591	130,318	1.3	564	121,171	1.3	27	9,147	1.4
Nevada	11	7,891	4.8	2	(D)	(D)	8	7,302	5.0
New Hampshire	21	42	0.5	14	17	0.6	3	15	0.1
New Jersey	160	552	0.3	104	300	0.5	-	-	-
New Mexico	43	11,138	2.1	33	6,020	1.7	10	5,118	2.5
New York	333	1,205	0.2	274	1,126	0.2	-	-	-
North Carolina	443	1,244	0.4	443	1,244	0.4	-	-	-
North Dakota	13	1,197	0.9	13	1,197	0.9	-	-	-
Ohio	167	249	0.9	166	238	0.9	-	-	-
Oklahoma	29	9,125	1.2	26	8,475	1.1	3	650	2.4
Oregon	1,082	142,558	1.4	1,022	134,747	1.3	60	7,811	2.9
Pennsylvania	368	410	0.5	299	299	0.4	-	-	-
Rhode Island	9	33	1.3	-	-	-	-	-	-
South Carolina	125	2,233	1.0	123	(D)	1.0	2	(D)	(D)
South Dakota	22	6,841	1.1	19	6,646	1.1	3	195	0.4
Tennessee	258	556	0.9	185	393	1.2	-	-	-
Texas	905	121,914	1.5	217	49,881	0.9	306	60,573	1.9
Utah	183	17,767	1.4	113	12,103	1.4	70	5,664	1.5
Vermont	74	112	0.5	40	40	0.3	-	-	-
Virginia	115	343	1.0	-	-	-	-	-	-
Washington	1,367	128,688	2.0	1,018	82,549	1.9	72	25,336	2.3
West Virginia	39	39	0.5	33	33	0.5	-	-	-
Wisconsin	160	3,936	0.9	160	3,936	0.9	-	-	-
Wyoming	45	10,437	1.4	20	2,863	1.5	25	7,574	1.3
Water Resources Areas									
WRA 01 New England	460	682	0.7	283	368	0.7	3	15	0.1
WRA 02 Mid-Atlantic	801	2,375	0.4	511	1,619	0.3	-	-	-
WRA 03 South Atlantic-Gulf	1,389	408,188	1.4	965	13,970	0.9	294	394,063	1.4
WRA 04 Great Lakes	370	2,777	0.5	315	2,702	0.5	-	-	-
WRA 05 Ohio	677	7,843	0.2	558	7,608	0.2	-	-	-
WRA 06 Tennessee	174	390	1.1	132	(D)	1.4	-	-	-
WRA 07 Upper Mississippi	461	32,810	0.9	382	28,972	0.8	28	(D)	(D)
WRA 08 Lower Mississippi	164	19,768	0.7	54	(D)	(D)	110	(D)	0.8
WRA 09 Souris-Red-Rainy	21	11,551	1.6	8	775	(D)	13	10,776	1.7
WRA 10 Missouri	997	202,816	1.2	867	183,172	1.1	122	19,636	1.4
WRA 11 Arkansas-White-Red	411	69,808	1.0	352	64,884	1.0	59	4,924	1.1
WRA 12 Texas-Gulf	702	89,362	1.7	122	22,406	1.0	198	55,496	2.0
WRA 13 Rio Grande	104	7,229	1.8	16	2,295	1.7	88	4,934	1.8
WRA 14 Upper Colorado	18	10,669	1.4	15	1,746	1.4	3	8,923	1.4
WRA 15 Lower Colorado	56	17,268	3.8	1	(D)	(D)	54	16,584	3.9
WRA 16 Great Basin	179	23,912	2.6	100	10,597	1.4	78	(D)	3.5
WRA 17 Pacific Northwest	3,081	338,820	1.9	2,407	241,491	1.7	397	76,526	2.7
WRA 18 California	2,542	163,272	2.8	63	22,117	2.2	1,157	120,225	2.9
WRA 19 Alaska	16	121	6.7	15	(D)	8.8	1	(D)	(D)
WRA 20 Hawaii	558	35,232	4.6	217	432	0.8	57	273	2.4

See footnote(s) at end of table.

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Table 28. **Estimated Quantity of Water Applied and Method of Distribution by Selected Crop: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Pastureland, all types								
				Method of distribution					
				Sprinkler system only			Gravity flow only		
	Farms	Irrigated acres harvested	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre	Farms	Acres	Average acre-feet applied per acre
U.S. TOTAL . . . . . 2003 . .	50,372	3,634,133	1.7	18,583	834,240	1.6	31,706	2,798,447	1.7
1998 . .	53,314	3,929,831	1.9	16,620	682,350	1.4	35,243	2,921,463	2.0
2003 DATA									
Alabama	27	1,281	0.3	18	1,061	0.2	2	(D)	(D)
Alaska	8	16	0.3	8	16	0.3	-	-	-
Arizona	807	19,661	3.2	34	3,540	1.0	773	16,121	3.7
Arkansas	251	7,411	0.6	237	7,005	0.6	14	406	0.7
California	5,826	511,534	2.6	813	32,919	6.4	5,013	478,615	2.4
Colorado	3,061	353,836	1.3	170	18,698	0.7	2,891	335,138	1.4
Connecticut	2	(D)	(D)	2	(D)	(D)	-	-	-
Delaware	2	(D)	(D)	2	(D)	(D)	-	-	-
Florida	888	66,308	1.2	267	(D)	1.2	617	57,934	1.2
Georgia	144	8,077	0.3	144	8,077	0.3	-	-	-
Hawaii	54	2,907	1.2	41	988	1.0	13	1,919	1.4
Idaho	8,868	377,431	1.7	2,810	98,029	2.0	6,058	279,402	1.6
Illinois	1	(D)	(D)	1	(D)	(D)	-	-	-
Indiana	2	(D)	(D)	2	(D)	(D)	-	-	-
Iowa	10	460	0.4	2	(D)	(D)	8	(D)	0.2
Kansas	58	11,663	1.2	57	(D)	1.2	1	(D)	(D)
Kentucky	-	-	-	-	-	-	-	-	-
Louisiana	62	3,678	0.6	3	838	0.6	59	2,840	0.5
Maine	6	(D)	(D)	4	(D)	(D)	2	(D)	(D)
Maryland	31	510	0.3	31	510	0.3	-	-	-
Massachusetts	38	312	0.5	38	312	0.5	-	-	-
Michigan	50	1,460	0.5	50	1,460	0.5	-	-	-
Minnesota	31	278	0.6	31	278	0.6	-	-	-
Mississippi	2	(D)	(D)	-	-	-	2	(D)	(D)
Missouri	69	480	0.4	18	225	0.3	51	255	0.5
Montana	3,660	450,858	1.2	559	49,570	1.2	3,101	401,288	1.2
Nebraska	603	84,179	1.6	564	78,313	1.6	39	5,866	1.1
Nevada	657	151,777	2.0	175	9,697	2.5	482	142,080	1.9
New Hampshire	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-
New Mexico	2,616	127,222	2.0	463	42,270	2.4	2,104	84,462	1.8
New York	6	360	0.1	6	360	0.1	-	-	-
North Carolina	193	10,141	0.5	193	10,141	0.5	-	-	-
North Dakota	12	1,221	1.3	4	(D)	0.4	8	(D)	(D)
Ohio	18	394	1.2	2	(D)	(D)	16	(D)	1.2
Oklahoma	318	42,758	1.2	259	36,436	1.0	59	6,322	2.0
Oregon	7,722	417,729	1.9	5,223	126,782	1.3	2,499	290,947	2.1
Pennsylvania	18	354	1.9	15	339	1.9	3	15	2.0
Rhode Island	-	-	-	-	-	-	-	-	-
South Carolina	145	833	0.3	145	833	0.3	-	-	-
South Dakota	108	4,257	1.3	-	-	-	85	4,211	1.3
Tennessee	21	2,016	0.4	3	(D)	(D)	18	(D)	1.0
Texas	2,709	225,292	0.8	1,635	166,981	0.9	1,074	58,311	0.5
Utah	5,842	281,944	1.9	1,972	51,301	1.9	3,870	230,643	1.9
Vermont	-	-	-	-	-	-	-	-	-
Virginia	77	770	0.5	77	770	0.5	-	-	-
Washington	3,091	96,416	2.5	2,051	37,824	1.9	1,040	58,592	2.9
West Virginia	-	-	-	-	-	-	-	-	-
Wisconsin	29	1,092	0.7	29	1,092	0.7	-	-	-
Wyoming	2,229	366,895	1.3	425	25,691	1.2	1,804	341,204	1.3
Water Resources Areas									
WRA 01 New England	46	518	0.5	44	(D)	0.5	2	(D)	(D)
WRA 02 Mid-Atlantic	125	1,930	0.6	122	1,915	0.6	3	15	2.0
WRA 03 South Atlantic-Gulf	1,399	86,660	1.0	776	27,736	0.6	619	58,084	1.2
WRA 04 Great Lakes	52	1,480	0.5	52	1,480	0.5	-	-	-
WRA 05 Ohio	36	(D)	1.1	2	(D)	(D)	34	(D)	(D)
WRA 06 Tennessee	8	(D)	(D)	1	(D)	(D)	-	-	-
WRA 07 Upper Mississippi	66	1,364	0.6	66	1,364	0.6	-	-	-
WRA 08 Lower Mississippi	194	8,305	0.7	119	4,999	0.8	75	3,306	0.6
WRA 09 Souris-Red-Rainy	5	706	(D)	4	(D)	0.6	1	(D)	(D)
WRA 10 Missouri	5,210	746,094	1.3	984	121,943	1.5	4,203	624,105	1.3
WRA 11 Arkansas-White-Red	1,829	213,836	1.1	645	143,522	0.9	1,184	70,314	1.4
WRA 12 Texas-Gulf	2,064	137,638	0.8	1,450	90,114	1.0	614	47,524	0.4
WRA 13 Rio Grande	1,871	106,371	1.9	173	(D)	2.8	1,649	78,428	1.5
WRA 14 Upper Colorado	4,751	460,156	1.4	1,288	48,894	1.5	3,463	411,262	1.3
WRA 15 Lower Colorado	1,177	38,749	2.5	265	9,496	1.4	912	29,253	2.8
WRA 16 Great Basin	4,981	318,791	2.0	1,180	23,170	2.2	3,801	295,621	2.0
WRA 17 Pacific Northwest	19,863	897,017	1.8	10,133	276,214	1.6	9,730	620,803	1.8
WRA 18 California	6,633	609,171	2.5	1,230	52,634	4.4	5,403	556,537	2.3
WRA 19 Alaska	8	16	0.3	8	16	0.3	-	-	-
WRA 20 Hawaii	54	2,907	1.2	41	988	1.0	13	1,919	1.4

[1] Includes both dry hay and haylage and greenchop yields in 2003, with no conversion to a dry weight basis made for the haylage and greenchop yields.
[2] Includes both dry hay and haylage, grass silage, and greenchop yields in 2003, with no conversion to a dry weight basis made for the haylage, grass silage, and greenchop yields.
[3] Included in land in vegetables.

Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Corn for grain or seed											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	32,267	9,749,748	6,173	1,921,708	2,359	674,562	4,173	522,167	27,299	8,648,480	4,041	677,210
1998 . .	36,826	10,617,766	8,409	(NA)	3,714	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	79	10,269	4	390	-	-	47	5,573	31	(D)	9	(D)
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	29	10,642	19	9,010	9	3,938	1	(D)	17	8,145	11	(D)
Arkansas	546	192,564	43	17,263	36	16,073	53	14,806	510	177,293	10	4,240
California	1,204	198,869	724	39,698	6	7,221	138	45,381	784	80,010	323	84,194
Colorado	1,649	555,870	515	251,452	267	99,725	208	66,915	1,152	446,144	412	50,758
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	159	33,892	41	6,358	7	923	18	1,793	142	31,732	5	375
Florida	20	3,610	9	2,130	-	-	3	60	17	3,550	-	-
Georgia	723	97,735	39	9,756	4	1,240	291	21,789	524	75,993	2	(D)
Hawaii	3	545	1	(D)	-	-	1	(D)	-	-	2	(D)
Idaho	575	51,352	73	10,864	8	1,249	29	4,795	86	10,050	503	38,593
Illinois	838	222,459	119	32,714	2	(D)	56	7,301	792	215,525	6	472
Indiana	627	157,415	28	4,308	7	1,110	190	27,158	503	130,907	1	(D)
Iowa	346	71,262	45	8,988	2	(D)	33	2,230	318	69,258	-	-
Kansas	3,022	1,231,918	567	221,766	233	85,239	300	30,625	2,721	1,172,551	185	38,934
Kentucky	49	6,626	4	880	1	(D)	25	2,066	26	4,648	-	-
Louisiana	380	126,920	22	4,296	18	3,736	73	16,712	331	109,143	17	2,565
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	109	18,884	19	3,932	3	1,005	37	3,144	84	15,644	2	(D)
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	655	185,788	26	8,578	10	1,120	392	57,698	388	124,934	30	3,536
Minnesota	981	177,272	90	21,667	9	875	79	5,308	922	172,202	21	1,864
Mississippi	275	129,105	6	3,620	5	2,120	43	6,980	240	122,125	-	-
Missouri	942	304,295	79	19,145	15	4,523	174	23,276	791	279,157	8	1,862
Montana	103	7,473	-	-	4	712	58	1,962	-	-	45	5,514
Nebraska	14,103	4,605,499	2,565	853,944	1,360	293,123	1,220	85,829	13,713	4,333,503	1,248	236,786
Nevada	2	(D)	-	-	-	-	2	(D)	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	18	1,988	2	(D)	-	-	9	(D)	10	1,082	-	-
New Mexico	72	42,166	25	14,016	6	3,580	-	-	61	22,882	13	19,801
New York	6	445	-	-	-	-	5	(D)	1	(D)	-	-
North Carolina	117	9,282	24	1,040	24	2,650	112	8,129	11	(D)	-	-
North Dakota	236	57,865	51	17,264	8	1,470	35	3,761	196	52,054	15	2,050
Ohio	9	3,188	2	(D)	2	(D)	5	1,657	5	(D)	1	(D)
Oklahoma	329	91,178	80	31,637	36	13,536	142	13,348	185	75,725	16	2,547
Oregon	120	16,002	15	4,668	11	3,358	12	4,672	13	2,273	104	9,247
Pennsylvania	11	806	-	-	-	-	10	(D)	1	(D)	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	89	13,998	17	3,333	-	-	55	5,977	44	8,691	2	(D)
South Dakota	715	142,149	80	20,228	24	6,158	43	7,172	570	116,173	113	19,274
Tennessee	48	5,886	1	(D)	-	-	15	1,839	36	4,047	-	-
Texas	1,740	749,465	492	247,826	121	103,335	47	12,726	1,563	678,344	211	60,920
Utah	142	12,352	30	3,271	3	500	3	102	27	1,441	129	10,809
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	80	11,260	4	430	-	-	67	10,023	15	741	4	496
Washington	339	62,815	125	17,375	11	1,286	13	11,559	40	5,481	319	45,775
West Virginia	2	(D)	-	-	-	-	2	(D)	-	-	-	-
Wisconsin	476	85,477	80	15,964	25	3,976	121	5,525	382	79,932	1	(D)
Wyoming	299	42,832	107	12,567	82	9,721	6	(D)	47	9,862	273	32,128
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	361	65,691	66	10,880	10	1,928	126	15,487	253	49,421	9	931
WRA 03 South Atlantic-Gulf	1,058	135,301	93	16,649	28	3,890	547	43,257	623	93,107	7	1,074
WRA 04 Great Lakes	876	232,977	59	11,261	27	1,936	505	67,891	527	161,930	30	3,536
WRA 05 Ohio	472	119,781	26	5,000	10	1,850	84	10,147	398	109,304	2	(D)
WRA 06 Tennessee	32	5,570	-	-	-	-	17	3,124	9	(D)	8	(D)
WRA 07 Upper Mississippi	2,438	511,169	299	72,933	25	4,875	366	39,490	2,156	470,624	31	3,261
WRA 08 Lower Mississippi	1,656	628,121	79	25,171	48	16,084	135	26,201	1,573	600,855	17	2,565
WRA 09 Souris-Red-Rainy	295	63,095	45	13,076	7	1,390	35	(D)	263	60,719	3	940
WRA 10 Missouri	18,076	5,741,365	3,403	1,196,186	1,724	414,888	1,748	181,641	16,604	5,255,492	2,096	365,264
WRA 11 Arkansas-White-Red	3,358	1,604,807	905	440,328	409	200,137	378	60,559	3,025	1,506,204	67	51,058
WRA 12 Texas-Gulf	1,042	264,572	195	42,151	18	9,460	33	4,300	888	226,991	202	35,806
WRA 13 Rio Grande	11	1,683	4	(D)	4	(D)	-	-	9	(D)	2	(D)
WRA 14 Upper Colorado	184	22,616	16	1,252	1	(D)	-	-	1	(D)	183	(D)
WRA 15 Lower Colorado	32	12,605	20	10,610	9	3,938	1	(D)	20	10,185	13	2,557
WRA 16 Great Basin	135	10,812	25	2,691	3	500	5	262	27	1,441	120	9,109
WRA 17 Pacific Northwest	1,034	130,169	213	32,907	30	5,893	54	21,026	139	17,804	926	93,615
WRA 18 California	1,204	198,869	724	39,698	6	7,221	138	45,381	784	80,010	323	84,194
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	3	545	1	(D)	-	-	1	(D)	-	-	2	(D)

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Corn for silage or greenchop											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	10,118	1,312,660	1,738	292,065	776	121,054	1,353	167,574	5,465	718,666	4,410	517,985
1998 . .	10,280	922,970	3,215	(NA)	1,166	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	33	1,571	-	-	-	-	29	1,206	4	365	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	75	15,564	43	9,021	12	3,088	15	1,645	32	5,568	42	11,964
Arkansas	12	2,063	-	-	-	-	-	-	12	2,063	-	-
California	2,214	466,109	492	102,802	349	59,033	345	61,782	964	229,272	1,565	249,800
Colorado	601	77,149	107	26,007	63	15,462	193	17,361	245	31,756	243	29,589
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Florida	66	20,008	26	4,930	22	3,260	2	(D)	64	(D)	-	-
Georgia	142	23,492	17	4,320	-	-	69	9,355	77	14,137	-	-
Hawaii	1	(D)	1	(D)	-	-	-	-	-	-	1	(D)
Idaho	1,064	127,652	183	32,053	40	15,634	76	11,252	168	41,933	926	77,357
Illinois	6	244	-	-	-	-	-	-	2	(D)	4	(D)
Indiana	47	5,891	7	525	7	525	18	1,375	30	4,516	-	-
Iowa	8	550	11	235	-	-	2	(D)	4	250	4	490
Kansas	569	66,310	125	17,698	9	2,059	56	4,678	518	61,806	21	2,540
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	2	(D)	-	-	-	-	2	(D)	-	-	2	(D)
Maine	2	(D)	-	-	-	-	-	-	-	-	2	(D)
Maryland	8	1,693	2	(D)	-	-	3	539	5	1,154	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	102	13,910	-	-	-	-	57	6,480	52	7,430	-	-
Minnesota	163	9,652	8	(D)	2	(D)	13	540	142	8,602	10	520
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	23	2,273	-	-	-	-	11	1,748	12	525	-	-
Montana	361	36,314	21	3,033	21	3,035	28	3,304	5	1,407	329	32,610
Nebraska	1,437	78,738	113	9,278	19	1,806	2	(D)	1,431	71,787	60	(D)
Nevada	38	3,613	11	736	-	-	15	1,596	8	425	21	1,592
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	298	76,214	138	26,955	39	8,200	5	(D)	279	63,711	54	12,473
New York	6	582	-	-	-	-	3	168	3	414	-	-
North Carolina	24	763	-	-	-	-	24	763	-	-	-	-
North Dakota	96	7,479	5	176	3	(D)	44	3,058	34	3,174	20	1,247
Ohio	2	(D)	-	-	-	-	1	(D)	1	(D)	-	-
Oklahoma	46	14,633	9	1,326	5	1,040	3	(D)	44	(D)	-	-
Oregon	726	52,991	5	267	-	-	141	16,833	479	23,932	138	12,306
Pennsylvania	8	172	-	-	-	-	8	172	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	20	2,080	1	(D)	-	-	7	860	13	1,220	-	-
South Dakota	131	10,739	5	280	3	240	16	1,064	46	2,358	72	7,317
Tennessee	9	879	4	419	-	-	9	879	-	-	-	-
Texas	412	81,523	86	31,050	18	3,540	52	2,936	361	78,587	-	-
Utah	624	38,921	96	6,747	10	710	17	773	89	8,051	549	30,417
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	14	867	-	-	-	-	5	660	9	207	-	-
Washington	457	43,416	158	6,423	134	1,370	45	3,600	182	11,190	230	28,626
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	88	5,947	2	(D)	-	-	17	367	74	5,580	-	-
Wyoming	181	21,399	62	6,088	20	1,536	20	2,539	74	7,627	117	12,468
Water Resources Areas												
WRA 01 New England	2	(D)	-	-	-	-	-	-	-	-	2	(D)
WRA 02 Mid-Atlantic	32	2,811	2	(D)	-	-	16	1,371	16	1,440	-	-
WRA 03 South Atlantic-Gulf	258	47,206	44	9,310	22	3,260	104	12,876	158	34,330	-	-
WRA 04 Great Lakes	151	19,387	8	1,025	7	(D)	76	7,423	83	11,964	-	-
WRA 05 Ohio	17	1,493	3	99	-	-	7	579	10	914	-	-
WRA 06 Tennessee	33	1,488	1	(D)	-	-	33	1,488	-	-	-	-
WRA 07 Upper Mississippi	239	16,036	18	365	2	(D)	31	2,877	199	12,549	14	(D)
WRA 08 Lower Mississippi	16	2,688	-	-	-	-	2	(D)	14	2,168	2	(D)
WRA 09 Souris-Red-Rainy	27	2,178	2	(D)	-	-	-	-	27	2,178	-	-
WRA 10 Missouri	2,692	222,176	352	51,117	129	22,195	216	24,202	1,900	125,840	723	75,926
WRA 11 Arkansas-White-Red	693	108,944	133	20,649	23	4,229	48	8,907	660	97,308	29	5,800
WRA 12 Texas-Gulf	303	75,909	62	30,447	13	3,486	54	3,440	245	70,988	5	1,481
WRA 13 Rio Grande	232	48,202	124	19,678	35	7,124	3	(D)	221	38,346	48	10,330
WRA 14 Upper Colorado	257	17,593	27	1,478	-	-	109	4,040	10	270	148	13,283
WRA 15 Lower Colorado	75	15,564	43	9,021	12	3,088	15	(D)	32	5,568	42	11,964
WRA 16 Great Basin	624	40,997	80	6,005	10	710	32	2,369	97	8,476	532	30,472
WRA 17 Pacific Northwest	2,252	223,619	346	38,743	174	17,004	262	31,685	829	77,055	1,299	117,849
WRA 18 California	2,214	466,109	492	102,802	349	59,033	345	61,782	964	229,272	1,565	249,800
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	1	(D)	1	(D)	-	-	-	-	-	-	1	(D)

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Sorghum for grain or seed											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	6,134	1,108,375	957	171,293	128	14,486	401	54,197	4,985	948,647	804	107,721
1998 . .	4,998	615,981	1,194	(NA)	526	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	3	(D)	-	-	-	-	2	(D)	1	(D)	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	28	6,490	12	3,349	2	(D)	2	(D)	18	3,734	15	(D)
Arkansas	326	58,081	49	4,886	10	1,725	29	5,040	310	53,041	-	-
California	4	3,525	-	-	-	-	-	-	-	-	4	3,525
Colorado	231	14,184	-	-	-	-	87	3,270	127	10,608	17	306
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	48	5,008	2	(D)	-	-	36	3,800	14	1,208	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	5	(D)	-	-	-	-	4	(D)	-	-	1	(D)
Illinois	3	(D)	1	(D)	-	-	1	(D)	2	(D)	-	-
Indiana	3	260	-	-	-	-	-	-	3	260	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	1,564	183,365	184	16,449	76	4,992	86	6,780	1,421	169,793	74	7,346
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	38	6,771	-	-	-	-	5	750	37	6,021	-	-
Maine	2	(D)	-	-	-	-	-	-	-	-	2	(D)
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Mississippi	31	6,692	1	(D)	1	(D)	2	(D)	31	(D)	-	-
Missouri	57	7,380	-	-	-	-	2	(D)	57	(D)	-	-
Montana	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska	945	44,148	233	8,621	-	-	-	-	863	37,998	82	6,150
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	145	33,510	37	9,751	2	(D)	4	(D)	135	30,031	6	2,370
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	166	27,770	18	3,251	8	1,415	5	(D)	159	26,460	2	(D)
Oregon	2	(D)	-	-	-	-	-	-	-	-	2	(D)
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	2	(D)	-	-	-	-	-	-	-	-	2	(D)
Tennessee	3	(D)	-	-	-	-	-	-	3	(D)	-	-
Texas	2,502	708,288	413	124,826	29	5,600	121	30,790	1,793	594,846	595	84,186
Utah	11	610	7	70	-	-	2	(D)	9	444	2	(D)
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	13	650	-	-	-	-	13	650	-	-	-	-
Water Resources Areas												
WRA 01 New England	2	(D)	-	-	-	-	-	-	-	-	2	(D)
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	51	5,159	2	(D)	-	-	38	3,826	15	1,333	-	-
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	5	560	-	-	-	-	1	(D)	4	(D)	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	4	(D)	1	(D)	-	-	-	-	4	(D)	-	-
WRA 08 Lower Mississippi	416	72,994	38	2,606	6	1,006	31	5,405	404	67,589	-	-
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	1,560	95,097	307	14,339	48	2,934	80	5,798	1,340	77,849	154	11,718
WRA 11 Arkansas-White-Red	2,285	471,966	370	88,334	45	5,198	143	15,519	2,118	448,869	29	7,960
WRA 12 Texas-Gulf	1,710	442,673	207	60,855	25	4,600	100	22,949	1,023	340,975	594	80,189
WRA 13 Rio Grande	44	7,512	13	1,656	2	(D)	-	-	43	(D)	1	(D)
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	35	7,260	12	3,349	2	(D)	2	(D)	25	4,504	15	(D)
WRA 16 Great Basin	11	610	7	70	-	-	2	(D)	9	(D)	2	(D)
WRA 17 Pacific Northwest	7	494	-	-	-	-	4	(D)	-	-	3	444
WRA 18 California	4	3,525	-	-	-	-	-	-	-	-	4	3,525
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Wheat for grain or seed											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	13,531	3,268,658	2,573	738,017	417	136,431	1,308	356,190	7,831	2,121,367	5,311	969,401
1998 . .	14,696	3,351,941	4,253	(NA)	1,488	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	275	122,144	176	66,394	15	10,233	40	12,179	107	44,414	177	71,290
Arkansas	46	8,770	8	24	-	-	5	300	41	8,470	-	-
California	1,038	406,582	302	96,191	37	10,024	104	49,614	438	116,528	747	278,905
Colorado	1,129	156,198	147	29,575	24	8,771	159	17,224	681	109,308	338	32,562
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	29	3,908	5	760	-	-	-	-	29	3,908	-	-
Florida	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	79	16,444	-	-	-	-	51	5,712	35	10,732	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	2,479	501,472	282	95,529	54	19,053	191	30,040	553	253,597	1,977	218,265
Illinois	13	2,357	-	-	-	-	-	-	13	2,357	-	-
Indiana	27	3,153	-	-	-	-	5	728	22	2,425	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	1,710	414,516	213	56,327	22	5,736	4	400	1,697	409,337	21	4,789
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	20	(D)	-	-	-	-	-	-	20	(D)	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	11	812	-	-	-	-	6	398	5	414	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	56	8,936	-	-	-	-	24	1,230	40	7,706	-	-
Minnesota	63	4,463	1	(D)	-	-	-	-	55	4,223	8	240
Mississippi	3	1,800	1	(D)	1	(D)	-	-	3	1,800	-	-
Missouri	28	7,983	-	-	-	-	-	-	28	8,678	-	-
Montana	709	119,455	92	22,593	9	4,708	143	23,657	146	21,155	439	74,760
Nebraska	580	110,254	167	25,832	19	2,370	19	1,140	553	105,273	8	3,841
Nevada	15	8,871	3	194	3	8,086	1	(D)	14	8,093	5	(D)
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	6	284	-	-	-	-	2	(D)	4	(D)	-	-
New Mexico	160	81,782	57	17,294	6	1,540	4	4,241	146	57,444	11	21,813
New York	54	54	-	-	-	-	-	-	54	54	-	-
North Carolina	36	938	-	-	-	-	35	(D)	1	(D)	-	-
North Dakota	80	17,724	11	3,000	2	(D)	15	3,413	34	6,587	35	7,984
Ohio	1	(D)	-	-	-	-	-	-	1	(D)	-	-
Oklahoma	587	131,691	186	37,808	27	3,962	15	(D)	571	127,841	2	(D)
Oregon	831	143,046	40	13,914	18	7,752	282	28,879	336	51,698	383	72,722
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	6	1,390	-	-	-	-	5	1,010	5	840	-	-
South Dakota	19	3,118	4	410	3	600	4	758	6	750	9	1,610
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	2,008	657,126	518	189,768	98	31,725	119	142,550	1,862	604,028	52	27,548
Utah	529	44,182	33	4,364	17	1,385	6	750	23	4,479	509	38,953
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	7	850	-	-	-	-	6	(D)	1	(D)	-	-
Washington	832	277,624	305	74,635	55	19,412	61	25,631	259	140,103	575	112,149
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	11	554	3	(D)	-	-	-	-	11	554	-	-
Wyoming	54	8,312	19	2,211	7	(D)	2	(D)	37	6,242	15	(D)
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	104	5,548	5	760	-	-	11	748	93	4,800	-	-
WRA 03 South Atlantic-Gulf	124	19,132	-	-	-	-	94	7,980	41	11,612	-	-
WRA 04 Great Lakes	60	9,017	-	-	-	-	26	1,246	42	7,771	-	-
WRA 05 Ohio	24	3,784	-	-	-	-	2	(D)	22	(D)	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	44	4,411	3	(D)	-	-	1	(D)	43	(D)	-	-
WRA 08 Lower Mississippi	95	19,913	9	(D)	1	(D)	5	300	90	20,308	-	-
WRA 09 Souris-Red-Rainy	68	6,367	2	(D)	-	-	4	959	56	5,168	8	240
WRA 10 Missouri	2,873	442,583	453	85,699	76	18,030	316	35,203	1,876	297,101	741	111,776
WRA 11 Arkansas-White-Red	3,037	981,745	687	237,428	44	13,348	76	145,890	2,916	935,935	70	19,806
WRA 12 Texas-Gulf	980	241,519	247	51,711	84	24,339	84	14,301	872	201,444	49	25,790
WRA 13 Rio Grande	38	8,227	17	3,913	8	(D)	-	-	36	7,415	3	1,412
WRA 14 Upper Colorado	59	14,343	1	(D)	1	(D)	-	-	10	790	49	13,553
WRA 15 Lower Colorado	275	122,144	176	66,394	15	10,233	40	12,179	107	44,414	177	71,290
WRA 16 Great Basin	590	59,675	36	4,558	20	9,471	7	1,408	48	13,267	560	45,320
WRA 17 Pacific Northwest	4,059	916,892	635	189,106	131	48,845	532	85,050	1,134	446,681	2,853	395,783
WRA 18 California	1,101	413,358	302	96,191	37	10,024	110	50,214	445	117,178	801	284,431
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Barley for grain or seed											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	4,654	991,277	450	125,356	190	72,578	648	123,235	1,154	316,249	3,263	565,773
1998 . .	8,982	999,322	2,293	(NA)	677	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Arizona	102	23,564	44	10,346	4	1,180	24	2,615	46	8,716	57	14,368
Arkansas	-	-	-	-	-	-	-	-	-	-	-	-
California	130	29,781	10	2,612	3	1,005	27	11,769	100	15,811	13	3,133
Colorado	398	82,734	153	34,283	52	18,510	43	7,538	262	56,565	154	21,652
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	8	1,553	-	-	-	-	-	-	8	1,787	-	-
Florida	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	1,758	438,399	102	54,587	62	35,616	228	43,536	502	202,495	1,265	198,993
Illinois	-	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Kansas	18	3,330	-	-	-	-	-	-	18	3,330	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	5	805	-	-	-	-	2	(D)	3	(D)	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	12	168	-	-	-	-	12	168	-	-	-	-
Minnesota	13	560	-	-	-	-	-	-	13	560	-	-
Mississippi	3	1,370	-	-	-	-	-	-	3	1,370	-	-
Missouri	4	180	-	-	-	-	-	-	4	180	-	-
Montana	953	292,443	41	11,615	30	8,295	231	48,328	48	6,559	716	238,429
Nebraska	20	1,493	19	(D)	-	-	-	-	19	(D)	1	(D)
Nevada	7	1,492	-	-	1	(D)	4	(D)	3	940	1	(D)
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota	30	4,353	2	(D)	-	-	3	(D)	13	1,959	15	(D)
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	11	275	-	-	-	-	-	-	11	275	-	-
Oregon	162	18,684	3	45	3	(D)	16	2,781	14	1,655	134	14,248
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	1	(D)	-	-	-	-	-	-	1	(D)	-	-
Texas	-	-	-	-	-	-	-	-	-	-	-	-
Utah	582	31,112	37	1,768	22	(D)	32	1,601	45	2,737	531	26,802
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	1	(D)	-	-	-	-	-	-	1	(D)	-	-
Washington	35	2,978	4	595	1	(D)	-	-	14	1,633	21	1,345
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	3	102	-	-	-	-	-	-	3	102	-	-
Wyoming	394	54,978	35	8,044	12	6,242	26	3,963	19	6,614	355	44,533
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	14	2,513	-	-	-	-	2	(D)	12	2,707	-	-
WRA 03 South Atlantic-Gulf	-	-	-	-	-	-	-	-	-	-	-	-
WRA 04 Great Lakes	13	208	-	-	-	-	12	(D)	1	(D)	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	1	(D)	-	-	-	-	-	-	1	(D)	-	-
WRA 07 Upper Mississippi	15	622	-	-	-	-	-	-	15	622	-	-
WRA 08 Lower Mississippi	7	1,550	-	-	-	-	-	-	7	1,550	-	-
WRA 09 Souris-Red-Rainy	9	1,426	-	-	-	-	-	-	9	1,426	-	-
WRA 10 Missouri	1,417	365,828	120	22,618	53	16,257	295	57,374	128	17,344	1,085	293,115
WRA 11 Arkansas-White-Red	29	3,605	-	-	-	-	-	-	29	3,605	-	-
WRA 12 Texas-Gulf	-	-	-	-	-	-	-	-	-	-	-	-
WRA 13 Rio Grande	200	53,632	126	29,685	39	14,790	1	(D)	199	50,498	19	4,825
WRA 14 Upper Colorado	179	(D)	2	(D)	-	-	11	(D)	-	-	168	6,826
WRA 15 Lower Colorado	102	23,564	44	10,346	4	1,180	24	2,615	46	8,716	57	14,368
WRA 16 Great Basin	917	44,278	37	(D)	23	1,210	29	(D)	128	5,733	795	36,610
WRA 17 Pacific Northwest	1,593	446,051	111	57,227	68	38,136	241	45,932	464	207,242	1,117	199,502
WRA 18 California	156	39,640	10	2,612	3	1,005	33	13,579	113	16,466	22	10,527
WRA 19 Alaska	2	(D)	-	-	-	-	-	-	2	(D)	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Soybeans for beans											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	21,072	5,347,078	1,111	238,509	431	113,035	3,149	407,384	19,709	4,852,134	776	114,314
1998 . .	19,830	4,516,540	1,519	(NA)	621	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	5	448	-	-	-	-	4	(D)	1	(D)	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas	3,182	1,686,946	141	84,541	95	59,500	738	232,056	3,027	1,445,526	63	17,364
California	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	12	2,200	-	-	-	-	-	-	12	2,212	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	103	10,561	10	802	6	392	34	685	72	9,986	-	-
Florida	13	3,820	-	-	-	-	-	-	11	(D)	2	(D)
Georgia	137	16,027	-	-	-	-	66	4,447	83	11,790	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	627	101,897	7	1,061	4	815	34	3,117	595	99,171	1	(D)
Indiana	475	75,040	4	884	-	-	130	14,131	383	61,011	1	(D)
Iowa	284	53,757	8	524	-	-	27	1,315	250	52,053	7	615
Kansas	1,669	311,032	235	51,425	76	12,722	154	12,786	1,473	291,855	98	10,185
Kentucky	29	4,691	-	-	1	(D)	12	1,265	17	3,426	-	-
Louisiana	220	74,566	6	2,325	5	2,250	46	15,606	193	57,860	4	1,102
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	84	9,832	3	(D)	1	(D)	32	1,670	58	8,262	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	426	72,371	14	1,262	1	(D)	226	25,651	285	46,530	4	270
Minnesota	655	102,854	13	2,014	8	975	15	1,316	636	101,050	9	648
Mississippi	568	399,348	6	1,610	6	6,080	48	20,599	561	378,245	8	4,550
Missouri	1,013	309,081	16	4,868	6	2,738	134	15,596	898	291,381	14	2,104
Montana	15	1,684	-	-	-	-	4	644	4	520	7	520
Nebraska	10,033	1,858,359	545	71,481	178	21,550	1,118	33,101	9,941	1,760,247	505	65,604
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	33	1,148	-	-	-	-	26	434	7	714	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	122	(D)	-	-	-	-	105	3,592	19	1,320	-	-
North Dakota	103	17,113	18	2,292	4	(D)	12	794	88	15,993	4	356
Ohio	3	370	-	-	-	-	1	(D)	1	(D)	1	(D)
Oklahoma	79	13,563	19	2,255	6	880	27	4,556	55	8,129	5	878
Oregon	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	3	108	-	-	-	-	3	108	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	30	5,737	2	(D)	-	-	20	3,276	19	2,817	2	(D)
South Dakota	559	100,662	37	4,995	25	2,620	40	5,092	490	86,542	40	9,043
Tennessee	22	5,054	3	1,325	-	-	7	459	18	4,595	-	-
Texas	263	64,850	5	568	4	388	14	869	261	71,312	1	(D)
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	24	2,660	-	-	-	-	18	1,763	6	897	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia	2	(D)	-	-	-	-	2	(D)	-	-	-	-
Wisconsin	279	36,717	19	2,890	5	800	52	1,838	245	34,950	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	245	24,049	13	1,985	7	1,340	111	(D)	143	19,859	-	-
WRA 03 South Atlantic-Gulf	307	30,696	2	(D)	-	-	196	12,015	132	(D)	4	304
WRA 04 Great Lakes	573	93,949	14	1,262	1	(D)	283	30,345	399	63,426	4	(D)
WRA 05 Ohio	328	55,584	4	884	2	(D)	66	5,811	269	49,830	2	(D)
WRA 06 Tennessee	6	468	-	-	-	-	2	(D)	4	(D)	-	-
WRA 07 Upper Mississippi	1,722	257,389	46	6,439	16	2,230	190	19,143	1,566	237,947	4	782
WRA 08 Lower Mississippi	4,174	2,152,432	128	67,907	79	44,545	754	230,995	4,019	1,917,591	46	14,919
WRA 09 Souris-Red-Rainy	163	26,663	14	1,022	4	(D)	16	984	135	24,705	12	974
WRA 10 Missouri	11,366	2,122,388	641	86,958	237	28,580	1,232	47,146	11,060	1,992,478	655	83,576
WRA 11 Arkansas-White-Red	2,065	566,267	245	71,460	81	35,215	299	56,517	1,859	501,318	49	13,189
WRA 12 Texas-Gulf	123	17,193	4	(D)	4	388	-	-	123	24,993	-	-
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-	-
WRA 18 California	-	-	-	-	-	-	-	-	-	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Beans, dry edible											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	2,697	458,265	452	70,279	243	36,561	243	39,137	1,207	243,051	1,375	185,691
1998 . .	5,464	655,572	1,198	(NA)	1,157	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	17	2,430	13	1,746	6	1,095	-	-	16	(D)	1	(D)
Arkansas	13	1,300	-	-	-	-	-	-	13	1,300	-	-
California	313	76,179	60	4,657	3	144	55	10,183	92	16,602	211	51,644
Colorado	218	38,975	90	18,678	68	14,445	19	3,404	167	32,158	35	3,413
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Florida	9	3,330	-	-	-	-	2	(D)	9	3,330	2	(D)
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	637	69,066	31	3,837	17	3,114	39	9,744	68	9,171	575	52,182
Illinois	-	-	-	-	-	-	-	-	-	-	-	-
Indiana	4	760	-	-	-	-	-	-	4	760	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	130	20,236	4	920	35	2,275	-	-	130	20,236	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	60	9,177	-	-	-	-	36	3,266	35	5,911	-	-
Minnesota	67	24,230	5	2,408	-	-	2	(D)	67	(D)	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	10	724	-	-	-	-	-	-	10	724	-	-
Montana	61	8,314	4	(D)	4	220	7	2,420	8	867	47	5,140
Nebraska	403	81,800	127	19,187	40	5,617	19	5,100	356	61,689	30	15,639
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	2	(D)	-	-	-	-	2	(D)	-	-	-	-
New Jersey	4	27	-	-	-	-	3	(D)	1	(D)	-	-
New Mexico	19	10,770	7	1,140	12	1,364	-	-	18	(D)	1	(D)
New York	1	(D)	-	-	-	-	1	(D)	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota	55	12,129	10	1,883	2	(D)	-	-	52	11,834	3	295
Ohio	3	3	-	-	-	-	3	3	-	-	-	-
Oklahoma	12	2,330	-	-	-	-	1	(D)	12	(D)	-	-
Oregon	76	6,984	11	1,100	11	1,100	6	588	15	1,431	58	5,181
Pennsylvania	33	99	-	-	-	-	33	99	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	1	(D)	-	-	-	-	1	(D)	-	-	-	-
South Dakota	2	(D)	1	(D)	-	-	-	-	1	(D)	1	(D)
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	80	26,982	8	600	-	-	-	-	76	26,882	4	100
Utah	2	(D)	2	(D)	2	(D)	-	-	-	-	2	(D)
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	3	99	-	-	-	-	3	99	-	-	-	-
Washington	207	23,657	33	6,098	22	2,899	3	500	11	2,183	193	20,974
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	4	7,600	-	-	-	-	-	-	4	7,600	-	-
Wyoming	249	27,973	46	5,945	21	3,388	8	1,232	40	7,680	212	19,437
Water Resources Areas												
WRA 01 New England	2	(D)	-	-	-	-	2	(D)	-	-	-	-
WRA 02 Mid-Atlantic	9	320	-	-	-	-	6	121	3	199	-	-
WRA 03 South Atlantic-Gulf	10	3,340	-	-	-	-	3	2,010	9	3,330	2	(D)
WRA 04 Great Lakes	61	9,302	-	-	-	-	37	3,391	35	5,911	-	-
WRA 05 Ohio	38	(D)	-	-	-	-	36	102	2	(D)	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	51	25,543	3	2,018	-	-	2	(D)	51	(D)	-	-
WRA 08 Lower Mississippi	23	2,024	-	-	-	-	-	-	23	2,024	-	-
WRA 09 Souris-Red-Rainy	62	15,343	6	1,593	2	(D)	-	-	62	15,343	-	-
WRA 10 Missouri	1,064	180,481	278	47,390	168	25,945	50	11,736	713	125,928	318	43,934
WRA 11 Arkansas-White-Red	22	9,432	-	-	-	-	1	(D)	22	(D)	-	-
WRA 12 Texas-Gulf	77	22,774	10	1,360	2	(D)	-	-	73	22,674	4	100
WRA 13 Rio Grande	12	1,070	5	(D)	10	990	-	-	12	1,070	-	-
WRA 14 Upper Colorado	11	9,376	-	-	-	-	-	-	-	-	11	9,376
WRA 15 Lower Colorado	17	2,430	13	1,746	6	1,095	-	-	16	(D)	1	(D)
WRA 16 Great Basin	10	932	2	(D)	2	(D)	-	-	8	(D)	10	932
WRA 17 Pacific Northwest	913	99,155	75	11,035	50	7,113	49	11,112	86	12,401	818	77,505
WRA 18 California	315	76,319	60	4,657	3	144	57	10,323	92	16,602	211	51,644
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Rice											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	6,836	2,994,757	658	245,595	698	171,939	1,684	447,305	4,930	1,929,234	1,543	634,980
1998 . .	8,791	3,473,384	1,542	(NA)	917	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas	3,080	1,322,891	333	113,651	168	84,860	873	207,096	2,828	1,107,516	53	11,864
California	1,175	595,932	100	33,684	376	25,563	140	51,994	264	84,930	1,016	466,568
Colorado	-	-	-	-	-	-	-	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	1	(D)	1	(D)	-	-	-	-	-	-	1	(D)
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	1	(D)	-	-	-	-	-	-	1	(D)	-	-
Louisiana	1,165	439,565	113	40,016	83	25,667	354	129,750	946	(D)	62	14,695
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi	344	194,212	8	6,430	5	5,000	34	8,532	334	183,662	10	(D)
Missouri	301	129,931	15	(D)	4	674	-	-	300	(D)	1	(D)
Montana	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	-	-	-	-	-	-	-	-	-	-	-	-
Oregon	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	3	275	-	-	-	-	-	-	1	(D)	2	(D)
Texas	764	308,522	88	47,075	62	30,175	283	49,933	254	121,358	398	137,231
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	1	(D)	1	(D)	-	-	-	-	-	-	1	(D)
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	2	(D)	-	-	-	-	-	-	2	(D)	-	-
WRA 08 Lower Mississippi	4,057	1,809,141	300	129,740	208	90,221	1,020	296,964	3,734	1,496,493	103	24,581
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	-	-	-	-	-	-	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	837	278,268	169	(D)	52	25,980	241	48,414	676	225,353	25	4,806
WRA 12 Texas-Gulf	764	308,522	88	47,075	62	30,175	283	49,933	254	(D)	398	(D)
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-	-
WRA 18 California	1,175	595,932	100	33,684	376	25,563	140	51,994	264	84,930	1,016	466,568
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Other small grains (oats, rye, etc.)											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	2,829	240,304	149	21,646	51	4,473	459	32,951	930	121,707	1,529	92,444
1998 . .	3,900	218,531	915	(NA)	105	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	18	2,240	6	1,023	-	-	-	-	3	390	15	1,850
Arkansas	5	1,900	-	-	-	-	-	-	5	1,900	-	-
California	350	62,285	21	4,215	6	2,064	35	4,830	36	28,111	283	29,344
Colorado	150	9,854	10	1,000	-	-	21	2,130	58	7,170	75	1,154
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	17	2,388	1	(D)	-	-	-	-	15	(D)	2	(D)
Georgia	30	2,537	-	-	-	-	21	1,615	9	922	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	134	12,981	13	(D)	-	-	10	553	36	3,587	105	10,041
Illinois	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Indiana	7	35	-	-	-	-	7	35	-	-	-	-
Iowa	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Kansas	23	2,843	1	(D)	1	(D)	-	-	23	2,843	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	14	1,203	-	-	-	-	8	222	8	981	-	-
Minnesota	58	1,269	-	-	-	-	-	-	58	1,269	-	-
Mississippi	4	2,042	1	(D)	1	(D)	-	-	4	2,042	-	-
Missouri	-	-	-	-	-	-	-	-	-	-	-	-
Montana	400	18,734	20	129	-	-	119	7,884	26	920	258	9,930
Nebraska	176	13,448	-	-	19	190	-	-	156	9,958	39	5,960
Nevada	39	2,771	2	(D)	-	-	8	696	21	1,805	18	(D)
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	3	15	-	-	-	-	-	-	3	15	-	-
New Mexico	46	5,154	23	1,868	19	711	1	(D)	45	4,730	1	(D)
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	20	2,478	-	-	-	-	20	2,478	-	-	-	-
North Dakota	16	1,670	4	424	2	(D)	3	318	7	947	7	918
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	39	5,317	6	2,368	-	-	-	-	39	5,317	-	-
Oregon	129	18,493	11	2,584	3	690	40	2,467	84	11,156	25	5,430
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	66	3,265	3	300	-	-	2	(D)	9	(D)	55	2,506
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	187	25,180	4	460	-	-	13	2,340	174	22,840	-	-
Utah	522	18,398	16	1,229	-	-	10	(D)	29	2,844	490	15,980
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	150	11,879	1	(D)	-	-	80	3,892	67	7,887	5	224
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	16	1,756	-	-	-	-	6	326	11	1,430	-	-
Wyoming	206	9,975	6	540	-	-	55	2,480	-	-	151	7,495
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	3	15	-	-	-	-	-	-	3	15	-	-
WRA 03 South Atlantic-Gulf	67	7,403	1	(D)	-	-	41	4,093	24	(D)	2	(D)
WRA 04 Great Lakes	28	2,491	-	-	-	-	20	363	11	2,128	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	40	1,411	-	-	-	-	1	(D)	39	(D)	-	-
WRA 08 Lower Mississippi	9	3,942	1	(D)	1	(D)	-	-	9	3,942	-	-
WRA 09 Souris-Red-Rainy	29	435	-	-	-	-	-	-	29	435	-	-
WRA 10 Missouri	748	45,687	31	1,093	21	(D)	145	9,217	198	14,289	428	25,164
WRA 11 Arkansas-White-Red	127	15,340	7	4,433	1	(D)	13	2,340	114	13,000	-	-
WRA 12 Texas-Gulf	105	12,120	-	-	-	-	-	-	105	12,120	-	-
WRA 13 Rio Grande	101	15,820	36	3,288	19	711	5	951	101	15,820	-	-
WRA 14 Upper Colorado	350	11,133	2	(D)	-	-	41	2,585	-	-	309	8,548
WRA 15 Lower Colorado	19	2,280	7	1,063	-	-	-	-	4	430	15	1,850
WRA 16 Great Basin	349	15,792	18	1,509	-	-	11	(D)	53	(D)	300	(D)
WRA 17 Pacific Northwest	490	41,601	25	4,835	3	690	142	7,372	200	22,520	187	13,593
WRA 18 California	364	64,834	21	4,215	6	2,064	40	5,050	40	28,271	288	31,513
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Alfalfa and alfalfa mixtures (dry hay, silage, and greenchop)											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	46,290	6,221,542	3,743	740,671	1,492	347,908	9,176	1,050,319	13,108	2,401,746	27,069	2,923,937
1998 . .	55,247	6,513,077	9,679	(NA)	2,870	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	803	210,084	196	78,403	37	13,661	71	10,156	200	67,975	602	140,316
Arkansas	-	-	-	-	-	-	-	-	-	-	-	-
California	2,638	1,008,458	287	134,096	162	71,474	347	154,735	1,205	431,899	1,655	486,574
Colorado	6,144	629,406	467	64,926	306	34,332	1,644	127,943	1,055	176,596	3,691	345,364
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	4	58	-	-	-	-	-	-	4	58	-	-
Florida	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	20	847	-	-	-	-	11	22	9	825	-	-
Hawaii	3	59	-	-	-	-	-	-	-	-	3	59
Idaho	7,192	758,734	742	77,535	103	12,741	949	90,235	1,735	311,604	4,900	372,942
Illinois	3	42	-	-	-	-	-	-	3	42	-	-
Indiana	36	2,278	-	-	-	-	7	932	29	1,346	-	-
Iowa	23	687	11	278	-	-	-	-	12	297	11	390
Kansas	925	207,977	53	36,656	96	58,593	113	12,322	816	194,771	44	1,244
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	2	(D)	-	-	-	-	-	-	-	-	2	(D)
Maryland	5	222	-	-	-	-	3	(D)	2	(D)	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	69	4,574	-	-	-	-	33	1,308	44	3,266	-	-
Minnesota	363	24,620	2	(D)	-	-	62	2,426	315	22,194	-	-
Mississippi	1	(D)	1	(D)	1	(D)	-	-	1	(D)	-	-
Missouri	197	6,117	-	-	-	-	129	3,619	68	2,498	-	-
Montana	5,393	714,722	265	42,623	14	3,006	1,667	251,545	612	40,940	3,303	423,497
Nebraska	2,901	350,700	100	27,056	18	810	120	11,672	2,388	285,689	544	60,409
Nevada	1,077	279,644	83	55,966	50	42,305	303	49,289	401	183,232	475	58,209
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	2	(D)	-	-	-	-	2	(D)	-	-	-	-
New Mexico	2,505	163,932	234	24,001	197	16,941	672	21,773	811	99,943	1,188	49,802
New York	4	171	-	-	-	-	4	171	-	-	-	-
North Carolina	56	1,744	-	-	-	-	56	1,744	-	-	-	-
North Dakota	205	23,090	6	709	1	(D)	83	7,003	87	13,096	39	3,056
Ohio	2	(D)	-	-	-	-	-	-	2	(D)	1	(D)
Oklahoma	310	37,928	95	10,372	72	4,714	21	4,290	285	34,080	5	(D)
Oregon	2,773	376,702	334	37,307	59	15,352	1,032	90,376	642	146,854	1,357	147,034
Pennsylvania	13	526	-	-	-	-	13	526	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	719	97,064	14	1,545	6	1,575	157	18,045	192	20,087	397	59,232
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	588	98,021	123	20,652	33	9,420	-	-	495	93,841	93	4,180
Utah	6,217	494,119	265	29,527	223	34,284	583	34,140	631	118,816	5,503	343,833
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	13	229	-	-	-	-	4	40	9	189	-	-
Washington	2,258	354,087	199	51,500	33	17,140	401	57,181	560	81,399	1,549	218,433
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	218	17,294	8	338	1	(D)	52	2,836	172	14,639	-	-
Wyoming	2,608	356,195	258	46,706	80	11,200	637	95,628	323	54,815	1,707	208,445
Water Resources Areas												
WRA 01 New England	2	(D)	-	-	-	-	-	-	-	-	2	(D)
WRA 02 Mid-Atlantic	37	1,191	-	-	-	-	22	(D)	15	(D)	-	-
WRA 03 South Atlantic-Gulf	76	2,591	-	-	-	-	67	1,766	9	825	-	-
WRA 04 Great Lakes	141	10,911	-	-	-	-	64	2,568	85	8,343	-	-
WRA 05 Ohio	16	1,667	-	-	-	-	3	900	13	(D)	1	(D)
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	503	33,615	22	856	1	(D)	78	3,494	434	30,032	9	(D)
WRA 08 Lower Mississippi	52	2,515	1	(D)	1	(D)	-	-	52	2,515	-	-
WRA 09 Souris-Red-Rainy	111	(D)	2	(D)	-	-	36	(D)	79	7,136	-	-
WRA 10 Missouri	13,474	1,632,462	695	129,203	207	36,020	3,056	390,142	4,290	494,066	6,679	767,237
WRA 11 Arkansas-White-Red	1,956	386,818	208	54,713	172	65,947	473	35,268	1,216	252,966	349	101,444
WRA 12 Texas-Gulf	347	55,062	57	21,012	42	(D)	1	(D)	329	53,782	17	1,441
WRA 13 Rio Grande	2,731	257,571	281	34,467	149	14,325	759	26,550	939	198,619	1,253	50,909
WRA 14 Upper Colorado	4,542	350,919	464	39,709	327	14,264	747	71,581	156	2,900	3,839	276,588
WRA 15 Lower Colorado	1,065	235,152	202	82,903	37	13,661	251	13,586	230	86,439	654	143,490
WRA 16 Great Basin	5,674	703,226	242	79,213	206	79,309	657	73,109	973	303,791	4,512	341,112
WRA 17 Pacific Northwest	12,640	1,473,044	1,206	160,025	179	36,109	2,592	264,908	3,011	511,156	7,859	722,335
WRA 18 California	2,920	1,065,717	363	138,095	171	74,403	370	163,373	1,277	448,402	1,892	518,692
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	3	59	-	-	-	-	-	-	-	-	3	59

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	All other hay (dry hay, haylage, grass silage, and greenchop)											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	27,667	3,253,729	3,086	341,005	718	55,515	8,471	1,240,942	6,573	758,309	13,392	1,310,600
1998 . .	23,562	3,008,815	5,609	(NA)	967	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	55	2,722	2	(D)	-	-	26	1,824	31	1,008	-	-
Alaska	13	1,456	-	-	-	-	-	-	13	1,456	-	-
Arizona	335	42,051	63	17,397	4	2,700	21	11,266	58	8,621	272	22,994
Arkansas	355	17,870	22	1,320	144	5,980	227	10,893	141	6,977	-	-
California	1,885	344,531	245	44,279	59	12,274	192	38,626	674	100,649	1,192	225,712
Colorado	4,554	472,776	575	43,195	255	16,456	1,330	245,556	546	73,141	2,729	162,143
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	5	390	-	-	-	-	-	-	5	390	-	-
Florida	274	16,275	34	3,465	2	(D)	51	(D)	221	11,025	2	(D)
Georgia	257	11,478	15	2,200	-	-	141	6,945	135	4,533	-	-
Hawaii	1	(D)	-	-	-	-	1	(D)	-	-	-	-
Idaho	1,353	103,573	99	12,630	72	1,080	313	47,142	178	12,245	981	45,106
Illinois	4	583	-	-	-	-	1	(D)	1	(D)	2	(D)
Indiana	9	288	-	-	-	-	-	-	9	288	-	-
Iowa	2	(D)	-	-	-	-	-	-	-	-	2	(D)
Kansas	384	36,567	68	9,120	4	520	-	-	371	34,517	13	2,470
Kentucky	7	413	-	-	-	-	7	413	-	-	-	-
Louisiana	31	2,598	-	-	-	-	16	918	15	1,680	-	-
Maine	2	(D)	-	-	-	-	-	-	-	-	2	(D)
Maryland	15	1,361	-	-	2	(D)	5	832	7	400	3	(D)
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	5	337	-	-	-	-	-	-	5	337	-	-
Minnesota	91	3,071	-	-	2	(D)	12	(D)	77	1,581	2	(D)
Mississippi	6	2,836	-	-	-	-	4	(D)	2	(D)	-	-
Missouri	41	3,849	-	-	-	-	39	(D)	2	(D)	-	-
Montana	2,329	383,511	129	30,109	26	2,256	843	169,326	235	10,282	1,293	204,790
Nebraska	934	131,811	21	2,875	-	-	-	-	691	123,719	243	8,092
Nevada	460	175,166	19	8,390	8	1,540	281	106,992	119	23,731	114	54,513
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	4	82	-	-	-	-	2	(D)	2	(D)	-	-
New Mexico	1,094	84,439	128	13,892	12	4,560	204	9,440	429	55,110	473	22,573
New York	9	1,350	-	-	-	-	9	1,350	-	-	-	-
North Carolina	409	21,237	-	-	-	-	387	19,651	22	1,776	-	-
North Dakota	36	3,847	7	(D)	-	-	20	430	10	870	7	2,547
Ohio	15	260	-	-	-	-	-	-	15	260	-	-
Oklahoma	412	37,697	4	580	4	380	228	14,545	183	23,230	2	(D)
Oregon	3,337	364,205	463	20,305	3	(D)	1,380	203,652	165	39,200	1,863	128,292
Pennsylvania	5	288	-	-	-	-	4	(D)	-	-	1	(D)
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	12	256	9	90	-	-	12	256	-	-	-	-
South Dakota	190	17,368	1	(D)	-	-	44	6,176	44	2,556	102	8,636
Tennessee	7	221	-	-	-	-	6	(D)	1	(D)	-	-
Texas	2,612	202,243	294	32,077	25	1,500	679	36,525	1,374	140,853	564	24,871
Utah	2,290	128,599	135	7,834	73	3,083	357	29,790	241	14,221	1,800	87,508
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	27	378	-	-	-	-	18	270	9	108	-	-
Washington	1,690	155,568	521	36,114	5	(D)	457	22,360	469	53,866	835	80,048
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	27	2,178	-	-	-	-	1	(D)	26	(D)	-	-
Wyoming	2,084	477,049	232	53,362	18	1,208	1,153	245,265	47	5,418	895	227,026
Water Resources Areas												
WRA 01 New England	2	(D)	-	-	-	-	-	-	-	-	2	(D)
WRA 02 Mid-Atlantic	38	2,229	-	-	2	(D)	11	1,054	23	936	4	(D)
WRA 03 South Atlantic-Gulf	1,017	53,764	60	5,795	2	(D)	630	34,930	406	17,922	2	(D)
WRA 04 Great Lakes	15	2,097	-	-	-	-	9	1,350	6	747	-	-
WRA 05 Ohio	39	1,073	-	-	-	-	16	503	23	570	-	-
WRA 06 Tennessee	4	470	-	-	-	-	-	-	4	470	-	-
WRA 07 Upper Mississippi	98	5,997	-	-	2	(D)	13	1,558	79	2,823	6	1,616
WRA 08 Lower Mississippi	274	11,974	22	1,320	122	5,100	129	5,117	145	6,857	-	-
WRA 09 Souris-Red-Rainy	34	2,478	-	-	-	-	5	(D)	27	378	2	(D)
WRA 10 Missouri	5,653	893,951	576	79,578	58	3,834	1,910	400,463	1,330	183,193	2,455	311,342
WRA 11 Arkansas-White-Red	1,611	218,456	172	24,291	56	6,961	504	53,650	824	125,751	324	41,135
WRA 12 Texas-Gulf	2,425	167,018	281	27,596	32	3,610	681	37,125	1,223	108,083	527	21,810
WRA 13 Rio Grande	943	80,944	125	12,407	15	5,050	97	11,671	344	49,204	515	23,743
WRA 14 Upper Colorado	4,060	447,883	311	36,616	209	8,500	1,328	198,789	97	4,934	2,684	250,990
WRA 15 Lower Colorado	399	46,467	68	17,797	4	2,700	54	12,646	76	9,687	291	25,444
WRA 16 Great Basin	2,192	279,799	119	15,427	146	5,283	559	135,909	268	36,146	1,494	119,574
WRA 17 Pacific Northwest	6,730	671,174	1,040	74,652	10	1,134	2,315	302,835	966	99,154	3,715	277,750
WRA 18 California	2,119	366,444	312	45,526	60	12,729	209	42,817	719	109,998	1,371	234,085
WRA 19 Alaska	13	1,456	-	-	-	-	-	-	13	1,456	-	-
WRA 20 Hawaii	1	(D)	-	-	-	-	1	(D)	-	-	-	-

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Peanuts for nuts											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	2,117	384,867	320	57,782	111	10,765	561	60,985	1,703	323,716	11	1,858
1998 . .	3,207	502,801	575	(NA)	248	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	37	9,048	1	(D)	-	-	24	2,738	20	6,310	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas	5	(D)	-	-	-	-	-	-	5	(D)	-	-
California	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	-	-	-	-	-	-	-	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	126	22,797	-	-	-	-	2	(D)	126	(D)	-	-
Georgia	871	140,081	8	2,283	5	1,650	431	34,402	534	107,221	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	-	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	-	-	-	-	-	-	-	-	-	-	-	-
Montana	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	38	15,333	15	5,564	-	-	2	(D)	32	12,653	4	1,180
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	23	2,861	-	-	-	-	15	2,121	6	(D)	3	(D)
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	265	26,616	26	3,982	85	4,047	15	2,825	250	23,393	3	(D)
Oregon	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	11	2,535	10	(D)	-	-	2	(D)	9	(D)	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	733	163,228	260	45,573	21	5,068	64	15,866	719	147,282	1	(D)
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	6	588	-	-	-	-	6	588	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	1,074	177,910	19	(D)	5	1,650	480	40,694	695	138,608	3	150
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
WRA 08 Lower Mississippi	2	(D)	-	-	-	-	-	-	2	(D)	-	-
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	-	-	-	-	-	-	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	375	37,203	26	3,982	85	4,047	15	2,825	360	33,980	3	408
WRA 12 Texas-Gulf	662	166,436	273	48,907	21	5,068	66	17,466	642	147,810	5	1,300
WRA 13 Rio Grande	4	(D)	2	(D)	-	-	-	-	4	(D)	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-	-
WRA 18 California	-	-	-	-	-	-	-	-	-	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	All cotton											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	8,621	4,080,054	1,390	645,169	520	259,755	953	320,483	6,931	3,170,286	1,595	744,258
1998 . .	10,952	4,881,801	3,692	(NA)	1,297	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	54	21,244	6	2,309	-	-	35	11,682	21	8,831	5	740
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	453	231,296	200	97,886	52	23,960	43	20,056	198	95,238	304	141,305
Arkansas	794	633,598	29	26,492	34	28,994	92	29,934	787	603,664	-	-
California	1,292	757,008	269	175,966	110	74,860	124	127,030	544	254,384	1,044	482,540
Colorado	-	-	-	-	-	-	-	-	-	-	-	-
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	14	7,938	-	-	-	-	-	-	14	7,938	-	-
Georgia	736	230,553	26	12,293	11	5,975	329	61,370	504	171,153	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	-	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	54	30,736	17	7,118	1	(D)	-	-	54	30,736	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	438	153,209	17	5,665	16	5,365	105	25,712	369	127,182	5	525
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi	514	427,271	12	9,498	8	7,053	66	12,571	482	416,581	7	1,461
Missouri	390	217,464	9	4,978	9	4,978	13	715	390	222,949	-	-
Montana	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	261	48,958	59	12,445	12	(D)	8	3,839	249	42,548	19	6,764
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	66	9,540	-	-	-	-	55	6,547	16	2,493	3	750
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	170	59,588	30	9,711	19	9,970	13	3,278	117	25,174	45	31,736
Oregon	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	34	8,616	-	-	-	-	22	3,617	22	4,999	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	16	9,680	-	-	-	-	-	-	16	9,680	-	-
Texas	3,335	1,233,355	716	280,808	248	96,544	48	14,132	3,148	1,146,736	163	78,437
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	906	269,037	31	13,282	11	5,975	447	77,101	572	192,866	7	(D)
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	25	11,884	4	1,860	-	-	21	(D)	5	2,548	1	(D)
WRA 07 Upper Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
WRA 08 Lower Mississippi	2,120	1,433,187	64	46,093	67	46,390	245	63,192	2,040	1,377,761	12	1,986
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	-	-	-	-	-	-	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	679	257,524	73	22,105	25	11,053	17	5,988	625	220,400	45	31,736
WRA 12 Texas-Gulf	2,929	1,060,941	696	269,372	247	96,570	45	13,012	2,775	991,246	129	62,633
WRA 13 Rio Grande	215	58,351	53	18,605	8	947	11	(D)	170	35,017	51	21,742
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	455	232,122	200	97,886	52	23,960	43	20,056	200	96,064	306	142,131
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-	-
WRA 18 California	1,292	757,008	269	175,966	110	74,860	124	127,030	544	254,384	1,044	482,540
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Sugarbeets for sugar											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	2,499	561,837	348	97,185	162	47,124	303	53,375	1,285	247,904	1,196	276,564
1998 . .	2,802	624,636	890	(NA)	415	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas	-	-	-	-	-	-	-	-	-	-	-	-
California	866	129,594	79	21,258	19	3,972	41	6,470	722	84,214	146	45,821
Colorado	203	34,667	94	17,526	36	3,914	68	4,171	153	24,830	51	7,372
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	760	246,887	111	43,940	56	27,989	72	17,871	292	120,750	527	114,589
Illinois	-	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	-	-	-	-	-	-	-	-	-	-
Michigan	56	(D)	-	-	-	-	14	1,802	47	3,426	2	(D)
Minnesota	10	2,792	-	-	-	-	2	(D)	8	(D)	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	-	-	-	-	-	-	-	-	-	-	-	-
Montana	328	72,403	24	4,841	28	6,313	54	12,772	5	634	278	59,271
Nebraska	40	10,105	1	(D)	-	-	18	(D)	21	5,395	2	(D)
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-	-	-	-	-
North Dakota	50	14,594	1	(D)	-	-	8	2,692	13	1,679	36	10,223
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	-	-	-	-	-	-	-	-	-	-	-	-
Oregon	67	9,954	20	(D)	17	3,358	18	(D)	18	3,167	45	(D)
Pennsylvania	-	-	-	-	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	-	-	-	-	-	-	-	-	-	-	-	-
Utah	1	(D)	1	(D)	-	-	-	-	1	(D)	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	4	3,481	1	(D)	-	-	2	(D)	-	-	2	(D)
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	114	31,757	16	(D)	6	1,578	6	1,102	5	1,212	107	29,615
Water Resources Areas												
WRA 01 New England	-	-	-	-	-	-	-	-	-	-	-	-
WRA 02 Mid-Atlantic	-	-	-	-	-	-	-	-	-	-	-	-
WRA 03 South Atlantic-Gulf	-	-	-	-	-	-	-	-	-	-	-	-
WRA 04 Great Lakes	56	(D)	-	-	-	-	14	(D)	47	3,426	2	(D)
WRA 05 Ohio	-	-	-	-	-	-	-	-	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	8	2,222	-	-	-	-	-	-	8	2,222	-	-
WRA 08 Lower Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
WRA 09 Souris-Red-Rainy	12	2,249	1	(D)	-	-	2	(D)	8	(D)	2	(D)
WRA 10 Missouri	725	161,847	135	(D)	70	11,805	154	23,977	189	32,321	472	107,701
WRA 11 Arkansas-White-Red	-	-	-	-	-	-	-	-	-	-	-	-
WRA 12 Texas-Gulf	-	-	-	-	-	-	-	-	-	-	-	-
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	1	(D)	1	(D)	-	-	-	-	1	(D)	-	-
WRA 17 Pacific Northwest	831	260,322	132	48,387	73	31,347	92	20,556	310	123,917	574	122,272
WRA 18 California	866	129,594	79	21,258	19	3,972	41	6,470	722	84,214	146	45,821
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Tobacco											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	1,533	35,304	52	628	31	2,528	1,245	23,642	321	11,836	28	970
1998 . .	3,957	121,059	447	(NA)	265	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	-	-	-	-	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas	-	-	-	-	-	-	-	-	-	-	-	-
California	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	-	-	-	-	-	-	-	-	-	-	-	-
Connecticut	8	780	2	(D)	1	(D)	7	409	2	(D)	3	(D)
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	59	1,560	-	-	-	-	-	-	59	1,560	-	-
Georgia	198	10,776	3	84	-	-	67	3,187	148	8,489	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	-	-	-	-	-	-	-	-	-	-	-	-
Indiana	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	576	6,931	42	196	28	868	502	5,811	89	1,202	7	77
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-
Maryland	3	(D)	1	(D)	-	-	2	(D)	1	(D)	-	-
Massachusetts	11	698	-	-	-	-	11	648	-	-	5	50
Michigan	-	-	-	-	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	-	-	-	-	-	-	-	-	-	-	-	-
Montana	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina	351	9,517	-	-	-	-	335	8,677	16	400	7	525
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	-	-	-	-	-	-	-	-	-	-	-	-
Oklahoma	-	-	-	-	-	-	-	-	-	-	-	-
Oregon	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	3	18	-	-	-	-	-	-	-	-	3	18
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	136	(D)	4	56	2	(D)	133	(D)	6	(D)	3	(D)
Texas	-	-	-	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	188	3,296	-	-	-	-	188	3,296	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	19	1,478	2	(D)	1	(D)	18	1,057	2	(D)	8	(D)
WRA 02 Mid-Atlantic	15	141	1	(D)	-	-	11	63	1	(D)	3	(D)
WRA 03 South Atlantic-Gulf	787	25,104	3	84	-	-	581	15,115	223	10,449	7	525
WRA 04 Great Lakes	-	-	-	-	-	-	-	-	-	-	-	-
WRA 05 Ohio	547	6,165	44	236	30	(D)	516	5,839	24	249	7	77
WRA 06 Tennessee	119	1,465	2	(D)	-	-	88	832	49	636	3	9
WRA 07 Upper Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
WRA 08 Lower Mississippi	46	951	-	-	-	-	31	736	22	362	-	-
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	-	-	-	-	-	-	-	-	-	-	-	-
WRA 11 Arkansas-White-Red	-	-	-	-	-	-	-	-	-	-	-	-
WRA 12 Texas-Gulf	-	-	-	-	-	-	-	-	-	-	-	-
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-	-
WRA 18 California	-	-	-	-	-	-	-	-	-	-	-	-
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Potatoes											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	3,423	1,032,604	1,200	483,947	863	294,243	696	126,385	1,873	637,402	1,243	284,227
1998 . .	4,792	1,185,764	2,099	(NA)	1,398	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	4	490	-	-	-	-	2	(D)	4	(D)	-	-
Alaska	15	440	-	-	-	-	3	2	12	438	-	-
Arizona	10	4,699	6	3,428	1	(D)	-	-	7	969	10	3,730
Arkansas	-	-	-	-	-	-	-	-	-	-	-	-
California	118	49,065	89	22,722	82	18,034	22	10,076	33	16,377	79	24,220
Colorado	217	68,254	165	48,419	157	44,798	11	2,450	217	65,084	14	3,654
Connecticut	-	-	-	-	-	-	-	-	-	-	-	-
Delaware	4	1,590	-	-	-	-	1	(D)	3	(D)	-	-
Florida	93	49,833	3	2,900	3	2,900	8	5,580	93	49,313	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	722	338,912	328	166,361	215	105,832	71	30,187	400	184,814	414	127,687
Illinois	53	6,119	15	192	-	-	-	-	53	6,119	-	-
Indiana	63	1,906	2	(D)	2	(D)	34	27	30	1,883	-	-
Iowa	29	116	-	-	-	-	9	9	20	107	-	-
Kansas	8	3,100	4	1,500	4	1,500	-	-	8	3,100	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	59	(D)	-	-	-	-	20	(D)	34	(D)	8	(D)
Maryland	19	1,924	9	1,145	-	-	6	363	13	1,406	2	(D)
Massachusetts	32	(D)	-	-	-	-	1	(D)	-	-	31	3
Michigan	187	43,188	12	7,049	5	(D)	66	12,596	155	30,592	-	-
Minnesota	66	48,297	16	27,351	3	1,700	5	(D)	60	46,118	1	(D)
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	13	6,981	1	(D)	-	-	-	-	13	7,087	-	-
Montana	58	12,845	19	4,353	-	-	4	730	27	3,715	54	8,400
Nebraska	99	16,840	4	14,357	4	9,277	-	-	97	(D)	2	(D)
Nevada	3	(D)	1	(D)	1	(D)	-	-	3	(D)	-	-
New Hampshire	18	9	3	1	-	-	4	5	14	4	-	-
New Jersey	44	1,063	-	-	-	-	36	481	8	582	-	-
New Mexico	1	(D)	-	-	1	(D)	-	-	1	(D)	-	-
New York	297	5,082	-	-	-	-	99	2,530	87	2,466	113	86
North Carolina	2	(D)	-	-	-	-	-	-	2	(D)	-	-
North Dakota	84	44,339	41	32,998	14	3,846	14	(D)	69	42,105	2	(D)
Ohio	38	663	13	7	-	-	16	(D)	22	(D)	-	-
Oklahoma	2	(D)	1	(D)	1	(D)	-	-	2	(D)	-	-
Oregon	284	44,788	201	14,167	202	14,234	16	9,095	36	9,162	251	28,283
Pennsylvania	97	2,365	3	6	3	6	88	2,069	7	14	3	282
Rhode Island	1	(D)	-	-	-	-	1	(D)	-	-	-	-
South Carolina	2	(D)	-	-	-	-	2	(D)	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	2	(D)	-	-	-	-	2	(D)	-	-	-	-
Texas	29	13,435	18	3,088	4	2,000	-	-	25	11,635	4	1,800
Utah	7	1,341	2	(D)	1	(D)	-	-	7	1,341	-	-
Vermont	15	8	-	-	-	-	-	-	10	8	5	1
Virginia	73	3,465	-	-	-	-	71	(D)	2	(D)	-	-
Washington	359	165,889	200	87,058	160	76,457	35	31,499	132	50,805	245	83,695
West Virginia	4	12	-	-	-	-	-	-	4	12	-	-
Wisconsin	190	81,839	42	37,320	-	-	49	7,415	161	74,265	5	160
Wyoming	2	(D)	2	(D)	-	-	-	-	2	(D)	-	-
Water Resources Areas												
WRA 01 New England	120	5,375	3	1	-	-	26	4,262	58	(D)	39	(D)
WRA 02 Mid-Atlantic	342	12,525	12	1,151	3	6	220	6,622	112	5,710	13	(D)
WRA 03 South Atlantic-Gulf	101	50,407	3	2,900	3	2,900	12	5,900	99	49,567	-	-
WRA 04 Great Lakes	423	68,947	34	10,746	5	(D)	135	16,202	229	52,544	112	201
WRA 05 Ohio	121	(D)	2	(D)	2	(D)	101	474	18	(D)	2	(D)
WRA 06 Tennessee	2	(D)	-	-	-	-	2	(D)	-	-	-	-
WRA 07 Upper Mississippi	254	95,930	60	52,451	2	(D)	19	(D)	243	90,722	1	(D)
WRA 08 Lower Mississippi	9	6,481	1	(D)	-	-	-	-	9	6,587	-	-
WRA 09 Souris-Red-Rainy	63	40,064	17	24,626	5	3,205	15	2,128	46	37,231	3	705
WRA 10 Missouri	215	53,998	56	39,110	25	15,260	7	2,180	187	44,268	51	7,550
WRA 11 Arkansas-White-Red	17	11,598	9	3,850	9	3,850	-	-	17	11,657	-	-
WRA 12 Texas-Gulf	23	5,708	14	1,088	1	(D)	-	-	19	3,908	4	1,800
WRA 13 Rio Grande	206	63,812	154	43,977	146	40,356	11	2,450	206	61,092	11	3,204
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	10	4,699	6	3,428	1	(D)	-	-	7	969	10	3,730
WRA 16 Great Basin	10	8,627	3	(D)	2	(D)	-	-	10	8,627	-	-
WRA 17 Pacific Northwest	1,178	543,854	558	262,991	400	191,481	118	69,399	566	244,681	727	235,412
WRA 18 California	314	57,030	268	28,657	259	23,076	27	11,588	35	16,477	270	30,573
WRA 19 Alaska	15	440	-	-	-	-	3	2	12	438	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Land in vegetables											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	17,807	2,081,358	2,662	486,534	944	236,641	5,550	361,794	8,847	1,046,006	4,503	733,950
1998 . .	20,088	2,309,550	4,226	(NA)	1,590	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	162	2,613	29	1,536	11	518	74	1,102	82	1,506	20	36
Alaska	33	133	4	8	-	-	3	2	30	131	-	-
Arizona	313	132,799	66	74,508	30	31,251	6	3,712	106	16,508	217	113,284
Arkansas	201	6,959	101	4,545	101	5,959	201	6,959	-	-	-	-
California	3,253	926,839	749	172,135	129	88,429	333	110,131	1,775	453,993	1,324	405,694
Colorado	105	18,996	72	10,218	60	8,231	17	2,142	104	17,087	5	787
Connecticut	111	842	4	100	1	(D)	49	647	61	164	10	(D)
Delaware	109	19,201	20	4,237	7	1,145	35	2,111	83	17,090	-	-
Florida	375	120,306	148	20,608	51	15,668	100	34,315	270	80,291	9	6,500
Georgia	499	73,994	18	14,450	6	10,338	354	29,790	190	45,212	-	-
Hawaii	332	3,943	55	621	18	180	49	626	9	68	274	3,249
Idaho	426	26,811	9	1,944	1	(D)	25	1,293	35	5,216	391	21,254
Illinois	199	19,638	35	3,834	-	-	37	2,371	151	17,274	13	(D)
Indiana	447	17,508	101	448	-	-	131	4,107	338	13,404	-	-
Iowa	187	1,809	26	28	-	-	87	286	100	1,524	-	-
Kansas	8	2,600	-	-	-	-	-	-	8	2,600	-	-
Kentucky	179	1,024	42	240	28	214	105	666	25	284	56	75
Louisiana	178	3,785	-	-	-	-	51	(D)	25	3,122	102	(D)
Maine	254	1,471	35	86	-	-	81	732	171	395	6	344
Maryland	294	17,052	65	1,776	55	544	119	5,932	154	11,165	49	372
Massachusetts	284	1,124	-	-	-	-	59	563	63	95	162	472
Michigan	683	60,860	13	3,580	1	(D)	311	24,128	416	35,036	30	1,976
Minnesota	304	14,641	52	2,084	28	1,984	58	(D)	255	12,792	1	(D)
Mississippi	1	(D)	-	-	-	-	-	-	1	(D)	-	-
Missouri	305	12,606	-	-	-	-	109	970	249	11,636	-	-
Montana	173	828	-	-	-	-	162	486	-	-	11	342
Nebraska	93	592	1	(D)	1	(D)	-	-	93	592	-	-
Nevada	15	411	-	-	-	-	-	-	13	(D)	2	(D)
New Hampshire	98	507	10	32	2	(D)	63	392	48	(D)	2	(D)
New Jersey	537	32,206	65	6,793	39	3,771	275	15,974	321	16,749	5	73
New Mexico	620	26,222	88	12,249	53	7,231	27	1,932	580	22,999	40	3,253
New York	608	30,393	19	1,455	-	-	375	22,309	183	6,079	145	2,040
North Carolina	521	18,833	56	6,697	14	1,515	372	13,567	160	5,266	-	-
North Dakota	6	48	-	-	-	-	6	48	-	-	-	-
Ohio	308	7,047	57	614	-	-	137	2,400	129	3,829	51	833
Oklahoma	23	4,315	4	3,300	6	(D)	-	-	21	4,464	2	(D)
Oregon	268	45,032	33	8,036	25	(D)	101	8,350	88	16,473	127	20,209
Pennsylvania	855	10,704	190	926	73	482	557	7,612	347	2,826	78	300
Rhode Island	32	130	-	-	-	-	12	94	12	(D)	8	(D)
South Carolina	520	10,049	2	(D)	7	320	157	2,892	365	7,157	-	-
South Dakota	50	247	-	-	-	-	2	(D)	25	148	23	(D)
Tennessee	175	6,905	12	308	8	350	127	2,698	28	4,373	23	119
Texas	1,453	107,257	149	21,482	43	13,394	387	2,491	631	52,959	445	51,807
Utah	380	6,669	80	3,860	76	3,090	74	962	126	3,946	229	1,761
Vermont	91	349	19	172	8	126	28	242	50	84	13	23
Virginia	355	8,086	19	668	4	135	171	6,883	197	2,052	-	-
Washington	952	153,551	146	57,068	49	30,717	40	33,852	358	31,310	613	96,223
West Virginia	25	(D)	3	30	-	-	7	52	15	(D)	3	(D)
Wisconsin	389	122,813	57	44,930	1	(D)	68	5,156	356	117,344	4	313
Wyoming	18	252	8	192	8	192	8	40	-	-	10	212
Water Resources Areas												
WRA 01 New England	836	4,298	63	350	11	184	276	2,594	394	802	194	926
WRA 02 Mid-Atlantic	2,179	94,707	289	14,266	145	6,044	1,038	41,072	1,277	54,555	111	1,004
WRA 03 South Atlantic-Gulf	1,809	222,153	226	42,316	87	28,289	802	78,132	1,054	139,337	22	6,522
WRA 04 Great Lakes	1,334	123,913	130	11,695	2	(D)	687	47,420	660	72,251	194	4,526
WRA 05 Ohio	931	17,936	166	652	61	247	455	(D)	357	14,520	141	(D)
WRA 06 Tennessee	488	6,775	48	1,738	10	420	452	6,438	36	606	10	17
WRA 07 Upper Mississippi	951	124,873	175	44,962	28	1,984	187	8,486	772	116,121	15	(D)
WRA 08 Lower Mississippi	428	17,455	101	4,545	101	5,959	262	7,223	64	9,773	102	459
WRA 09 Souris-Red-Rainy	32	1,588	-	-	-	-	31	(D)	-	-	1	(D)
WRA 10 Missouri	487	11,638	16	1,996	15	2,472	246	1,044	198	9,731	47	863
WRA 11 Arkansas-White-Red	278	20,602	58	9,614	59	9,388	69	2,662	276	18,649	3	860
WRA 12 Texas-Gulf	1,451	105,724	146	22,324	47	13,535	387	2,491	629	52,993	445	50,240
WRA 13 Rio Grande	605	29,934	90	12,620	49	7,090	27	1,932	572	25,319	33	4,645
WRA 14 Upper Colorado	25	1,744	11	1,007	1	(D)	-	-	10	1,320	15	424
WRA 15 Lower Colorado	406	137,762	141	77,738	104	34,211	6	3,712	199	21,471	217	113,284
WRA 16 Great Basin	303	3,947	6	900	2	(D)	74	962	54	1,366	224	1,619
WRA 17 Pacific Northwest	1,643	224,939	187	66,823	74	37,306	163	43,070	481	52,999	1,129	137,656
WRA 18 California	3,256	927,294	750	172,360	130	88,654	336	110,556	1,775	453,993	1,326	405,724
WRA 19 Alaska	33	133	4	8	-	-	3	2	30	131	-	-
WRA 20 Hawaii	332	3,943	55	621	18	180	49	626	9	68	274	3,249

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Sweet corn [2]											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	4,753	285,291	447	91,587	297	35,248	1,372	63,715	2,322	142,826	1,306	92,036
1998 . .	4,387	311,801	829	(NA)	423	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	28	166	2	(D)	2	(D)	20	54	9	109	6	3
Alaska	8	2	-	-	-	-	-	-	8	2	-	-
Arizona	7	200	7	200	2	(D)	-	-	3	9	7	200
Arkansas	101	1,010	-	-	101	1,010	101	1,010	-	-	-	-
California	393	22,539	12	4,590	11	4,490	1	(D)	353	2,969	40	19,870
Colorado	76	757	58	356	54	352	-	-	75	735	1	(D)
Connecticut	7	185	-	-	-	-	7	186	-	-	-	-
Delaware	43	8,499	10	1,844	5	870	9	1,097	40	7,484	-	-
Florida	12	14,630	-	-	-	-	10	11,480	4	3,550	2	(D)
Georgia	15	11,724	2	(D)	1	(D)	7	1,206	8	13,518	-	-
Hawaii	25	406	11	348	-	-	4	301	-	-	21	106
Idaho	255	14,996	34	4,806	20	761	11	395	24	3,631	234	10,970
Illinois	55	6,879	8	1,361	-	-	8	249	47	6,900	-	-
Indiana	90	2,613	-	-	-	-	12	655	80	1,967	-	-
Iowa	54	780	-	-	-	-	18	86	36	695	-	-
Kansas	8	2,100	4	500	-	-	-	-	8	2,100	-	-
Kentucky	23	117	7	4	7	4	7	21	2	(D)	14	(D)
Louisiana	4	16	-	-	-	-	-	-	4	16	-	-
Maine	83	698	-	-	-	-	46	387	33	(D)	4	(D)
Maryland	109	6,147	13	1,434	5	135	39	1,577	76	4,570	2	(D)
Massachusetts	112	362	-	-	-	-	13	129	-	-	99	(D)
Michigan	213	6,456	-	-	-	-	82	2,434	143	4,158	-	-
Minnesota	188	7,953	28	1,489	28	1,489	46	92	142	8,043	-	-
Mississippi	1	(D)	-	-	-	-	-	-	1	(D)	-	-
Missouri	111	496	-	-	-	-	4	140	107	356	-	-
Montana	7	8	-	-	-	-	-	-	-	-	7	8
Nebraska	93	482	1	(D)	1	(D)	-	-	93	482	-	-
Nevada	11	11	-	-	-	-	-	-	11	11	-	-
New Hampshire	35	236	5	7	2	(D)	25	196	10	(D)	1	(D)
New Jersey	179	4,726	4	228	7	80	94	2,584	89	(D)	1	(D)
New Mexico	4	28	-	-	-	-	-	-	2	(D)	2	(D)
New York	200	5,717	3	180	3	180	130	4,416	68	776	67	633
North Carolina	146	1,903	2	(D)	-	-	128	1,221	20	682	-	-
North Dakota	6	24	-	-	-	-	6	24	-	-	-	-
Ohio	140	1,665	27	50	-	-	51	663	85	716	5	286
Oklahoma	4	234	-	-	4	234	-	-	4	234	-	-
Oregon	97	14,325	3	1,395	3	1,395	22	1,855	51	6,043	51	6,729
Pennsylvania	338	2,829	12	192	-	-	171	2,266	137	564	39	44
Rhode Island	5	(D)	-	-	-	-	1	(D)	4	1	-	-
South Carolina	133	561	-	-	-	-	20	310	114	451	-	-
South Dakota	27	102	-	-	-	-	2	(D)	25	(D)	-	-
Tennessee	24	(D)	3	15	-	-	23	(D)	1	(D)	-	-
Texas	14	14	-	-	-	-	-	-	1	(D)	13	(D)
Utah	281	1,146	2	(D)	2	(D)	74	666	52	251	204	229
Vermont	12	(D)	5	5	-	-	7	(D)	5	5	-	-
Virginia	129	241	3	15	-	-	127	(D)	2	(D)	-	-
Washington	642	83,292	118	39,807	39	22,882	23	24,759	160	9,493	482	51,468
West Virginia	15	32	-	-	-	-	-	-	15	32	-	-
Wisconsin	188	56,881	63	30,493	-	-	23	2,109	170	58,647	2	(D)
Wyoming	2	(D)	-	-	-	-	-	-	-	-	2	(D)
Water Resources Areas												
WRA 01 New England	248	1,531	5	7	2	(D)	93	940	52	66	104	526
WRA 02 Mid-Atlantic	766	24,248	47	3,718	17	1,085	336	8,582	414	15,620	47	294
WRA 03 South Atlantic-Gulf	234	28,348	6	1,780	3	(D)	85	13,635	155	18,310	8	403
WRA 04 Great Lakes	434	27,629	35	5,220	3	180	227	6,689	220	21,497	65	783
WRA 05 Ohio	234	3,486	21	46	7	4	102	(D)	116	2,798	16	50
WRA 06 Tennessee	190	786	3	15	-	-	190	786	-	-	-	-
WRA 07 Upper Mississippi	439	56,090	80	28,310	28	1,489	61	2,339	382	56,982	2	(D)
WRA 08 Lower Mississippi	118	2,007	-	-	101	1,010	108	1,031	10	(D)	-	-
WRA 09 Souris-Red-Rainy	29	47	-	-	-	-	29	47	-	-	-	-
WRA 10 Missouri	141	760	5	(D)	1	(D)	6	(D)	126	(D)	9	28
WRA 11 Arkansas-White-Red	172	2,923	57	765	57	499	-	-	172	2,987	-	-
WRA 12 Texas-Gulf	16	34	-	-	-	-	-	-	3	21	13	13
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	16	486	1	(D)	1	(D)	-	-	10	(D)	6	(D)
WRA 15 Lower Colorado	18	211	7	200	2	(D)	-	-	14	20	7	200
WRA 16 Great Basin	278	1,145	2	(D)	2	(D)	74	666	52	251	201	228
WRA 17 Pacific Northwest	994	112,613	155	46,008	62	25,038	56	27,009	235	19,167	767	69,167
WRA 18 California	393	22,539	12	4,590	11	4,490	1	(D)	353	2,969	40	19,870
WRA 19 Alaska	8	2	-	-	-	-	-	-	8	2	-	-
WRA 20 Hawaii	25	406	11	348	-	-	4	301	-	-	21	106

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Tomatoes [2]											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	7,322	427,812	945	82,335	389	31,381	2,252	129,583	3,498	213,736	1,770	169,815
1998 . .	5,223	308,476	1,929	(NA)	453	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	68	641	21	517	11	360	39	581	23	55	6	6
Alaska	11	3	-	-	-	-	-	-	11	3	-	-
Arizona	139	139	-	-	-	-	-	-	-	-	139	139
Arkansas	201	1,404	-	-	101	404	201	1,404	-	-	-	-
California	1,942	354,804	193	63,252	25	18,770	162	105,549	1,191	166,432	711	164,225
Colorado	57	176	53	159	53	159	-	-	57	208	-	-
Connecticut	51	58	3	17	-	-	15	33	26	14	10	11
Delaware	4	3	-	-	1	(D)	1	(D)	3	3	-	-
Florida	38	37,783	11	6,340	9	8,426	2	(D)	32	33,963	4	2,200
Georgia	132	4,217	9	2,025	4	485	69	961	65	3,256	-	-
Hawaii	52	669	20	50	1	(D)	9	13	-	-	43	660
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	77	292	14	28	-	-	7	28	57	260	13	4
Indiana	237	3,509	64	53	-	-	76	(D)	169	2,358	-	-
Iowa	123	97	26	7	-	-	52	58	71	39	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	112	235	49	90	28	63	77	207	14	14	21	20
Louisiana	103	57	-	-	-	-	51	51	1	(D)	51	(D)
Maine	104	61	-	-	-	-	38	11	66	50	-	-
Maryland	198	957	51	174	51	174	89	(D)	92	(D)	23	46
Massachusetts	131	72	-	-	-	-	7	22	31	16	93	34
Michigan	226	3,721	3	150	-	-	76	1,048	152	1,363	4	1,310
Minnesota	170	337	23	23	23	23	31	18	139	318	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	60	14	-	-	-	-	-	-	60	14	-	-
Montana	7	3	-	-	-	-	-	-	-	-	7	3
Nebraska	92	18	-	-	-	-	-	-	92	18	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	37	13	8	1	2	(D)	19	8	18	5	-	-
New Jersey	316	2,093	54	854	16	302	188	(D)	131	918	1	(D)
New Mexico	2	(D)	-	-	-	-	-	-	-	-	2	(D)
New York	406	1,075	14	320	3	120	174	(D)	116	207	124	238
North Carolina	133	4,713	24	4,495	2	(D)	131	(D)	2	(D)	-	-
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	142	1,045	33	264	2	(D)	33	(D)	77	341	32	17
Oklahoma	-	-	-	-	-	-	-	-	-	-	-	-
Oregon	2	(D)	-	-	-	-	2	(D)	-	-	-	-
Pennsylvania	392	1,526	153	519	44	250	99	(D)	259	504	69	186
Rhode Island	13	11	-	-	-	-	9	9	4	2	-	-
South Carolina	130	976	-	-	-	-	6	115	124	861	-	-
South Dakota	27	13	-	-	-	-	2	(D)	25	(D)	-	-
Tennessee	27	1,709	11	541	5	149	22	1,622	-	-	5	87
Texas	475	986	80	428	4	72	382	38	80	428	13	520
Utah	273	409	-	-	-	-	74	296	49	98	150	15
Vermont	31	10	5	3	-	-	10	4	16	6	5	1
Virginia	97	3,594	19	2,019	4	1,349	93	3,127	11	(D)	-	-
Washington	374	99	-	-	-	-	-	-	133	27	241	72
West Virginia	24	20	3	6	-	-	6	6	15	8	3	6
Wisconsin	86	50	1	2	-	-	-	-	86	50	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	341	215	11	19	2	(D)	88	83	150	86	103	45
WRA 02 Mid-Atlantic	1,084	8,298	240	3,521	116	2,075	436	5,584	630	3,474	70	219
WRA 03 South Atlantic-Gulf	384	47,053	48	12,313	24	9,271	130	9,543	246	38,185	10	2,206
WRA 04 Great Lakes	549	5,206	64	485	3	120	208	2,253	223	1,418	139	1,545
WRA 05 Ohio	447	2,050	119	511	30	283	191	501	181	1,413	75	152
WRA 06 Tennessee	215	2,931	35	1,534	7	199	212	2,928	-	-	3	3
WRA 07 Upper Mississippi	435	3,021	82	64	23	(D)	70	1,116	353	1,901	13	4
WRA 08 Lower Mississippi	314	1,490	-	-	101	404	255	1,473	8	12	51	5
WRA 09 Souris-Red-Rainy	23	2	-	-	-	-	23	2	-	-	-	-
WRA 10 Missouri	143	(D)	-	-	-	-	10	4	126	39	7	(D)
WRA 11 Arkansas-White-Red	117	190	53	159	53	159	-	-	117	222	-	-
WRA 12 Texas-Gulf	475	986	80	428	4	72	382	38	80	428	13	520
WRA 13 Rio Grande	-	-	-	-	-	-	-	-	-	-	-	-
WRA 14 Upper Colorado	2	(D)	-	-	-	-	-	-	-	-	2	(D)
WRA 15 Lower Colorado	139	139	-	-	-	-	-	-	-	-	139	139
WRA 16 Great Basin	273	409	-	-	-	-	74	296	49	98	150	15
WRA 17 Pacific Northwest	374	99	-	-	-	-	-	-	133	27	241	72
WRA 18 California	1,944	355,004	193	63,252	25	18,770	164	105,749	1,191	166,432	711	164,225
WRA 19 Alaska	11	3	-	-	-	-	-	-	11	3	-	-
WRA 20 Hawaii	52	669	20	50	1	(D)	9	13	-	-	43	660

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Lettuce and romaine [2]											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	2,659	276,705	192	103,402	95	61,690	871	11,431	1,388	166,311	428	111,368
1998 . .	1,520	267,886	554	(NA)	90	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	7	1	-	-	-	-	-	-	7	1	-	-
Alaska	8	3	-	-	-	-	-	-	8	3	-	-
Arizona	52	75,742	37	55,060	18	28,839	6	3,670	4	546	45	79,804
Arkansas	-	-	-	-	-	-	-	-	-	-	-	-
California	846	191,396	92	47,376	65	32,009	5	4,600	786	159,883	71	30,923
Colorado	5	3,268	1	(D)	-	-	-	-	5	3,268	-	-
Connecticut	21	39	3	(D)	1	(D)	3	(D)	18	(D)	-	-
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	4	(D)	-	-	-	-	3	(D)	1	(D)	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	53	182	-	-	-	-	3	40	-	-	50	142
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	27	4	-	-	-	-	-	-	27	4	-	-
Indiana	26	10	19	2	-	-	26	10	-	-	-	-
Iowa	35	16	9	2	-	-	17	11	18	5	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	-	-	-	-	-	-	-	-	-
Maine	3	13	-	-	-	-	3	(D)	-	-	2	(D)
Maryland	28	104	-	-	-	-	26	(D)	2	(D)	-	-
Massachusetts	32	3	-	-	-	-	32	3	-	-	-	-
Michigan	79	162	-	-	-	-	-	-	79	162	-	-
Minnesota	46	9	-	-	-	-	-	-	46	9	-	-
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	52	10	-	-	-	-	52	10	-	-	-	-
Montana	4	(Z)	-	-	-	-	-	-	-	-	4	(Z)
Nebraska	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	21	8	-	-	-	-	10	4	11	5	-	-
New Jersey	67	1,533	9	(D)	9	212	10	(D)	57	(D)	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	209	1,326	-	-	-	-	130	494	74	761	11	70
North Carolina	126	1,611	2	(D)	-	-	124	1,718	2	(D)	-	-
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	45	(D)	13	1	-	-	14	(D)	31	8	1	(D)
Oklahoma	-	-	-	-	-	-	-	-	-	-	-	-
Oregon	-	-	-	-	-	-	-	-	-	-	-	-
Pennsylvania	56	75	-	-	-	-	17	45	39	(D)	-	-
Rhode Island	8	2	-	-	-	-	-	-	4	1	4	2
South Carolina	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Tennessee	-	-	-	-	-	-	-	-	-	-	-	-
Texas	382	76	-	-	-	-	382	76	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	13	66	7	(D)	2	(D)	8	66	5	1	-	-
Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Washington	373	112	-	-	-	-	-	-	133	(D)	240	(D)
West Virginia	13	4	-	-	-	-	-	-	13	4	-	-
Wisconsin	16	3	-	-	-	-	-	-	16	3	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	93	131	5	144	3	630	51	114	38	(D)	6	(D)
WRA 02 Mid-Atlantic	308	2,801	14	(D)	9	212	124	881	179	1,911	5	10
WRA 03 South Atlantic-Gulf	28	2,013	2	(D)	-	-	18	(D)	10	(D)	-	-
WRA 04 Great Lakes	185	776	13	1	-	-	68	(D)	117	(D)	7	(D)
WRA 05 Ohio	58	54	19	2	-	-	36	53	22	8	-	-
WRA 06 Tennessee	109	109	-	-	-	-	109	218	-	-	-	-
WRA 07 Upper Mississippi	101	28	9	2	-	-	17	11	84	17	-	-
WRA 08 Lower Mississippi	-	-	-	-	-	-	-	-	-	-	-	-
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	58	13	-	-	-	-	52	10	2	(D)	4	(D)
WRA 11 Arkansas-White-Red	-	-	-	-	-	-	-	-	-	-	-	-
WRA 12 Texas-Gulf	382	76	-	-	-	-	382	76	-	-	-	-
WRA 13 Rio Grande	5	3,268	1	(D)	-	-	-	-	5	3,268	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	52	75,742	37	55,060	18	28,839	6	3,670	4	546	45	79,804
WRA 16 Great Basin	-	-	-	-	-	-	-	-	-	-	-	-
WRA 17 Pacific Northwest	373	112	-	-	-	-	-	-	133	(D)	240	(D)
WRA 18 California	846	191,396	92	47,376	65	32,009	5	4,600	786	159,883	71	30,923
WRA 19 Alaska	8	3	-	-	-	-	-	-	8	3	-	-
WRA 20 Hawaii	53	182	-	-	-	-	3	40	-	-	50	142

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Berries, bearing and non-bearing											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	8,947	229,542	1,691	56,787	964	26,437	4,743	102,469	3,704	100,614	942	28,730
1998 . .	8,212	142,776	2,375	(NA)	1,421	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	75	427	9	79	2	(D)	26	190	22	206	27	31
Alaska	5	7	-	-	-	-	-	-	5	7	-	-
Arizona	-	-	-	-	-	-	-	-	-	-	-	-
Arkansas	223	1,329	-	-	101	909	223	1,329	-	-	-	-
California	388	65,019	265	35,121	3	3,978	159	2,657	183	43,838	54	19,124
Colorado	4	12	4	12	4	(D)	-	-	4	12	-	-
Connecticut	60	289	8	(D)	-	-	42	251	10	(D)	9	(D)
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	368	5,685	366	4,975	120	3,868	-	-	368	5,685	-	-
Georgia	233	3,247	-	-	-	-	62	950	173	2,297	-	-
Hawaii	10	22	-	-	-	-	-	-	-	-	10	22
Idaho	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	94	148	27	21	-	-	13	39	68	85	13	23
Indiana	61	467	2	(D)	-	-	40	411	23	56	-	-
Iowa	86	324	17	23	9	23	43	185	43	139	-	-
Kansas	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	35	99	-	-	-	-	14	35	14	50	7	14
Louisiana	66	1,944	-	-	-	-	66	1,944	-	-	-	-
Maine	105	10,782	36	278	42	(D)	100	10,484	6	192	3	106
Maryland	34	119	-	-	-	-	2	(D)	32	(D)	-	-
Massachusetts	459	13,090	132	4,847	249	8,632	318	9,597	58	2,893	108	600
Michigan	652	15,094	91	706	38	163	267	4,110	461	11,790	-	-
Minnesota	218	1,014	23	12	-	-	76	448	142	566	-	-
Mississippi	333	333	-	-	-	-	-	-	333	333	-	-
Missouri	124	1,886	-	-	-	-	103	570	21	1,316	-	-
Montana	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	40	40	-	-	-	-	-	-	-	-	40	40
New Hampshire	47	153	3	(Z)	-	-	24	131	23	22	-	-
New Jersey	182	7,720	24	844	19	1,020	82	2,946	107	5,340	-	-
New Mexico	-	-	-	-	-	-	-	-	-	-	-	-
New York	244	1,950	68	938	3	144	68	890	131	911	62	149
North Carolina	357	6,239	36	343	17	272	355	5,951	10	288	-	-
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	264	792	49	198	9	111	118	254	105	347	44	194
Oklahoma	110	330	55	55	-	-	110	330	-	-	-	-
Oregon	1,907	31,021	132	1,584	132	1,584	1,001	8,547	503	15,350	405	7,124
Pennsylvania	373	1,189	88	207	11	112	206	873	200	612	-	-
Rhode Island	10	159	1	(D)	2	(D)	10	159	-	-	-	-
South Carolina	148	762	10	80	-	-	125	(D)	21	438	2	(D)
South Dakota	23	115	-	-	-	-	-	-	23	115	-	-
Tennessee	113	698	45	286	21	153	63	515	42	135	8	48
Texas	386	17,202	-	-	-	-	382	17,190	-	-	4	12
Utah	74	1,776	-	-	-	-	74	1,776	-	-	-	-
Vermont	42	244	11	97	-	-	23	189	19	(D)	2	(D)
Virginia	5	56	3	36	-	-	5	56	-	-	-	-
Washington	494	13,843	138	3,668	133	2,128	224	7,979	359	5,262	136	602
West Virginia	21	69	15	309	6	270	6	24	12	(D)	3	(D)
Wisconsin	474	23,849	33	1,942	43	2,479	313	21,131	183	2,098	5	620
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	702	24,553	185	5,260	293	9,139	503	20,658	111	3,188	120	707
WRA 02 Mid-Atlantic	756	10,207	178	1,885	24	1,045	326	4,177	474	6,884	2	(D)
WRA 03 South Atlantic-Gulf	1,370	16,528	414	5,470	139	4,212	445	7,270	927	9,247	8	11
WRA 04 Great Lakes	895	16,912	110	1,074	47	397	366	5,307	546	12,088	79	323
WRA 05 Ohio	335	1,328	103	688	33	486	211	860	87	410	39	(D)
WRA 06 Tennessee	179	419	14	107	3	45	131	262	21	105	27	52
WRA 07 Upper Mississippi	768	25,746	93	1,863	52	2,502	355	21,161	416	3,942	18	643
WRA 08 Lower Mississippi	221	1,640	-	-	101	909	193	1,561	28	79	-	-
WRA 09 Souris-Red-Rainy	45	224	-	-	-	-	45	224	-	-	-	-
WRA 10 Missouri	84	655	-	-	-	-	52	468	32	187	-	-
WRA 11 Arkansas-White-Red	284	2,388	55	55	-	-	276	2,372	8	16	-	-
WRA 12 Texas-Gulf	386	17,202	-	-	-	-	382	17,190	-	-	4	12
WRA 13 Rio Grande	4	12	4	12	4	12	-	-	4	12	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 15 Lower Colorado	-	-	-	-	-	-	-	-	-	-	-	-
WRA 16 Great Basin	114	1,816	-	-	-	-	74	1,776	-	-	40	40
WRA 17 Pacific Northwest	2,401	44,864	270	5,252	265	3,712	1,225	16,526	862	20,612	541	7,726
WRA 18 California	388	65,019	265	35,121	3	3,978	159	2,657	183	43,838	54	19,124
WRA 19 Alaska	5	7	-	-	-	-	-	-	5	7	-	-
WRA 20 Hawaii	10	22	-	-	-	-	-	-	-	-	10	22

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Land in bearing and non-bearing orchards, vineyards, and nut trees											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	59,559	4,104,946	11,015	1,255,759	5,851	489,254	7,852	513,371	31,795	2,383,438	24,228	1,450,993
1998 . .	57,118	4,445,374	14,421	(NA)	2,963	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	109	1,654	-	-	-	-	23	634	79	999	14	21
Alaska	4	20	-	-	-	-	-	-	4	20	-	-
Arizona	1,174	31,450	312	11,951	65	6,688	66	1,828	592	19,517	520	12,080
Arkansas	223	1,632	-	-	101	1,212	223	1,632	-	-	-	-
California	34,560	2,749,578	7,439	994,087	3,509	384,837	2,915	236,151	20,561	1,677,247	14,566	1,065,229
Colorado	109	8,100	17	765	-	-	17	765	-	-	109	7,703
Connecticut	13	174	-	-	2	(D)	10	128	3	(D)	2	(D)
Delaware	4	281	3	231	3	231	-	-	4	281	-	-
Florida	6,627	748,362	1,145	159,777	833	62,229	716	176,646	5,891	499,377	206	75,101
Georgia	902	72,278	38	6,094	22	2,500	221	6,899	690	65,379	-	-
Hawaii	328	5,887	21	3,329	10	89	64	152	19	3,948	245	1,787
Idaho	765	3,991	251	1,506	251	1,506	251	502	3	90	511	3,399
Illinois	54	834	-	-	-	-	-	-	54	834	-	-
Indiana	19	4	-	-	-	-	-	-	19	4	-	-
Iowa	26	60	9	18	-	-	-	-	26	60	-	-
Kansas	152	3,234	-	-	-	-	74	2,960	78	274	-	-
Kentucky	50	135	14	18	7	4	7	(D)	22	(D)	21	(D)
Louisiana	93	2,682	-	-	-	-	12	1,440	30	1,140	51	102
Maine	3	(D)	-	-	-	-	3	130	1	(D)	-	-
Maryland	8	318	-	-	-	-	4	142	6	176	-	-
Massachusetts	48	579	3	219	8	(D)	17	480	6	96	31	3
Michigan	362	10,180	-	-	-	-	15	(D)	355	9,148	2	(D)
Minnesota	142	2,456	23	368	-	-	23	58	119	2,399	-	-
Mississippi	4	370	-	-	-	-	-	-	4	370	-	-
Missouri	82	4,316	4	740	4	740	57	1,032	26	3,284	-	-
Montana	324	1,296	162	648	-	-	-	-	162	648	162	648
Nebraska	91	182	-	-	-	-	-	-	91	182	-	-
Nevada	51	51	-	-	-	-	-	-	51	51	-	-
New Hampshire	24	102	-	-	-	-	10	58	15	(D)	2	(D)
New Jersey	66	1,333	7	45	2	(D)	15	530	53	803	-	-
New Mexico	1,939	32,331	238	6,345	5	800	961	5,371	585	22,882	582	11,523
New York	208	6,783	17	770	-	-	119	4,901	87	1,647	11	235
North Carolina	270	1,906	-	-	-	-	52	598	218	1,308	-	-
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	109	485	17	(D)	3	(D)	40	277	55	208	14	7
Oklahoma	108	108	-	-	54	54	-	-	108	108	-	-
Oregon	382	37,600	40	5,115	39	4,485	185	2,726	38	6,421	218	28,453
Pennsylvania	170	2,550	2	(D)	-	-	106	1,205	76	1,270	6	75
Rhode Island	19	113	-	-	-	-	7	88	8	21	4	4
South Carolina	36	4,857	3	386	-	-	26	3,115	13	1,742	-	-
South Dakota	27	595	-	-	-	-	2	(D)	25	(D)	-	-
Tennessee	3	24	3	24	-	-	3	24	-	-	-	-
Texas	2,882	45,893	848	14,021	386	7,182	386	2,182	809	18,121	1,687	25,590
Utah	323	4,938	74	1,480	74	1,480	74	1,480	20	1,719	249	1,739
Vermont	32	(D)	-	-	-	-	19	50	11	36	2	(D)
Virginia	95	894	10	260	-	-	76	553	19	341	-	-
Washington	6,456	313,285	315	47,464	473	14,800	1,050	57,664	679	39,831	5,013	217,040
West Virginia	16	186	-	-	-	-	3	75	13	111	-	-
Wisconsin	67	591	-	-	-	-	-	-	67	591	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Water Resources Areas												
WRA 01 New England	115	1,144	3	219	10	376	55	900	33	211	39	33
WRA 02 Mid-Atlantic	441	10,558	34	956	5	271	301	6,298	163	4,221	5	39
WRA 03 South Atlantic-Gulf	7,935	828,879	1,186	166,257	855	64,729	1,036	187,742	6,884	568,777	220	75,122
WRA 04 Great Lakes	554	12,507	19	447	-	-	56	2,000	484	10,092	27	422
WRA 05 Ohio	171	607	17	19	10	5	39	306	108	216	24	85
WRA 06 Tennessee	12	202	3	24	-	-	5	174	7	28	-	-
WRA 07 Upper Mississippi	254	3,512	32	386	-	-	23	58	231	3,454	-	-
WRA 08 Lower Mississippi	173	4,482	-	-	101	1,212	135	2,872	38	1,610	-	-
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-	-	-	-	-
WRA 10 Missouri	262	7,369	4	740	4	740	133	4,002	130	3,367	-	-
WRA 11 Arkansas-White-Red	345	1,268	-	-	54	54	100	200	194	966	51	102
WRA 12 Texas-Gulf	2,020	28,248	386	7,182	386	7,182	382	382	791	7,011	847	20,855
WRA 13 Rio Grande	2,750	48,253	700	13,184	5	800	965	7,171	554	32,277	1,420	16,250
WRA 14 Upper Colorado	116	8,118	17	765	-	-	17	765	-	-	116	7,721
WRA 15 Lower Colorado	1,382	35,174	386	13,431	139	8,168	140	3,308	652	21,243	594	12,598
WRA 16 Great Basin	210	2,970	-	-	-	-	-	-	60	1,759	170	1,211
WRA 17 Pacific Northwest	7,927	356,171	768	54,733	763	20,791	1,486	60,892	882	46,990	5,904	249,539
WRA 18 California	34,560	2,749,578	7,439	994,087	3,509	384,837	2,915	236,151	20,561	1,677,247	14,566	1,065,229
WRA 19 Alaska	4	20	-	-	-	-	-	-	4	20	-	-
WRA 20 Hawaii	328	5,887	21	3,329	10	89	64	152	19	3,948	245	1,787

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Other crops											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	13,181	1,444,893	1,000	276,589	366	104,419	2,513	312,102	5,053	568,484	6,432	610,423
1998 . .	8,067	1,332,330	1,475	(NA)	659	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	99	792	7	7	-	-	10	456	50	295	41	41
Alaska	16	121	-	-	-	-	5	110	-	-	11	11
Arizona	56	17,268	40	5,839	3	685	7	(D)	18	8,218	37	9,505
Arkansas	27	1,995	-	-	-	-	27	1,995	-	-	-	-
California	2,539	162,920	85	33,891	17	3,310	93	20,801	580	58,947	2,319	87,831
Colorado	151	27,678	37	15,345	20	7,850	-	-	93	22,368	58	5,310
Connecticut	73	103	1	(D)	-	-	19	39	28	28	44	45
Delaware	-	-	-	-	-	-	-	-	-	-	-	-
Florida	298	397,549	2	(D)	1	(D)	15	176,127	257	35,031	32	196,891
Georgia	67	3,016	2	(D)	-	-	5	230	9	2,730	56	56
Hawaii	558	35,232	50	29,487	30	4,166	151	9,327	32	22,009	380	(D)
Idaho	633	67,826	64	9,588	31	5,306	8	523	37	9,067	605	58,236
Illinois	209	20,444	15	3,860	3	883	15	122	138	20,254	56	70
Indiana	100	11,968	2	(D)	-	-	20	2,980	67	8,969	19	19
Iowa	124	3,603	8	8	-	-	28	172	48	2,825	48	606
Kansas	338	44,825	35	3,180	12	1,500	18	630	264	44,751	74	74
Kentucky	112	210	-	-	-	-	21	140	7	7	84	84
Louisiana	180	15,886	1	(D)	-	-	53	1,125	76	12,051	52	2,710
Maine	200	200	66	66	-	-	2	(D)	198	(D)	-	-
Maryland	98	794	-	-	-	-	24	24	50	746	24	24
Massachusetts	106	215	5	125	-	-	42	151	32	32	32	32
Michigan	182	459	-	-	-	-	27	101	104	307	51	51
Minnesota	59	15,860	9	1,004	2	(D)	13	9,321	19	1,461	27	5,078
Mississippi	333	3,330	-	-	-	-	333	3,330	-	-	-	-
Missouri	35	8,960	6	1,328	-	-	23	5,414	18	3,546	-	-
Montana	25	4,811	-	-	-	-	4	696	6	354	15	3,761
Nebraska	591	130,318	57	(D)	57	11,322	2	(D)	580	117,886	28	(D)
Nevada	11	7,891	-	-	-	-	2	(D)	6	5,960	3	(D)
New Hampshire	21	42	2	(D)	2	(D)	4	(D)	6	(D)	11	14
New Jersey	160	552	24	24	24	24	11	162	101	174	48	216
New Mexico	43	11,138	10	2,144	4	860	-	-	41	(D)	4	(D)
New York	333	1,205	-	-	-	-	58	694	108	324	167	187
North Carolina	443	1,244	-	-	-	-	7	175	217	325	226	744
North Dakota	13	1,197	4	628	2	(D)	-	-	12	(D)	1	(D)
Ohio	167	249	13	39	13	39	15	62	44	66	121	121
Oklahoma	29	9,125	9	5,660	6	4,240	-	-	29	9,125	-	-
Oregon	1,082	142,558	62	19,506	62	21,064	675	38,744	228	53,760	302	53,454
Pennsylvania	368	410	-	-	-	-	3	45	198	198	167	167
Rhode Island	9	33	-	-	-	-	4	28	-	-	5	5
South Carolina	125	2,233	-	-	-	-	12	808	125	(D)	10	(D)
South Dakota	22	6,841	1	(D)	1	(D)	3	1,060	12	2,626	7	3,155
Tennessee	258	556	18	18	-	-	36	216	92	146	130	194
Texas	905	121,914	89	22,602	17	5,849	395	15,300	294	60,276	227	48,338
Utah	183	17,767	8	2,673	3	1,050	5	1,000	30	3,410	153	13,597
Vermont	74	112	17	(D)	-	-	5	25	34	34	35	53
Virginia	115	343	-	-	-	-	-	-	115	343	-	-
Washington	1,367	128,688	245	45,125	54	20,719	279	10,499	561	44,287	582	81,327
West Virginia	39	39	-	-	-	-	11	11	6	6	22	22
Wisconsin	160	3,936	4	1,345	-	-	21	402	74	3,433	84	101
Wyoming	45	10,437	2	(D)	2	(D)	2	(D)	9	(D)	34	3,020
Water Resources Areas												
WRA 01 New England	460	682	85	206	2	(D)	76	255	287	299	115	137
WRA 02 Mid-Atlantic	801	2,375	30	30	24	24	38	231	517	1,730	246	414
WRA 03 South Atlantic-Gulf	1,389	408,188	11	(D)	1	(D)	427	181,171	658	39,806	344	198,411
WRA 04 Great Lakes	370	2,777	13	39	13	39	61	983	140	1,559	198	235
WRA 05 Ohio	677	7,843	18	18	-	-	111	1,527	142	5,877	424	460
WRA 06 Tennessee	174	390	-	-	-	-	24	(D)	92	146	58	(D)
WRA 07 Upper Mississippi	461	32,810	28	(D)	3	883	64	5,410	276	26,901	130	(D)
WRA 08 Lower Mississippi	164	19,768	1	(D)	-	-	29	3,069	82	13,959	54	2,740
WRA 09 Souris-Red-Rainy	21	11,551	2	(D)	2	(D)	10	6,021	7	475	4	5,055
WRA 10 Missouri	997	202,816	123	33,013	92	23,522	12	7,592	867	173,330	137	21,894
WRA 11 Arkansas-White-Red	411	69,808	74	21,157	23	(D)	39	3,808	297	64,020	99	(D)
WRA 12 Texas-Gulf	702	89,362	47	8,869	4	860	395	15,300	170	31,463	148	44,599
WRA 13 Rio Grande	104	7,229	12	3,748	-	-	-	-	24	3,161	82	4,138
WRA 14 Upper Colorado	18	10,669	-	-	-	-	2	(D)	-	-	16	(D)
WRA 15 Lower Colorado	56	17,268	40	5,839	3	685	7	305	18	8,218	37	9,505
WRA 16 Great Basin	179	23,912	8	2,673	3	1,050	7	1,240	36	9,370	141	13,542
WRA 17 Pacific Northwest	3,081	338,820	373	74,319	149	47,189	962	49,766	825	106,954	1,488	192,925
WRA 18 California	2,542	163,272	85	33,891	17	3,310	93	20,801	583	59,207	2,320	87,923
WRA 19 Alaska	16	121	-	-	-	-	5	110	-	-	11	11
WRA 20 Hawaii	558	35,232	50	29,487	30	4,166	151	9,327	32	22,009	380	(D)

See footnote(s) at end of table.

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Table 29. **Application of Chemicals in Irrigation Water and Source of Water for Selected Crops: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Pastureland, all types											
	Farms	Irrigated acres harvested	Chemigation using irrigation system				Acres irrigated using [1]					
			Commercial fertilizer		Pesticide application		On-farm surface water		Well water		Water from off-farm suppliers	
			Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
U.S. TOTAL . . . . . 2003 . .	50,372	3,634,133	2,535	113,071	1,083	32,449	11,352	1,240,595	11,374	704,324	28,846	1,726,806
1998 . .	53,314	3,929,831	5,206	(NA)	1,098	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA												
Alabama	27	1,281	-	-	-	-	18	1,061	7	(D)	2	(D)
Alaska	8	16	4	8	-	-	-	-	8	16	-	-
Arizona	807	19,661	157	2,779	-	-	74	979	141	6,383	602	12,945
Arkansas	251	7,411	-	-	-	-	137	3,306	114	4,105	-	-
California	5,826	511,534	653	7,626	1	(D)	400	139,547	3,525	162,791	2,077	217,403
Colorado	3,061	353,836	423	18,961	606	20,402	1,051	194,590	230	24,695	1,809	138,093
Connecticut	2	(D)	-	-	-	-	2	(D)	-	-	-	-
Delaware	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Florida	888	66,308	245	1,225	-	-	344	22,850	534	32,372	11	11,086
Georgia	144	8,077	13	510	-	-	100	4,366	44	3,711	-	-
Hawaii	54	2,907	2	(D)	1	(D)	3	100	14	480	37	2,327
Idaho	8,868	377,431	33	2,446	7	(D)	1,013	95,306	335	27,406	7,779	256,257
Illinois	1	(D)	-	-	-	-	-	-	1	(D)	-	-
Indiana	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Iowa	10	460	-	-	-	-	8	(D)	2	(D)	-	-
Kansas	58	11,663	23	5,581	-	-	-	-	58	11,663	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	62	3,678	-	-	-	-	59	3,618	3	60	-	-
Maine	6	(D)	-	-	-	-	2	(D)	-	-	4	(D)
Maryland	31	510	-	-	-	-	4	312	27	198	-	-
Massachusetts	38	312	-	-	-	-	38	(D)	32	(D)	-	-
Michigan	50	1,460	-	-	-	-	50	1,460	-	-	-	-
Minnesota	31	278	-	-	-	-	-	-	31	278	-	-
Mississippi	2	(D)	-	-	-	-	-	-	2	(D)	-	-
Missouri	69	480	-	-	-	-	9	90	60	390	-	-
Montana	3,660	450,858	44	19,870	3	150	1,337	201,373	204	8,468	2,176	243,282
Nebraska	603	84,179	37	1,459	-	-	1	(D)	584	75,433	56	10,616
Nevada	657	151,777	2	(D)	11	(D)	248	99,094	155	18,667	285	44,116
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	2,616	127,222	257	5,744	221	1,326	1,005	38,996	788	42,969	825	45,963
New York	6	360	-	-	-	-	-	-	6	360	-	-
North Carolina	193	10,141	-	-	-	-	193	(D)	2	(D)	-	-
North Dakota	12	1,221	-	-	-	-	1	(D)	2	(D)	9	(D)
Ohio	18	394	-	-	-	-	4	184	14	210	-	-
Oklahoma	318	42,758	40	5,430	22	3,570	160	6,735	154	34,073	4	2,000
Oregon	7,722	417,729	341	8,982	143	4,455	2,273	184,076	2,095	39,680	3,424	198,027
Pennsylvania	18	354	-	-	-	-	15	291	-	-	3	63
Rhode Island	-	-	-	-	-	-	-	-	-	-	-	-
South Carolina	145	833	-	-	-	-	23	325	122	508	-	-
South Dakota	108	4,257	-	-	-	-	13	2,371	23	46	72	1,840
Tennessee	21	2,016	-	-	18	180	18	(D)	3	(D)	-	-
Texas	2,709	225,292	125	21,894	-	-	828	26,370	989	166,155	892	33,642
Utah	5,842	281,944	64	1,612	49	392	762	30,665	455	16,651	4,909	235,755
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	77	770	-	-	-	-	19	190	58	580	-	-
Washington	3,091	96,416	33	4,086	1	(D)	602	27,267	470	8,836	2,190	60,313
West Virginia	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	29	1,092	-	-	-	-	-	-	29	1,092	-	-
Wyoming	2,229	366,895	39	3,418	-	-	538	143,978	49	12,555	1,680	212,310
Water Resources Areas												
WRA 01 New England	46	518	-	-	-	-	42	314	32	(D)	4	(D)
WRA 02 Mid-Atlantic	125	1,930	-	-	-	-	29	(D)	93	1,164	3	(D)
WRA 03 South Atlantic-Gulf	1,399	86,660	258	(D)	-	-	687	37,633	702	37,791	13	11,236
WRA 04 Great Lakes	52	1,480	-	-	-	-	50	(D)	2	(D)	-	-
WRA 05 Ohio	36	(D)	-	-	18	(D)	22	(D)	14	(D)	-	-
WRA 06 Tennessee	8	(D)	-	-	-	-	-	-	8	(D)	-	-
WRA 07 Upper Mississippi	66	1,364	-	-	-	-	9	90	57	1,274	-	-
WRA 08 Lower Mississippi	194	8,305	-	-	-	-	73	4,024	121	4,281	-	-
WRA 09 Souris-Red-Rainy	5	706	-	-	-	-	1	(D)	4	(D)	-	-
WRA 10 Missouri	5,210	746,094	111	22,014	-	-	1,269	308,848	905	101,899	3,150	340,245
WRA 11 Arkansas-White-Red	1,829	213,836	280	21,591	224	3,772	369	26,100	465	135,309	995	53,352
WRA 12 Texas-Gulf	2,064	137,638	95	8,986	-	-	802	18,620	776	92,227	486	26,791
WRA 13 Rio Grande	1,871	106,371	254	4,674	221	1,326	911	53,812	555	34,615	409	18,828
WRA 14 Upper Colorado	4,751	460,156	219	18,752	404	20,200	1,145	164,064	318	6,485	3,415	293,404
WRA 15 Lower Colorado	1,177	38,749	157	2,779	-	-	243	9,499	309	9,203	787	20,727
WRA 16 Great Basin	4,981	318,791	58	1,732	60	1,442	610	115,195	377	32,938	4,055	180,938
WRA 17 Pacific Northwest	19,863	897,017	432	22,034	154	4,911	4,605	320,158	3,043	67,559	12,695	514,988
WRA 18 California	6,633	609,171	665	8,526	1	(D)	482	178,831	3,571	176,949	2,797	263,767
WRA 19 Alaska	8	16	4	8	-	-	-	-	8	16	-	-
WRA 20 Hawaii	54	2,907	2	(D)	1	(D)	3	100	14	480	37	2,327

[1] Column totals may exceed acres of crop when more than one water source was used.
[2] Included in land in vegetables.

Table 30. **Primary Method of Water Distribution by Crop, United States: 2003**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Crop	All methods		Pressure systems		Gravity systems	
	Farms	Acres	Farms	Acres	Farms	Acres
Corn for grain or seed	32,267	9,749,748	23,333	7,620,641	8,934	2,129,107
Corn for silage or greenchop	10,118	1,312,660	4,634	603,519	5,484	709,141
Sorghum for grain or seed	6,134	1,108,375	3,264	764,359	2,870	344,016
Wheat for grain or seed	13,531	3,268,658	8,542	2,394,589	4,989	874,069
Barley for grain or seed	4,654	991,277	2,595	707,641	2,059	283,636
Soybeans for beans	21,072	5,347,078	13,904	2,839,105	7,168	2,507,973
Beans, dry edible	2,697	458,265	1,459	284,986	1,238	173,279
Rice	6,836	2,994,757	111	47,838	6,725	2,946,919
Other small grains (oats, rye, etc.)	2,829	240,304	1,636	138,153	1,193	102,151
Alfalfa and alfalfa mixtures	46,290	6,221,542	23,530	3,564,294	22,760	2,657,248
All other hay including dry hay, haylage, grass silage, and greenchop	27,667	3,253,729	12,191	1,117,646	15,476	2,136,083
Peanuts for nuts	2,117	384,867	2,048	361,840	69	23,027
All Cotton	8,621	4,080,054	4,597	2,067,241	4,024	2,012,813
Sugarbeets for sugar	2,499	561,837	1,592	365,676	907	196,161
Tobacco	1,533	35,304	1,533	35,304	-	-
Potatoes	3,423	1,032,604	3,180	948,946	243	83,658
Land in vegetables	17,807	2,081,358	14,297	1,385,041	3,510	696,317
Sweet corn	4,753	285,291	3,514	237,728	1,239	47,562
Tomatoes	7,322	427,812	6,060	199,783	1,262	228,028
Lettuce and romaine	2,659	276,705	2,507	184,344	152	92,361
Berries	8,947	229,542	8,744	222,534	203	7,008
Land in orchards	59,559	4,104,946	45,764	3,273,837	13,795	831,109
Other crops	13,181	1,444,893	10,519	699,288	2,662	745,605
Pastureland, all types	50,372	3,634,133	18,666	835,686	31,706	2,798,447

See footnote(s) at end of table.

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Table 30. **Primary Method of Water Distribution by Crop, United States: 2003** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Crop	Pressure irrigation distribution systems [1] - con.									
	Hand move systems		Solid or permanent set systems		Side roll or wheel line systems		Big gun systems		Low-flow irrigation (drip, trickle, or micro sprinklers)	
	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]
Corn for grain or seed	0.3	0.1	0.1	(Z)	0.1	(Z)	3.3	0.8	2.0	0.3
Corn for silage or greenchop	5.6	1.6	0.5	0.1	1.2	0.5	4.5	3.3	0.1	0.1
Sorghum for grain or seed	(Z)	(Z)	0.1	(Z)	0.4	0.4	0.3	0.1	0.8	1.2
Wheat for grain or seed	3.5	2.0	0.2	0.1	7.4	4.9	0.7	0.1	0.5	0.1
Barley for grain or seed	13.8	4.5	-	-	9.2	7.8	0.4	(Z)	0.1	0.2
Soybeans for beans	0.3	(Z)	0.2	(Z)	0.2	0.1	2.0	0.6	(Z)	(Z)
Beans, dry edible	1.4	1.8	2.4	0.9	5.9	4.0	0.9	0.5	1.4	(Z)
Rice	-	-	0.2	0.2	-	-	-	-	-	-
Other small grains (oats, rye, etc.)	15.5	7.4	0.5	0.3	11.1	6.3	1.7	1.5	-	-
Alfalfa and alfalfa mixtures	10.4	4.1	0.6	0.2	15.1	10.7	1.8	0.7	0.1	0.1
All other hay including dry hay, haylage, grass silage, and greenchop	11.3	3.3	1.7	0.4	9.4	5.1	4.8	2.5	0.1	0.1
Peanuts for nuts	-	-	0.2	0.1	9.9	2.3	11.0	1.7	-	-
All Cotton	2.1	1.7	0.1	0.1	1.7	0.8	0.8	0.1	1.7	1.0
Sugarbeets for sugar	26.8	14.2	1.2	0.8	12.2	9.8	-	-	-	-
Tobacco	41.4	20.7	1.8	2.5	0.7	0.9	35.2	37.4	0.7	0.6
Potatoes	13.4	1.3	11.0	5.2	4.2	3.7	7.2	1.9	9.6	0.1
Land in vegetables	25.8	14.3	3.0	2.5	0.9	1.2	7.1	3.6	30.6	12.4
Sweet corn	20.7	2.4	5.1	0.4	0.4	0.4	11.5	7.6	20.6	4.3
Tomatoes	19.5	11.7	4.1	0.3	0.1	1.5	2.7	0.3	53.0	26.3
Lettuce and romaine	53.1	50.3	7.3	1.1	0.2	1.2	0.9	0.3	28.1	6.0
Berries	14.2	6.4	26.3	32.2	0.2	0.1	3.2	4.7	49.4	43.9
Land in orchards	4.9	1.1	14.6	17.4	0.1	0.1	0.1	0.1	52.6	51.8
Other crops	30.0	4.4	5.1	1.3	3.2	3.9	2.9	1.1	23.8	5.9
Pastureland, all types	15.9	3.9	6.6	0.7	4.5	2.3	2.5	1.6	0.2	(Z)

See footnote(s) at end of table.

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Table 30. **Primary Method of Water Distribution by Crop, United States: 2003** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Crop	Pressure irrigation distribution systems [1]									
	Center pivot and linear move systems								Other pressure systems	
	Less than 15 psi		15 to 29 psi		30 to 59 psi		60 psi or more			
	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]
Corn for grain or seed	3.8	3.4	19.1	24.3	32.1	34.9	11.4	6.4	0.1	(Z)
Corn for silage or greenchop	2.0	2.2	11.5	15.8	13.7	15.0	6.5	5.0	0.1	0.1
Sorghum for grain or seed	8.5	10.6	28.8	37.3	12.8	12.5	1.5	0.9	(Z)	(Z)
Wheat for grain or seed	6.7	8.1	26.1	33.1	14.8	17.3	3.2	2.6	0.1	0.1
Barley for grain or seed	0.2	0.3	12.6	18.7	16.3	22.2	3.2	2.8	-	-
Soybeans for beans	0.9	0.8	14.9	11.8	34.6	26.6	12.7	6.1	0.1	0.1
Beans, dry edible	0.8	1.5	17.3	22.6	21.2	25.3	2.8	1.9	-	-
Rice	0.1	(Z)	0.4	0.7	-	-	0.3	0.2	0.7	0.4
Other small grains (oats, rye, etc.)	3.9	3.9	9.5	15.5	14.0	18.6	1.4	1.5	0.1	0.3
Alfalfa and alfalfa mixtures	1.7	2.1	8.2	13.5	10.3	16.5	2.8	2.7	(Z)	0.1
All other hay including dry hay, haylage, grass silage, and greenchop	1.4	1.4	5.6	8.9	7.3	8.3	2.3	2.0	0.1	0.1
Peanuts for nuts	8.5	12.3	29.5	37.2	29.4	29.7	8.4	7.6	-	-
All Cotton	6.8	7.2	22.8	17.2	14.3	13.2	2.9	2.3	0.2	0.6
Sugarbeets for sugar	0.6	0.3	7.0	10.1	12.8	18.5	3.0	3.8	-	-
Tobacco	0.6	1.7	2.4	2.0	11.5	21.7	5.1	8.9	0.7	0.9
Potatoes	0.2	2.2	13.7	21.7	24.7	37.1	8.3	8.8	0.7	0.5
Land in vegetables	2.5	1.9	2.7	4.3	4.6	12.2	2.5	5.6	0.7	0.2
Sweet corn	0.5	3.1	3.5	12.9	7.7	34.3	3.9	13.3	-	-
Tomatoes	0.1	(Z)	1.0	0.4	1.1	1.0	0.9	1.5	0.2	(Z)
Lettuce and romaine	0.2	0.1	2.1	0.1	0.7	1.9	1.3	(Z)	0.5	(Z)
Berries	0.3	(Z)	0.4	0.1	1.9	1.2	1.7	1.2	0.2	(Z)
Land in orchards	0.6	0.2	1.4	0.6	0.5	0.3	0.2	0.2	1.8	0.4
Other crops	2.2	1.9	4.5	11.0	6.9	12.4	1.0	1.9	0.1	(Z)
Pastureland, all types	0.8	1.4	2.6	5.2	2.5	4.6	0.7	0.4	0.9	0.3

See footnote(s) at end of table.

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Table 30. **Primary Method of Water Distribution by Crop, United States: 2003** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Crop	Gravity irrigation distribution systems [1] - con.									
	Siphon tube system				Portal or ditch-gate system				Poly-pipe or lay flat tubing system	
	Unlined ditches		Lined ditches		Unlined ditches		Lined ditches			
	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]
Corn for grain or seed	3.0	2.2	1.7	0.5	0.5	0.6	0.4	0.1	4.7	4.8
Corn for silage or greenchop	7.4	12.4	5.9	5.3	4.8	2.9	3.8	3.0	2.8	2.7
Sorghum for grain or seed	2.3	3.3	1.0	0.8	8.1	1.5	0.5	0.2	9.8	10.3
Wheat for grain or seed	7.4	5.7	7.8	3.6	6.6	3.5	2.3	3.3	1.9	1.1
Barley for grain or seed	8.0	5.7	10.2	4.5	9.5	7.4	4.3	2.3	2.6	0.2
Soybeans for beans	0.2	0.1	-	-	0.6	0.9	0.1	0.3	13.4	23.9
Beans, dry edible	12.9	14.7	12.7	5.6	1.5	1.1	2.0	1.6	1.4	0.9
Rice	2.1	1.8	0.7	0.4	15.0	13.6	1.3	1.6	12.8	8.7
Other small grains (oats, rye, etc.)	3.4	4.0	3.4	1.7	11.9	8.4	1.9	1.2	2.8	4.1
Alfalfa and alfalfa mixtures	4.1	6.5	3.9	3.0	17.5	10.4	6.0	5.8	2.0	1.0
All other hay including dry hay, haylage, grass silage, and greenchop	1.8	1.8	1.0	1.0	26.4	27.6	4.3	4.3	2.0	1.3
Peanuts for nuts	2.4	4.5	0.2	0.2	-	-	-	-	0.2	0.3
All Cotton	8.1	6.9	3.5	3.6	1.6	2.0	2.7	2.1	17.9	18.7
Sugarbeets for sugar	12.8	10.3	7.5	4.0	3.8	4.0	1.6	3.4	1.2	1.2
Tobacco	-	-	-	-	-	-	-	-	-	-
Potatoes	1.6	2.0	1.7	0.8	0.8	2.4	0.3	0.1	1.2	0.1
Land in vegetables	5.7	13.7	2.6	3.8	1.1	1.4	0.7	3.2	3.3	0.9
Sweet corn	3.8	4.1	3.2	2.5	2.2	0.7	0.2	0.2	4.5	1.4
Tomatoes	5.7	31.8	0.3	0.8	0.2	1.2	0.3	0.8	1.4	0.6
Lettuce and romaine	0.4	0.8	0.5	3.5	0.2	2.8	0.8	11.8	0.6	(Z)
Berries	(Z)	1.0	-	-	0.2	0.6	-	-	0.6	(Z)
Land in orchards	1.0	0.7	1.1	0.4	3.4	1.3	1.2	1.1	1.6	0.5
Other crops	2.5	3.8	2.0	3.5	2.5	18.8	1.0	1.8	1.6	3.8
Pastureland, all types	1.5	1.4	1.0	0.7	24.8	28.0	3.2	2.2	4.1	1.5

See footnote(s) at end of table.

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Table 30. **Primary Method of Water Distribution by Crop, United States: 2003** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Crop	Gravity irrigation distribution systems [1]									
	Gated-pipe (not poly-pipe)		Improved gated-pipe (surge-flow or cablegation) (not poly-pipe)		Sub-irrigation		Open discharge (from a well or pump)		Other gravity	
	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]	Percent of farms	Percent of acres irrigated [2]
Corn for grain or seed	15.6	9.4	1.1	0.7	(Z)	(Z)	0.2	0.4	0.3	0.1
Corn for silage or greenchop	14.3	8.9	1.6	0.6	(Z)	(Z)	4.4	5.8	9.1	9.6
Sorghum for grain or seed	22.9	11.2	0.6	0.4	-	-	1.5	1.3	0.1	0.1
Wheat for grain or seed	7.6	5.0	0.2	0.1	(Z)	(Z)	1.4	2.1	1.8	1.1
Barley for grain or seed	5.8	2.8	0.3	0.2	-	-	0.9	1.1	2.8	1.6
Soybeans for beans	13.7	6.5	1.1	0.7	(Z)	(Z)	4.5	9.0	0.4	1.0
Beans, dry edible	10.9	7.8	3.4	0.9	-	-	0.8	1.1	0.4	0.7
Rice	1.5	1.3	0.2	0.6	-	-	55.1	58.3	9.8	9.9
Other small grains (oats, rye, etc.)	8.3	6.6	0.4	0.2	-	-	0.8	10.4	9.3	5.0
Alfalfa and alfalfa mixtures	8.7	4.7	(Z)	0.1	(Z)	(Z)	1.1	2.5	5.9	5.2
All other hay including dry hay, haylage, grass silage, and greenchop	7.1	3.7	0.2	0.1	(Z)	0.1	1.6	1.5	11.6	21.2
Peanuts for nuts	0.4	0.8	0.1	(Z)	-	-	-	-	-	-
All Cotton	9.4	6.6	0.3	0.3	-	-	1.9	4.3	1.2	1.1
Sugarbeets for sugar	8.1	6.1	0.8	0.4	0.2	0.1	0.3	0.4	0.2	0.5
Tobacco	-	-	-	-	-	-	-	-	-	-
Potatoes	0.1	0.2	-	-	0.5	1.3	0.5	0.7	0.3	0.5
Land in vegetables	1.9	4.9	-	-	0.2	0.8	2.8	0.7	1.5	1.2
Sweet corn	3.2	2.6	-	-	0.1	3.9	8.8	0.3	0.1	0.1
Tomatoes	2.9	9.5	-	-	(Z)	0.1	6.2	1.5	0.1	2.3
Lettuce and romaine	3.2	8.5	-	-	-	-	-	-	0.1	0.1
Berries	-	-	0.8	0.4	(Z)	0.2	0.6	0.3	(Z)	0.1
Land in orchards	2.9	4.7	0.1	0.5	0.3	0.5	3.6	3.5	7.9	6.0
Other crops	1.5	3.5	(Z)	(Z)	0.1	3.7	2.7	1.5	6.3	7.4
Pastureland, all types	6.6	4.2	(Z)	0.1	0.1	0.5	6.1	4.5	15.5	31.8

[1] Percentages are calculated across all methods.
[2] The sum of percent acres irrigated across systems for a crop may not add to 100 percent due to the use of unknown secondary irrigation systems by crop.

Table 31. **Other Uses of Irrigation Water: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Prevent freeze damage		Crop cooling to delay early budding or blooming, or to reduce heat stress		Leaching to remove salts from soil	
	Farms	Acres applied	Farms	Acres applied	Farms	Acres applied
U.S. TOTAL . . . . . 2003 . .	14,531	1,432,532	6,954	1,005,165	1,368	497,529
1998 . .	12,902	1,556,218	7,325	1,759,926	985	366,765
2003 DATA						
Alabama	26	108	4	340	-	-
Alaska	-	-	-	-	-	-
Arizona	104	9,846	69	44,771	151	88,314
Arkansas	101	303	64	53,055	22	4,640
California	4,980	746,894	2,386	220,378	869	303,873
Colorado	3	1,710	108	14,582	8	2,520
Connecticut	43	275	2	(D)	-	-
Delaware	2	(D)	-	-	-	-
Florida	2,492	379,520	307	42,571	5	(D)
Georgia	21	1,392	18	10,062	-	-
Hawaii	-	-	8	8	3	(D)
Idaho	114	53,759	143	47,164	48	18,630
Illinois	-	-	62	27,003	-	-
Indiana	47	714	23	4,029	-	-
Iowa	35	141	58	1,521	8	8
Kansas	13	10,608	90	25,599	-	-
Kentucky	14	56	66	1,173	-	-
Louisiana	56	1,158	25	11,125	-	-
Maine	52	1,939	76	469	-	-
Maryland	7	33	1	(D)	-	-
Massachusetts	421	12,175	310	7,484	-	-
Michigan	329	7,686	150	17,666	2	(D)
Minnesota	135	1,492	47	4,396	-	-
Mississippi	-	-	38	22,525	-	-
Missouri	-	-	40	12,771	-	-
Montana	4	397	180	66,454	4	480
Nebraska	18	2,268	37	29,507	-	-
Nevada	83	360	88	2,981	22	6,105
New Hampshire	19	98	18	73	-	-
New Jersey	58	4,321	60	3,776	-	-
New Mexico	120	6,207	61	15,952	43	3,761
New York	114	1,464	30	507	2	(D)
North Carolina	156	7,628	42	2,582	32	1,240
North Dakota	2	(D)	18	4,502	2	(D)
Ohio	101	460	35	140	3	15
Oklahoma	114	1,054	29	6,010	-	-
Oregon	1,020	25,838	471	27,897	6	3,372
Pennsylvania	228	1,103	118	440	-	-
Rhode Island	7	150	6	115	-	-
South Carolina	150	1,104	2	(D)	-	-
South Dakota	-	-	10	4,878	-	-
Tennessee	55	319	21	(D)	-	-
Texas	31	4,140	282	109,116	46	17,448
Utah	123	1,578	17	1,326	34	12,605
Vermont	10	38	15	(D)	-	-
Virginia	4	312	25	1,765	-	-
Washington	2,708	97,495	1,047	111,949	26	1,602
West Virginia	6	24	-	-	-	-
Wisconsin	355	31,941	184	31,126	-	-
Wyoming	50	13,992	63	12,170	32	4,104
Water Resources Areas						
WRA 01 New England	549	14,668	413	8,199	-	-
WRA 02 Mid-Atlantic	364	6,223	216	5,549	2	(D)
WRA 03 South Atlantic-Gulf	2,845	389,752	378	58,329	37	12,940
WRA 04 Great Lakes	457	11,850	198	23,673	2	(D)
WRA 05 Ohio	163	809	135	8,030	3	15
WRA 06 Tennessee	16	127	10	1,405	-	-
WRA 07 Upper Mississippi	422	30,978	302	53,732	-	-
WRA 08 Lower Mississippi	183	1,624	115	94,376	17	4,140
WRA 09 Souris-Red-Rainy	45	179	33	2,537	-	-
WRA 10 Missouri	85	17,121	466	134,244	44	4,562
WRA 11 Arkansas-White-Red	131	3,174	128	50,057	5	500
WRA 12 Texas-Gulf	14	2,020	277	98,068	41	6,734
WRA 13 Rio Grande	75	7,341	42	4,270	54	16,955
WRA 14 Upper Colorado	50	10,896	19	3,206	14	(D)
WRA 15 Lower Colorado	178	11,326	71	45,513	164	89,974
WRA 16 Great Basin	132	458	96	3,813	41	15,880
WRA 17 Pacific Northwest	3,655	169,815	1,658	189,328	69	19,602
WRA 18 California	5,167	754,171	2,389	220,828	872	306,795
WRA 19 Alaska	-	-	-	-	-	-
WRA 20 Hawaii	-	-	8	8	3	(D)

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Table 31. **Other Uses of Irrigation Water: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Land application of livestock waste		Land irrigated or flooded for wildlife or water-fowl habitat		Other purposes	
	Farms	Acres applied	Farms	Acres applied	Farms	Acres applied
U.S. TOTAL . . . . . 2003 . .	2,968	444,627	4,587	610,029	3,337	467,124
1998 . .	2,054	255,365	(NA)	(NA)	2,518	210,193
2003 DATA						
Alabama	26	1,402	-	-	12	290
Alaska	-	-	-	-	-	-
Arizona	4	(D)	74	199	18	3,914
Arkansas	185	8,280	743	156,279	31	15,735
California	1,142	222,133	934	173,722	1,812	222,989
Colorado	27	6,438	109	12,455	84	16,960
Connecticut	-	-	-	-	2	(D)
Delaware	9	432	-	-	3	300
Florida	23	7,050	4	608	1	(D)
Georgia	97	15,980	22	451	25	2,786
Hawaii	2	(D)	11	46	18	206
Idaho	55	11,131	461	16,708	8	7,405
Illinois	27	2,494	5	868	4	1,900
Indiana	25	3,957	1	(D)	21	21
Iowa	-	-	14	315	3	592
Kansas	89	15,268	22	80	27	11,496
Kentucky	9	675	2	(D)	10	476
Louisiana	19	3,358	235	57,812	93	34,606
Maine	-	-	2	(D)	3	100
Maryland	7	889	7	31	24	240
Massachusetts	-	-	-	-	46	1,686
Michigan	19	2,018	78	572	30	7,818
Minnesota	9	1,001	7	2,828	4	840
Mississippi	2	(D)	110	23,224	4	940
Missouri	161	9,262	57	5,207	-	-
Montana	4	1,920	306	13,144	56	9,390
Nebraska	5	6,055	19	380	169	43,026
Nevada	2	(D)	87	13,650	-	-
New Hampshire	-	-	2	(D)	-	-
New Jersey	-	-	-	-	50	208
New Mexico	15	3,958	100	3,338	5	120
New York	7	2,392	-	-	3	222
North Carolina	494	33,831	-	-	108	216
North Dakota	1	(D)	4	12	4	60
Ohio	4	404	-	-	3	135
Oklahoma	81	10,463	4	562	11	1,210
Oregon	150	22,280	97	34,919	73	18,642
Pennsylvania	42	475	3	6	73	508
Rhode Island	-	-	4	4	1	(D)
South Carolina	31	1,835	12	220	10	100
South Dakota	10	2,406	23	23	2	(D)
Tennessee	12	1,689	22	148	-	-
Texas	108	24,320	270	19,969	144	37,642
Utah	3	360	178	9,616	130	4,851
Vermont	-	-	-	-	-	-
Virginia	4	80	58	580	10	100
Washington	47	9,866	255	4,993	152	5,830
West Virginia	-	-	-	-	-	-
Wisconsin	-	-	7	364	40	8,521
Wyoming	11	8,140	238	56,546	10	3,340
Water Resources Areas						
WRA 01 New England	-	-	8	32	52	1,939
WRA 02 Mid-Atlantic	62	1,876	65	611	163	1,578
WRA 03 South Atlantic-Gulf	642	60,303	40	2,315	156	3,942
WRA 04 Great Lakes	32	5,410	78	572	39	9,635
WRA 05 Ohio	35	3,955	4	18	27	(D)
WRA 06 Tennessee	34	1,495	18	18	2	(D)
WRA 07 Upper Mississippi	59	6,836	14	1,255	45	9,693
WRA 08 Lower Mississippi	128	8,588	1,026	220,403	128	51,281
WRA 09 Souris-Red-Rainy	2	(D)	6	2,825	-	-
WRA 10 Missouri	155	28,068	336	43,425	249	63,380
WRA 11 Arkansas-White-Red	297	34,828	176	32,332	53	27,164
WRA 12 Texas-Gulf	104	22,330	237	11,315	135	25,630
WRA 13 Rio Grande	13	3,238	60	2,650	75	8,230
WRA 14 Upper Colorado	1	(D)	311	44,479	58	4,135
WRA 15 Lower Colorado	4	(D)	172	1,702	92	4,950
WRA 16 Great Basin	4	720	105	20,257	-	-
WRA 17 Pacific Northwest	250	42,321	977	42,948	232	29,137
WRA 18 California	1,144	223,089	943	182,826	1,813	225,729
WRA 19 Alaska	-	-	-	-	-	-
WRA 20 Hawaii	2	(D)	11	46	18	206

Table 32. **Irrigated Farms by Size of Farm: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Total			1 to 49 acres			50 to 99 acres		
	Farms	Acres in farms	Acres irrigated	Farms	Acres in farms	Acres irrigated	Farms	Acres in farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	220,163	196,515,390	52,583,431	85,829	1,457,778	995,628	20,842	1,465,530	852,442
1998 . .	223,932	194,529,190	54,249,965	84,157	1,434,061	1,078,517	20,214	1,436,692	828,428
2003 DATA									
Alabama	578	315,083	52,722	213	3,419	767	80	6,138	1,125
Alaska	73	13,717	2,252	49	982	136	1	(D)	(D)
Arizona	2,777	1,354,975	836,587	1,487	28,237	13,733	286	23,725	6,200
Arkansas	4,834	5,703,693	3,944,867	100	4,000	200	245	20,846	9,608
California	46,841	15,714,032	8,471,936	26,107	413,475	350,159	4,760	321,893	280,926
Colorado	11,567	11,546,709	2,562,329	3,252	80,863	55,504	1,620	104,792	59,990
Connecticut	234	13,580	2,213	190	3,075	625	10	(D)	14
Delaware	213	192,493	69,088	30	(D)	180	10	772	462
Florida	8,335	3,976,525	1,497,653	5,034	76,801	52,291	1,122	80,121	41,010
Georgia	2,847	2,078,620	710,893	618	14,770	6,723	376	25,548	7,848
Hawaii	1,214	308,611	78,538	1,108	7,997	4,033	35	(D)	(D)
Idaho	14,303	6,336,063	3,126,857	7,096	117,296	96,493	1,035	75,624	55,521
Illinois	1,195	1,248,453	374,919	126	1,722	686	128	9,629	3,527
Indiana	1,193	1,103,897	276,294	170	2,758	641	128	8,644	2,092
Iowa	709	576,988	134,164	147	3,887	730	80	5,843	389
Kansas	4,878	9,570,633	2,543,950	148	592	148	74	6,068	2,960
Kentucky	943	298,298	20,685	280	6,909	1,393	112	8,169	(D)
Louisiana	2,280	2,374,244	838,717	305	2,140	1,070	117	8,886	3,480
Maine	507	192,712	18,163	235	3,022	685	34	(D)	(D)
Maryland	509	187,682	53,734	221	3,205	738	41	3,358	752
Massachusetts	842	74,178	16,151	446	6,265	2,132	191	13,168	1,970
Michigan	2,366	1,220,101	432,665	804	20,750	4,893	230	16,676	2,823
Minnesota	1,639	1,153,741	434,500	297	6,725	3,082	110	7,743	2,163
Mississippi	1,567	2,180,689	1,169,793	333	2,997	333	-	-	-
Missouri	1,966	2,289,921	1,020,728	154	4,324	1,286	122	8,504	1,848
Montana	8,625	23,046,094	2,131,955	2,327	63,897	39,702	879	55,499	30,507
Nebraska	16,278	22,574,776	7,516,171	386	7,403	1,557	274	19,097	14,456
Nevada	1,722	4,088,606	639,310	646	13,457	10,125	78	5,991	3,354
New Hampshire	161	14,552	818	83	1,593	261	39	2,560	147
New Jersey	807	126,649	46,679	405	5,388	1,713	111	7,500	2,540
New Mexico	6,741	8,556,784	769,787	3,820	46,903	30,299	788	54,496	27,341
New York	1,284	275,475	48,545	699	9,006	3,323	210	16,180	2,636
North Carolina	2,281	698,205	101,055	1,073	13,592	5,571	134	10,134	4,802
North Dakota	541	1,477,038	207,772	-	-	-	-	-	-
Ohio	670	97,788	14,476	328	3,711	1,097	165	12,803	1,215
Oklahoma	1,819	3,081,687	508,842	54	1,080	54	274	19,470	3,289
Oregon	14,205	9,913,275	1,731,660	6,960	143,265	87,433	2,700	196,009	94,492
Pennsylvania	1,589	276,614	19,633	717	10,884	2,633	235	15,954	3,616
Rhode Island	58	4,862	648	39	550	135	10	(D)	(D)
South Carolina	951	300,910	52,046	367	5,791	969	239	13,662	1,165
South Dakota	1,444	3,268,827	390,406	46	552	230	53	3,605	2,250
Tennessee	759	298,741	34,429	330	4,451	1,294	107	7,917	836
Texas	15,441	20,465,276	4,947,745	4,208	60,426	40,931	915	65,293	27,485
Utah	10,070	6,285,621	1,082,213	4,869	83,914	55,594	1,024	76,391	62,829
Vermont	204	15,975	825	110	1,964	284	35	(D)	(D)
Virginia	905	357,982	33,635	366	9,025	1,505	129	8,705	567
Washington	12,862	5,024,117	1,806,782	7,704	120,094	88,291	1,123	85,330	65,889
West Virginia	100	10,163	801	32	(D)	59	42	2,646	(D)
Wisconsin	1,414	1,044,557	391,763	250	4,867	1,143	55	3,156	673
Wyoming	4,822	15,185,178	1,415,037	1,060	29,163	22,764	276	19,188	15,865
Water Resources Areas									
WRA 01 New England	1,917	309,246	38,410	1,055	15,542	3,970	304	20,343	2,346
WRA 02 Mid-Atlantic	4,142	996,233	233,602	1,971	30,314	8,401	560	38,917	8,987
WRA 03 South Atlantic-Gulf	15,567	7,472,460	2,410,814	7,408	114,549	65,141	1,921	133,797	54,826
WRA 04 Great Lakes	3,694	1,797,625	611,881	1,207	29,025	6,572	422	30,729	6,212
WRA 05 Ohio	2,928	1,393,401	220,290	1,052	14,827	3,451	472	34,199	2,351
WRA 06 Tennessee	891	217,167	31,065	505	6,332	2,217	117	8,450	(D)
WRA 07 Upper Mississippi	4,359	3,655,167	1,145,841	679	14,283	5,283	325	22,836	6,270
WRA 08 Lower Mississippi	7,817	10,792,231	6,199,006	259	3,200	1,509	404	32,792	14,691
WRA 09 Souris-Red-Rainy	491	750,834	183,590	45	1,050	270	-	-	-
WRA 10 Missouri	34,813	71,088,623	12,922,399	3,682	91,537	51,974	1,662	113,805	73,225
WRA 11 Arkansas-White-Red	10,805	20,648,533	5,285,088	860	23,077	12,644	425	30,394	7,085
WRA 12 Texas-Gulf	12,439	10,550,868	3,284,293	3,874	60,002	40,363	915	65,293	27,485
WRA 13 Rio Grande	6,844	8,060,807	799,492	3,843	37,634	26,813	594	40,101	21,134
WRA 14 Upper Colorado	9,068	9,265,206	1,366,203	3,082	75,017	50,580	1,365	89,183	55,219
WRA 15 Lower Colorado	3,393	2,061,452	897,445	1,691	33,149	17,293	420	31,572	13,015
WRA 16 Great Basin	9,821	9,311,710	1,516,775	4,543	74,104	52,759	867	66,875	51,585
WRA 17 Pacific Northwest	42,003	21,738,781	6,679,626	22,309	398,002	278,380	5,141	373,595	218,178
WRA 18 California	47,884	16,082,718	8,676,821	26,607	427,155	363,839	4,892	330,341	287,130
WRA 19 Alaska	73	13,717	2,252	49	982	136	1	(D)	(D)
WRA 20 Hawaii	1,214	308,611	78,538	1,108	7,997	4,033	35	(D)	(D)

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Table 32. **Irrigated Farms by Size of Farm: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	100 to 219 acres			220 to 499 acres			500 to 999 acres		
	Farms	Acres in farms	Acres irrigated	Farms	Acres in farms	Acres irrigated	Farms	Acres in farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	23,323	3,452,997	1,958,694	27,035	9,169,286	4,842,078	21,876	15,814,294	8,006,492
1998 . .	24,950	3,769,328	2,271,466	26,778	8,915,560	4,865,372	25,925	18,611,144	9,684,953
2003 DATA									
Alabama	80	11,922	1,939	73	26,804	3,182	39	29,012	4,552
Alaska	8	1,212	218	11	3,359	678	2	(D)	(D)
Arizona	142	16,532	10,568	234	82,555	51,233	314	242,716	135,993
Arkansas	577	87,231	27,050	796	258,802	167,508	1,173	837,341	586,351
California	5,280	701,901	532,302	4,851	1,635,559	1,267,079	3,189	2,295,819	1,406,643
Colorado	1,219	184,675	115,291	1,695	595,048	294,374	1,307	920,029	528,702
Connecticut	13	1,905	622	17	(D)	(D)	3	(D)	(D)
Delaware	14	(D)	1,070	41	15,371	6,282	52	40,054	16,615
Florida	669	103,238	66,416	637	215,248	98,667	293	181,787	105,341
Georgia	300	42,127	16,935	314	112,843	38,920	494	346,073	113,015
Hawaii	23	2,960	1,017	20	6,553	1,651	1	(D)	(D)
Idaho	2,097	323,248	224,418	1,680	544,335	351,178	917	624,803	493,319
Illinois	102	15,493	4,613	134	47,430	25,517	231	162,444	61,339
Indiana	128	17,306	4,000	172	61,999	22,637	215	149,166	47,969
Iowa	63	9,903	4,197	108	35,911	14,104	105	74,627	18,346
Kansas	64	10,144	8,428	438	161,472	83,380	1,041	810,124	235,042
Kentucky	214	29,871	2,492	191	66,469	2,557	98	65,911	(D)
Louisiana	172	25,249	9,184	421	146,990	65,590	390	280,696	144,803
Maine	83	10,753	1,128	90	29,793	1,090	46	38,006	1,503
Maryland	78	13,181	2,674	52	18,229	8,408	65	50,066	8,975
Massachusetts	155	25,155	4,519	31	10,870	1,855	9	4,770	972
Michigan	411	59,923	19,847	263	87,209	32,109	273	186,178	64,848
Minnesota	197	34,170	12,723	437	156,465	58,176	239	175,996	68,752
Mississippi	336	36,867	3,900	69	22,161	14,368	143	110,087	66,060
Missouri	161	28,869	11,046	250	95,733	42,427	439	337,696	146,106
Montana	649	107,014	73,767	1,290	505,928	211,408	643	476,220	246,278
Nebraska	1,317	211,905	136,162	2,824	960,632	616,215	3,840	2,745,594	1,389,653
Nevada	247	33,707	18,629	193	62,990	38,809	124	83,604	58,767
New Hampshire	17	2,382	115	19	6,307	259	3	1,710	36
New Jersey	130	21,572	9,409	91	25,339	12,274	48	31,408	13,074
New Mexico	586	92,635	49,095	517	179,475	54,683	270	193,290	88,957
New York	197	30,484	5,345	71	24,675	7,043	53	33,648	7,811
North Carolina	368	56,133	9,703	401	128,025	23,100	125	84,770	10,866
North Dakota	28	4,466	2,162	11	4,527	2,909	65	48,210	15,055
Ohio	103	(D)	1,174	37	13,539	(D)	20	13,082	3,612
Oklahoma	120	20,845	7,288	300	98,780	20,864	239	192,323	54,417
Oregon	884	130,125	83,659	1,892	651,737	274,723	486	358,957	225,105
Pennsylvania	299	44,351	3,153	189	60,170	3,802	91	65,408	2,193
Rhode Island	6	850	98	2	(D)	(D)	-	-	-
South Carolina	41	7,281	1,374	172	71,001	4,800	70	52,052	9,524
South Dakota	59	9,230	8,009	277	96,445	35,104	193	149,198	47,275
Tennessee	107	16,140	1,020	102	36,306	1,481	53	33,505	3,104
Texas	2,077	329,728	139,261	1,943	627,146	232,258	1,922	1,435,906	757,184
Utah	1,252	198,104	105,187	1,335	430,483	216,373	780	553,094	212,752
Vermont	45	5,956	223	12	4,289	151	2	(D)	(D)
Virginia	12	1,791	900	122	43,541	3,114	193	139,871	5,936
Washington	1,488	209,543	151,761	1,055	332,041	253,596	745	558,296	373,925
West Virginia	19	3,045	119	5	1,998	(D)	-	-	-
Wisconsin	238	38,057	8,460	321	100,627	33,096	240	171,693	57,741
Wyoming	448	68,003	56,024	829	260,624	141,676	593	423,048	164,310
Water Resources Areas									
WRA 01 New England	300	44,523	6,672	164	54,378	3,816	63	47,978	2,786
WRA 02 Mid-Atlantic	608	94,684	21,057	405	131,381	36,014	340	245,001	49,347
WRA 03 South Atlantic-Gulf	1,778	254,873	99,966	1,677	581,659	168,186	1,107	758,767	247,047
WRA 04 Great Lakes	689	105,033	25,527	455	154,298	52,425	392	267,992	92,838
WRA 05 Ohio	349	47,397	4,582	383	136,415	12,238	279	191,952	29,469
WRA 06 Tennessee	125	18,477	1,626	42	14,562	2,460	57	38,980	(D)
WRA 07 Upper Mississippi	504	78,056	24,068	844	282,871	114,661	768	551,593	196,845
WRA 08 Lower Mississippi	471	66,591	32,053	1,201	416,390	238,280	1,708	1,235,868	796,127
WRA 09 Souris-Red-Rainy	35	6,546	2,630	99	39,308	8,228	72	54,940	19,109
WRA 10 Missouri	2,581	414,841	289,456	5,715	1,968,013	1,058,303	5,748	4,158,078	1,958,997
WRA 11 Arkansas-White-Red	1,414	220,496	45,570	1,307	456,698	197,280	1,977	1,500,860	644,958
WRA 12 Texas-Gulf	1,639	274,165	133,898	1,472	457,360	215,804	1,366	1,024,417	552,610
WRA 13 Rio Grande	443	69,782	40,575	994	355,650	91,584	352	257,183	170,481
WRA 14 Upper Colorado	1,164	170,051	116,934	1,188	406,524	180,883	1,072	747,572	325,174
WRA 15 Lower Colorado	166	19,319	12,814	249	86,828	53,455	492	367,924	154,717
WRA 16 Great Basin	1,282	212,273	97,816	1,329	446,483	205,255	710	486,668	226,640
WRA 17 Pacific Northwest	4,317	630,803	453,524	4,543	1,510,492	914,149	2,083	1,507,468	1,077,900
WRA 18 California	5,427	720,915	548,691	4,937	1,660,064	1,286,728	3,287	2,368,539	1,457,875
WRA 19 Alaska	8	1,212	218	11	3,359	678	2	(D)	(D)
WRA 20 Hawaii	23	2,960	1,017	20	6,553	1,651	1	(D)	(D)

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Table 32. **Irrigated Farms by Size of Farm: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	1,000 to 1,999 acres			2,000 to 4,999 acres			5,000 acres or more		
	Farms	Acres in farms	Acres irrigated	Farms	Acres in farms	Acres irrigated	Farms	Acres in farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	20,437	28,614,890	12,334,972	14,453	42,755,448	13,465,559	6,368	93,785,167	10,127,566
1998 . .	21,533	29,476,179	13,422,206	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA									
Alabama	45	59,446	10,485	38	108,436	18,446	10	69,906	12,226
Alaska	-	-	-	2	(D)	(D)	-	-	-
Arizona	144	197,678	138,397	137	410,515	280,164	33	353,017	200,299
Arkansas	1,070	1,527,050	1,115,868	775	2,254,513	1,598,312	98	713,910	439,970
California	1,453	2,127,507	1,571,841	752	2,232,349	1,455,126	449	5,985,529	1,607,860
Colorado	876	1,277,355	416,023	1,132	3,556,118	639,094	466	4,827,829	453,351
Connecticut	1	(D)	(D)	-	-	-	-	-	-
Delaware	45	63,723	28,222	18	51,765	9,497	3	(D)	6,760
Florida	286	435,776	140,993	201	633,661	203,371	93	2,249,893	789,564
Georgia	479	644,532	234,453	233	663,846	231,971	33	228,881	61,028
Hawaii	6	8,265	2,403	9	(D)	13,400	12	249,349	55,086
Idaho	887	1,205,167	637,450	398	1,178,430	669,320	193	2,267,160	599,158
Illinois	305	436,125	125,084	147	414,178	110,136	22	161,432	44,017
Indiana	230	327,284	89,446	140	384,338	89,843	10	152,402	19,666
Iowa	147	207,547	59,339	47	126,151	31,239	12	113,119	5,820
Kansas	1,288	1,807,590	607,069	1,542	4,559,684	1,052,148	283	2,214,959	554,775
Kentucky	31	39,032	3,205	12	38,461	5,358	5	43,476	(D)
Louisiana	494	676,196	275,754	352	1,032,337	280,498	29	201,750	58,338
Maine	9	(D)	(D)	5	(D)	(D)	5	84,718	9,616
Maryland	31	45,552	16,695	21	54,091	15,492	-	-	-
Massachusetts	10	13,950	4,703	-	-	-	-	-	-
Michigan	238	346,969	117,080	123	346,701	128,625	24	155,695	62,440
Minnesota	228	315,189	108,527	117	345,775	133,325	14	111,678	47,752
Mississippi	282	407,939	227,239	311	927,798	483,076	93	672,840	374,817
Missouri	526	751,670	342,116	274	756,596	400,179	40	306,529	75,720
Montana	811	1,064,495	298,637	914	2,918,074	478,134	1,112	17,854,967	753,522
Nebraska	4,586	6,222,593	2,825,107	2,369	6,436,013	1,802,676	682	5,971,539	730,345
Nevada	165	227,755	92,098	141	437,701	152,729	128	3,223,401	264,799
New Hampshire	-	-	-	-	-	-	-	-	-
New Jersey	18	23,209	3,908	4	12,233	3,761	-	-	-
New Mexico	264	363,839	138,180	202	665,817	143,054	294	6,960,329	238,178
New York	36	52,639	8,185	8	30,017	2,700	10	78,826	11,502
North Carolina	114	157,108	20,118	57	167,419	20,883	9	81,024	6,012
North Dakota	125	179,839	49,808	250	763,918	105,314	62	476,078	32,524
Ohio	7	(D)	(D)	9	23,003	(D)	1	(D)	(D)
Oklahoma	368	527,326	117,902	301	940,096	186,148	163	1,281,767	118,880
Oregon	366	521,375	227,912	567	1,751,269	292,464	350	6,160,538	445,872
Pennsylvania	48	53,861	2,480	10	25,986	1,756	-	-	-
Rhode Island	-	-	-	1	(D)	(D)	-	-	-
South Carolina	29	36,488	8,622	30	87,135	23,092	3	27,500	2,500
South Dakota	335	477,490	109,344	354	1,079,071	118,362	127	1,453,236	69,832
Tennessee	22	30,155	4,772	28	83,220	9,873	10	87,047	12,049
Texas	2,384	3,485,339	1,379,103	1,401	4,211,314	1,438,553	591	10,250,124	932,970
Utah	403	549,929	149,801	230	625,315	126,158	177	3,768,391	153,519
Vermont	-	-	-	-	-	-	-	-	-
Virginia	54	69,392	6,272	29	85,657	15,341	-	-	-
Washington	423	622,254	283,720	215	639,144	301,873	109	2,457,415	287,727
West Virginia	2	(D)	(D)	-	-	-	-	-	-
Wisconsin	172	231,254	78,285	114	313,514	126,962	24	181,389	85,403
Wyoming	594	771,951	254,639	433	1,332,245	259,561	589	12,280,956	500,198
Water Resources Areas									
WRA 01 New England	20	27,049	6,916	6	14,715	2,288	5	84,718	9,616
WRA 02 Mid-Atlantic	186	241,992	58,009	69	195,744	45,027	3	18,200	6,760
WRA 03 South Atlantic-Gulf	978	1,362,514	417,337	555	1,644,635	493,151	143	2,621,666	865,160
WRA 04 Great Lakes	327	474,284	164,463	164	472,533	181,907	38	263,731	81,937
WRA 05 Ohio	232	325,619	58,126	141	394,019	76,198	20	248,973	33,875
WRA 06 Tennessee	16	21,881	4,411	23	64,287	(D)	6	44,198	7,150
WRA 07 Upper Mississippi	777	1,078,345	321,891	395	1,120,624	324,356	67	506,559	152,467
WRA 08 Lower Mississippi	2,001	2,845,446	1,730,904	1,531	4,440,723	2,477,651	242	1,751,221	907,791
WRA 09 Souris-Red-Rainy	98	143,639	38,228	120	353,318	88,854	22	152,033	26,271
WRA 10 Missouri	7,347	9,966,837	3,901,619	5,351	15,621,954	3,337,952	2,727	38,753,558	2,250,873
WRA 11 Arkansas-White-Red	1,986	2,862,628	1,081,971	1,866	5,770,918	1,813,879	970	9,783,462	1,481,701
WRA 12 Texas-Gulf	1,971	2,873,960	1,129,773	976	2,879,061	922,221	226	2,916,610	262,139
WRA 13 Rio Grande	227	301,356	163,687	201	647,979	157,497	190	6,351,122	127,721
WRA 14 Upper Colorado	405	597,633	146,786	566	1,684,464	235,395	226	5,494,762	255,232
WRA 15 Lower Colorado	179	243,460	147,445	148	446,183	295,357	48	833,017	203,349
WRA 16 Great Basin	498	681,583	214,490	302	861,154	242,580	290	6,482,570	425,650
WRA 17 Pacific Northwest	1,688	2,380,691	1,145,167	1,252	3,807,911	1,251,824	670	11,129,819	1,340,504
WRA 18 California	1,495	2,177,708	1,601,346	776	2,298,397	1,496,928	463	6,099,599	1,634,284
WRA 19 Alaska	-	-	-	2	(D)	(D)	-	-	-
WRA 20 Hawaii	6	8,265	2,403	9	(D)	13,400	12	249,349	55,086

Table 33. **Irrigated Farms by North American Industrial Classification System: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Total		Oilseed and grain farming (1111)		Other crop farming (1119)							
					Total		Tobacco farming (11191)		Cotton farming (11192)		Sugarcane farming, hay farming, and all other crop farming (11193, 11194, 11199)	
	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	220,163	52,583,431	34,594	18,784,625	44,260	12,960,415	1,204	39,765	5,767	4,583,003	37,289	8,337,647
1998 . .	223,932	54,249,965	39,970	20,222,502	45,636	13,839,453	3,316	132,837	7,572	5,343,113	34,748	8,363,503
2003 DATA												
Alabama	578	52,722	16	(D)	184	37,920	-	-	36	19,570	148	18,350
Alaska	73	2,252	4	80	28	1,171	-	-	-	-	28	1,171
Arizona	2,777	836,587	126	57,095	708	522,230	-	-	279	226,749	429	295,481
Arkansas	4,834	3,944,867	3,387	3,130,384	696	780,476	-	-	555	762,766	141	17,710
California	46,841	8,471,936	1,457	799,805	2,290	2,247,159	-	-	551	740,993	1,739	1,506,166
Colorado	11,567	2,562,329	1,436	753,162	4,885	660,558	-	-	-	-	4,885	660,558
Connecticut	234	2,213	-	-	96	928	7	780	-	-	89	148
Delaware	213	69,088	99	26,049	17	8,759	-	-	-	-	17	8,759
Florida	8,335	1,497,653	39	10,945	626	418,039	59	2,700	4	5,000	563	410,339
Georgia	2,847	710,893	165	36,692	1,051	436,323	118	15,299	328	168,382	605	252,642
Hawaii	1,214	78,538	3	350	304	(D)	-	-	-	-	304	(D)
Idaho	14,303	3,126,857	1,188	356,965	4,363	1,133,148	-	-	-	-	4,363	1,133,148
Illinois	1,195	374,919	869	332,888	99	1,080	-	-	-	-	99	1,080
Indiana	1,193	276,294	616	217,814	86	5,512	-	-	-	-	86	5,512
Iowa	709	134,164	392	115,993	76	3,646	-	-	-	-	76	3,646
Kansas	4,878	2,543,950	3,261	1,906,545	468	277,312	-	-	8	25,264	460	252,048
Kentucky	943	20,685	63	11,781	583	6,247	471	6,093	-	-	112	154
Louisiana	2,280	838,717	1,299	637,897	578	167,873	-	-	332	146,335	246	21,538
Maine	507	18,163	-	-	66	66	-	-	-	-	66	66
Maryland	509	53,734	65	22,970	156	(D)	2	(D)	-	-	154	(D)
Massachusetts	842	16,151	-	-	178	1,096	11	698	-	-	167	398
Michigan	2,366	432,665	507	196,635	268	22,763	-	-	-	-	268	22,763
Minnesota	1,639	434,500	679	244,580	68	13,432	-	-	-	-	68	13,432
Mississippi	1,567	1,169,793	478	628,057	737	528,759	-	-	395	513,933	342	14,826
Missouri	1,966	1,020,728	1,033	720,202	353	251,649	-	-	283	245,191	70	6,458
Montana	8,625	2,131,955	689	254,114	2,128	487,130	-	-	-	-	2,128	487,130
Nebraska	16,278	7,516,171	10,906	5,705,527	373	163,151	-	-	-	-	373	163,151
Nevada	1,722	639,310	56	11,884	555	221,965	-	-	-	-	555	221,965
New Hampshire	161	818	-	-	43	233	-	-	-	-	43	233
New Jersey	807	46,679	43	2,447	208	643	-	-	-	-	208	643
New Mexico	6,741	769,787	162	140,885	1,757	279,509	-	-	71	21,023	1,686	258,486
New York	1,284	48,545	4	1,250	394	3,036	-	-	-	-	394	3,036
North Carolina	2,281	101,055	35	2,508	868	33,132	291	10,077	48	9,725	529	13,330
North Dakota	541	207,772	287	94,632	62	29,063	-	-	-	-	62	29,063
Ohio	670	14,476	67	3,288	157	1,835	-	-	-	-	157	1,835
Oklahoma	1,819	508,842	522	213,157	361	127,493	-	-	82	45,865	279	81,628
Oregon	14,205	1,731,660	216	63,751	3,974	568,226	-	-	-	-	3,974	568,226
Pennsylvania	1,589	19,633	6	180	419	1,607	3	18	-	-	416	1,589
Rhode Island	58	648	-	-	26	59	-	-	-	-	26	59
South Carolina	951	52,046	51	15,411	262	10,767	-	-	24	6,771	238	3,996
South Dakota	1,444	390,406	540	197,361	104	31,747	-	-	-	-	104	31,747
Tennessee	759	34,429	37	11,132	402	12,164	102	(D)	13	9,284	287	(D)
Texas	15,441	4,947,745	2,459	1,424,105	5,256	2,286,232	-	-	2,755	1,636,053	2,501	650,179
Utah	10,070	1,082,213	460	65,036	3,216	270,120	-	-	-	-	3,216	270,120
Vermont	204	825	-	-	92	190	-	-	-	-	92	190
Virginia	905	33,635	108	7,835	330	5,930	140	2,594	3	99	187	3,237
Washington	12,862	1,806,782	405	207,498	2,924	570,636	-	-	-	-	2,924	570,636
West Virginia	100	801	1	(D)	23	162	-	-	-	-	23	162
Wisconsin	1,414	391,763	230	85,470	210	15,169	-	-	-	-	210	15,169
Wyoming	4,822	1,415,037	128	67,961	1,152	261,378	-	-	-	-	1,152	261,378
Water Resources Areas												
WRA 01 New England	1,917	38,410	-	-	466	2,501	18	1,478	-	-	448	1,023
WRA 02 Mid-Atlantic	4,142	233,602	299	57,478	1,193	19,068	14	81	3	99	1,176	18,888
WRA 03 South Atlantic-Gulf	15,567	2,410,814	340	70,563	3,462	932,054	599	30,625	426	197,809	2,437	703,620
WRA 04 Great Lakes	3,694	611,881	686	246,482	404	33,060	-	-	-	-	404	33,060
WRA 05 Ohio	2,928	220,290	534	171,843	1,113	(D)	451	5,453	-	-	662	(D)
WRA 06 Tennessee	891	31,065	27	3,754	272	16,379	78	1,214	26	13,909	168	1,256
WRA 07 Upper Mississippi	4,359	1,145,841	1,987	700,344	379	26,139	-	-	-	-	379	26,139
WRA 08 Lower Mississippi	7,817	6,199,006	5,022	4,393,767	1,849	1,720,057	44	914	1,562	1,670,297	243	48,846
WRA 09 Souris-Red-Rainy	491	183,590	304	102,140	10	4,218	-	-	-	-	10	4,218
WRA 10 Missouri	34,813	12,922,399	14,804	7,538,522	5,067	1,158,658	-	-	-	-	5,067	1,158,658
WRA 11 Arkansas-White-Red	10,805	5,285,088	4,682	3,157,177	2,051	869,085	-	-	479	328,453	1,572	540,632
WRA 12 Texas-Gulf	12,439	3,284,293	1,661	682,786	4,705	1,958,395	-	-	2,312	1,356,487	2,393	601,908
WRA 13 Rio Grande	6,844	799,492	73	38,353	2,003	344,301	-	-	127	46,907	1,876	297,394
WRA 14 Upper Colorado	9,068	1,366,203	243	45,636	2,621	261,640	-	-	-	-	2,621	261,640
WRA 15 Lower Colorado	3,393	897,445	127	58,928	815	544,316	-	-	281	228,049	534	316,267
WRA 16 Great Basin	9,821	1,516,775	858	91,989	3,532	477,526	-	-	-	-	3,532	477,526
WRA 17 Pacific Northwest	42,003	6,679,626	1,474	610,514	11,535	2,229,901	-	-	-	-	11,535	2,229,901
WRA 18 California	47,884	8,676,821	1,466	813,919	2,451	2,305,081	-	-	551	740,993	1,900	1,564,088
WRA 19 Alaska	73	2,252	4	80	28	1,171	-	-	-	-	28	1,171
WRA 20 Hawaii	1,214	78,538	3	350	304	(D)	-	-	-	-	304	(D)

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Table 33. **Irrigated Farms by North American Industrial Classification System: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Vegetable and melon farming (1112)		Fruit and tree nut farming (1113)		Beef cattle ranching and farming (112111)		Cattle feedlots (112112)		Dairy cattle and milk production (11212)		All other animal specialties (1122, 1123, 1124, 1125 1129)	
	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	11,899	4,588,132	64,649	4,791,916	36,884	7,675,987	5,387	1,451,473	5,548	1,389,185	16,777	941,493
1998 . .	15,822	4,614,014	57,116	4,541,787	41,637	7,722,967	3,344	1,137,057	6,146	1,391,158	14,261	781,027
2003 DATA												
Alabama	96	2,624	134	1,701	93	3,716	14	490	9	670	32	3,497
Alaska	24	724	4	20	-	-	-	-	2	(D)	7	11
Arizona	269	202,923	1,066	27,330	173	17,640	-	-	5	3,626	430	5,743
Arkansas	130	14,590	200	400	136	7,647	100	1,000	22	1,100	163	9,270
California	1,528	1,176,517	35,953	3,227,510	2,294	433,754	4	1,912	1,624	526,019	1,691	59,260
Colorado	285	153,259	311	8,872	3,140	747,100	504	147,413	53	36,366	953	55,599
Connecticut	79	738	48	518	-	-	-	-	-	-	11	29
Delaware	23	14,633	-	-	-	-	-	-	4	1,110	70	18,537
Florida	376	224,657	6,621	725,169	479	102,114	-	-	29	13,595	165	3,134
Georgia	276	99,996	921	75,339	237	12,510	-	-	137	29,157	60	20,876
Hawaii	335	4,170	500	23,100	29	2,281	-	-	2	(D)	25	(D)
Idaho	525	878,742	502	2,259	5,636	540,030	421	36,673	296	127,053	1,372	51,987
Illinois	107	30,844	66	997	-	-	15	3,233	-	-	39	5,877
Indiana	238	24,990	21	271	11	2,482	3	2,594	161	9,331	57	13,300
Iowa	89	1,736	35	285	17	1,049	17	3,600	11	234	72	7,621
Kansas	78	11,074	74	2,960	588	193,232	166	115,800	71	15,205	172	21,822
Kentucky	98	609	50	225	119	1,253	-	-	14	14	16	556
Louisiana	95	17,057	195	5,223	80	3,900	-	-	17	2,558	16	4,209
Maine	237	6,566	99	10,916	-	-	-	-	37	476	2	(D)
Maryland	199	17,921	10	510	-	-	-	-	12	1,876	67	5,990
Massachusetts	157	1,051	433	13,596	6	120	-	-	-	-	37	257
Michigan	468	133,239	812	27,986	2	(D)	40	6,816	68	18,142	201	26,444
Minnesota	242	81,524	232	3,149	51	5,406	69	20,135	213	41,074	85	25,200
Mississippi	-	-	333	333	2	(D)	-	-	-	-	17	11,644
Missouri	61	17,387	91	6,060	169	5,637	55	2,730	122	7,193	82	9,870
Montana	21	20,367	324	1,296	4,117	1,212,223	100	30,882	37	20,898	1,209	105,045
Nebraska	96	21,846	-	-	2,200	622,076	1,567	755,963	234	65,802	902	181,806
Nevada	3	8,990	40	40	892	361,776	44	16,110	51	6,773	81	11,772
New Hampshire	70	308	34	202	-	-	-	-	2	(D)	6	(D)
New Jersey	377	33,823	131	9,502	-	-	-	-	-	-	48	264
New Mexico	172	76,352	1,691	33,874	2,063	167,861	13	4,310	51	55,608	832	11,388
New York	540	33,335	264	7,413	10	105	-	-	64	2,926	8	480
North Carolina	310	13,810	465	10,208	6	1,308	-	-	17	238	580	39,851
North Dakota	47	56,692	-	-	120	21,539	5	2,062	18	2,974	2	(D)
Ohio	233	7,408	160	984	2	(D)	-	-	45	471	6	430
Oklahoma	71	8,520	55	55	552	142,511	73	5,580	9	7,378	176	4,148
Oregon	302	200,005	2,540	111,650	3,232	629,651	732	54,161	438	58,747	2,771	45,469
Pennsylvania	508	10,890	311	3,595	113	431	34	143	130	1,498	68	1,289
Rhode Island	19	305	13	284	-	-	-	-	-	-	-	-
South Carolina	274	10,892	48	5,209	15	510	-	-	23	3,956	278	5,301
South Dakota	23	138	23	690	450	89,446	105	37,538	25	6,745	174	26,741
Tennessee	133	6,462	39	177	78	1,981	-	-	10	749	41	1,745
Texas	1,374	238,172	3,158	67,345	2,375	802,018	118	58,737	154	44,446	547	26,690
Utah	259	19,381	77	3,876	2,888	498,170	655	52,799	438	135,911	2,077	36,920
Vermont	55	304	45	319	-	-	-	-	12	(D)	-	-
Virginia	221	15,364	86	813	133	1,282	9	540	15	1,121	3	750
Washington	407	461,993	6,045	345,233	1,651	98,992	446	23,856	611	92,957	373	5,617
West Virginia	34	(D)	29	247	5	5	-	-	-	-	2	(D)
Wisconsin	333	223,833	360	24,175	26	1,936	15	3,782	182	35,105	41	2,276
Wyoming	2	(D)	-	-	2,694	940,595	63	62,614	73	9,573	710	71,676
Water Resources Areas												
WRA 01 New England	593	9,171	642	25,599	6	120	-	-	51	548	56	332
WRA 02 Mid-Atlantic	1,315	102,177	797	20,755	95	(D)	43	683	128	5,572	266	27,360
WRA 03 South Atlantic-Gulf	1,063	348,553	8,491	817,191	891	122,276	7	140	198	47,378	1,115	72,659
WRA 04 Great Lakes	1,083	226,540	980	31,137	9	1,270	43	9,260	239	33,108	233	31,007
WRA 05 Ohio	627	22,670	177	1,234	258	2,181	-	-	159	2,887	60	10,835
WRA 06 Tennessee	445	(D)	52	927	44	(D)	7	350	24	888	1	(D)
WRA 07 Upper Mississippi	628	253,560	588	28,058	70	7,807	101	28,123	363	67,494	243	34,316
WRA 08 Lower Mississippi	238	43,574	161	3,462	256	10,328	101	1,380	17	2,558	173	23,880
WRA 09 Souris-Red-Rainy	42	54,265	45	270	36	4,607	7	3,142	38	7,446	9	7,502
WRA 10 Missouri	245	84,113	378	8,377	9,073	2,625,573	2,148	1,029,458	420	111,981	2,678	365,717
WRA 11 Arkansas-White-Red	229	68,555	329	2,905	2,743	1,011,248	224	123,252	138	33,534	409	19,332
WRA 12 Texas-Gulf	1,370	216,820	2,377	49,138	1,510	249,446	97	34,033	172	66,985	547	26,690
WRA 13 Rio Grande	354	189,604	2,423	50,366	1,449	136,834	5	600	49	31,659	488	7,775
WRA 14 Upper Colorado	2	(D)	109	8,468	3,984	894,081	341	48,325	109	31,803	1,659	76,238
WRA 15 Lower Colorado	350	209,855	1,115	29,045	383	34,374	159	9,958	7	4,806	437	6,163
WRA 16 Great Basin	186	23,919	117	3,916	2,699	704,015	501	46,167	446	128,014	1,482	41,229
WRA 17 Pacific Northwest	1,100	1,534,346	9,043	449,398	10,837	1,345,874	1,462	102,981	1,355	279,341	5,197	127,271
WRA 18 California	1,670	1,189,555	36,321	3,238,550	2,512	521,350	141	13,621	1,631	532,745	1,692	62,000
WRA 19 Alaska	24	724	4	20	-	-	-	-	2	(D)	7	11
WRA 20 Hawaii	335	4,170	500	23,100	29	2,281	-	-	2	(D)	25	(D)

Table 34. **Irrigated Farm Statistics by Market Value of Agricultural Products Sold: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	All farms									
	Farms with irrigation				Acres irrigated by			Quantity of water applied		
	Farms	Total acres	Irrigated acres	Irrigated cropland harvested (acres)	Ground-water	Surface water		Ground-water (acre-feet)	Surface water	
						On-farm	Off-farm		On-farm (acre-feet)	Off-farm (acre-feet)
U.S. TOTAL . . . . . 2003 . .	220,163	196,515,390	52,583,431	48,626,955	32,342,820	7,277,527	13,867,438	43,473,979	11,781,586	31,638,466
1998 . .	223,932	194,529,190	54,249,965	50,138,419	32,222,665	7,402,653	16,408,547	(NA)	(NA)	(NA)
2003 DATA										
Alabama	578	315,083	52,722	51,432	24,451	26,994	1,333	21,527	13,364	739
Alaska	73	13,717	2,252	2,236	2,128	113	11	1,103	(D)	(D)
Arizona	2,777	1,354,975	836,587	812,826	291,025	72,213	516,422	1,157,996	261,044	2,332,795
Arkansas	4,834	5,703,693	3,944,867	3,937,008	3,421,365	509,914	26,793	3,520,455	699,967	45,886
California	46,841	15,714,032	8,471,936	7,902,973	3,823,115	1,045,025	4,166,854	9,659,306	2,998,094	12,189,829
Colorado	11,567	11,546,709	2,562,329	2,192,822	1,095,601	694,262	810,713	1,543,516	1,076,371	1,365,054
Connecticut	234	13,580	2,213	2,193	290	1,523	409	154	642	127
Delaware	213	192,493	69,088	69,062	64,840	4,803	375	25,590	1,733	490
Florida	8,335	3,976,525	1,497,653	1,404,118	772,907	418,190	319,598	894,452	661,443	295,428
Georgia	2,847	2,078,620	710,893	701,047	518,239	194,926	56	235,945	77,580	6
Hawaii	1,214	308,611	78,538	45,922	33,938	17,036	50,999	127,489	69,533	113,313
Idaho	14,303	6,336,063	3,126,857	2,746,630	1,202,870	352,666	1,609,148	2,106,694	597,043	3,360,210
Illinois	1,195	1,248,453	374,919	374,891	360,740	12,905	1,274	229,748	5,753	1,295
Indiana	1,193	1,103,897	276,294	276,252	227,750	48,533	129	109,364	(D)	(D)
Iowa	709	576,988	134,164	133,679	127,128	4,909	2,147	59,151	2,370	1,147
Kansas	4,878	9,570,633	2,543,950	2,527,401	2,430,557	75,062	60,901	3,027,608	61,236	56,658
Kentucky	943	298,298	20,685	20,685	10,264	10,386	280	5,253	4,082	130
Louisiana	2,280	2,374,244	838,717	830,986	633,455	186,544	23,596	636,023	247,414	42,111
Maine	507	192,712	18,163	17,973	1,480	15,278	1,405	1,428	9,312	354
Maryland	509	187,682	53,734	53,224	40,131	13,124	891	15,394	5,509	318
Massachusetts	842	74,178	16,151	15,748	1,289	13,972	954	8,539	77,400	3,948
Michigan	2,366	1,220,101	432,665	431,205	286,450	140,338	6,533	151,684	64,174	2,386
Minnesota	1,639	1,153,741	434,500	432,883	400,925	23,335	10,240	257,164	22,766	13,731
Mississippi	1,567	2,180,689	1,169,793	1,169,387	1,115,676	46,834	9,213	898,301	50,862	7,907
Missouri	1,966	2,289,921	1,020,728	1,019,406	961,231	55,341	4,156	657,685	23,807	3,370
Montana	8,625	23,046,094	2,131,955	1,672,882	96,469	724,542	1,313,763	130,799	837,206	1,855,914
Nebraska	16,278	22,574,776	7,516,171	7,429,626	6,974,942	121,860	443,354	7,851,007	111,166	488,295
Nevada	1,722	4,088,606	639,310	487,343	259,721	241,713	145,684	750,837	473,601	366,463
New Hampshire	161	14,552	818	818	162	592	64	120	397	25
New Jersey	807	126,649	46,679	46,473	26,487	21,219	289	19,053	16,064	112
New Mexico	6,741	8,556,784	769,787	629,994	502,021	89,790	206,658	1,160,773	165,378	492,319
New York	1,284	275,475	48,545	48,167	12,289	33,598	2,712	4,466	12,223	1,326
North Carolina	2,281	698,205	101,055	90,574	14,559	85,237	3,109	6,916	47,070	1,020
North Dakota	541	1,477,038	207,772	205,455	152,714	25,381	30,400	131,043	26,058	46,896
Ohio	670	97,788	14,476	14,082	6,995	5,126	2,355	8,070	6,579	1,234
Oklahoma	1,819	3,081,687	508,842	457,972	413,067	62,572	36,513	507,329	60,377	40,668
Oregon	14,205	9,913,275	1,731,660	1,303,030	421,642	629,850	720,621	718,210	1,117,533	1,450,562
Pennsylvania	1,589	276,614	19,633	19,234	5,230	13,103	1,594	2,897	5,224	443
Rhode Island	58	4,862	648	648	52	567	29	29	538	25
South Carolina	951	300,910	52,046	51,213	31,157	22,017	232	18,041	12,244	47
South Dakota	1,444	3,268,827	390,406	385,045	233,600	39,400	117,406	200,251	41,043	740,110
Tennessee	759	298,741	34,429	32,413	25,636	9,119	574	11,501	5,084	565
Texas	15,441	20,465,276	4,947,745	4,607,667	4,174,840	184,173	588,932	4,822,676	215,423	916,727
Utah	10,070	6,285,621	1,082,213	798,597	191,842	104,527	790,434	487,234	207,090	1,604,167
Vermont	204	15,975	825	825	208	509	108	118	358	34
Virginia	905	357,982	33,635	32,865	6,619	28,077	496	2,802	9,944	141
Washington	12,862	5,024,117	1,806,782	1,706,758	484,392	292,208	1,041,882	866,461	573,999	2,464,111
West Virginia	100	10,163	801	801	247	532	22	132	733	10
Wisconsin	1,414	1,044,557	391,763	390,671	345,408	45,436	1,279	261,743	94,408	412
Wyoming	4,822	15,185,178	1,415,037	1,041,813	114,676	512,153	794,498	159,899	687,264	1,329,559
Water Resources Areas										
WRA 01 New England	1,917	309,246	38,410	37,797	3,399	32,176	2,908	10,337	88,410	4,493
WRA 02 Mid-Atlantic	4,142	996,233	233,602	231,466	151,669	82,329	3,459	68,819	41,103	1,624
WRA 03 South Atlantic-Gulf	15,567	7,472,460	2,410,814	2,294,818	1,357,881	748,216	324,005	1,171,668	816,011	296,934
WRA 04 Great Lakes	3,694	1,797,625	611,881	610,383	413,750	188,774	10,013	224,075	84,250	3,974
WRA 05 Ohio	2,928	1,393,401	220,290	219,491	188,038	29,789	2,561	99,586	15,361	1,180
WRA 06 Tennessee	891	217,167	31,065	29,386	9,168	21,781	570	6,715	(D)	(D)
WRA 07 Upper Mississippi	4,359	3,655,167	1,145,841	1,142,613	1,033,198	105,710	7,313	688,137	124,601	4,078
WRA 08 Lower Mississippi	7,817	10,792,231	6,199,006	6,185,482	5,544,318	621,741	46,962	5,094,989	837,531	74,874
WRA 09 Souris-Red-Rainy	491	750,834	183,590	182,464	155,776	17,335	11,069	113,026	17,871	15,616
WRA 10 Missouri	34,813	71,088,623	12,922,399	12,160,515	8,903,020	1,484,303	2,585,699	10,151,649	1,988,049	4,513,369
WRA 11 Arkansas-White-Red	10,805	20,648,533	5,285,088	5,015,326	4,671,455	328,802	322,138	5,738,771	380,861	458,300
WRA 12 Texas-Gulf	12,439	10,550,868	3,284,293	3,063,179	2,584,161	181,152	519,180	2,882,905	217,589	786,869
WRA 13 Rio Grande	6,844	8,060,807	799,492	683,474	570,192	117,573	155,334	1,288,023	197,058	334,361
WRA 14 Upper Colorado	9,068	9,265,206	1,366,203	900,455	13,559	448,173	904,621	18,902	534,629	1,492,449
WRA 15 Lower Colorado	3,393	2,061,452	897,445	854,596	323,513	87,173	531,096	1,245,145	295,287	2,391,764
WRA 16 Great Basin	9,821	9,311,710	1,516,775	1,196,457	450,163	319,763	760,981	1,198,054	611,061	1,600,791
WRA 17 Pacific Northwest	42,003	21,738,781	6,679,626	5,760,754	2,068,529	1,344,057	3,354,776	3,580,862	2,319,846	7,155,378
WRA 18 California	47,884	16,082,718	8,676,821	8,010,141	3,864,965	1,101,531	4,273,743	9,763,722	3,129,579	12,388,681
WRA 19 Alaska	73	13,717	2,252	2,236	2,128	113	11	1,103	(D)	(D)
WRA 20 Hawaii	1,214	308,611	78,538	45,922	33,938	17,036	50,999	127,489	69,533	113,313

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Table 34. **Irrigated Farm Statistics by Market Value of Agricultural Products Sold: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms with less than $25,000 in total agricultural products sold									
	Farms with irrigation				Acres irrigated by			Quantity of water applied		
	Farms	Total acres	Irrigated acres	Irrigated cropland harvested (acres)	Ground-water	Surface water		Ground-water (acre-feet)	Surface water	
						On-farm	Off-farm		On-farm (acre-feet)	Off-farm (acre-feet)
U.S. TOTAL . . . . . 2003 . .	105,143	15,136,008	2,677,440	1,738,967	645,010	676,919	1,365,456	848,775	853,933	2,432,992
1998 . .	98,129	(NA)	3,763,633	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA										
Alabama	313	23,587	2,650	2,480	1,383	1,193	(D)	708	498	(D)
Alaska	55	3,072	294	286	200	(D)	11	104	793	(D)
Arizona	1,777	141,648	24,211	13,851	7,071	1,444	15,696	20,111	4,318	65,327
Arkansas	666	94,847	27,439	26,054	23,499	3,940	-	17,896	1,774	-
California	22,859	1,145,679	385,368	247,989	174,633	31,650	182,515	359,373	96,329	509,624
Colorado	6,913	2,002,239	298,099	220,282	21,400	108,508	168,191	33,808	104,651	286,818
Connecticut	157	2,582	230	230	(D)	(D)	(D)	(D)	(D)	(D)
Delaware	30	305	180	180	80	(D)	-	24	80	-
Florida	5,477	365,876	66,429	55,200	59,008	5,761	1,660	56,163	2,221	1,826
Georgia	997	77,580	13,566	13,152	7,245	6,265	56	1,819	1,738	6
Hawaii	885	19,544	3,089	2,124	292	617	2,205	605	451	(D)
Idaho	9,245	965,815	262,865	134,673	43,472	55,428	165,330	48,821	87,537	293,887
Illinois	228	32,447	3,845	3,845	3,351	424	70	1,718	565	13
Indiana	153	12,316	2,282	2,282	1,353	910	(D)	715	(D)	2
Iowa	189	13,632	3,077	2,797	1,657	490	930	716	191	612
Kansas	434	270,854	14,908	14,908	14,834	-	74	19,770	-	7
Kentucky	365	28,544	1,618	1,618	(D)	1,351	161	51	682	94
Louisiana	466	39,586	13,266	12,756	9,211	3,017	1,710	9,085	2,112	817
Maine	375	32,337	1,290	1,204	(D)	458	62	(D)	85	62
Maryland	220	12,520	1,867	1,507	814	902	(D)	222	300	173
Massachusetts	456	17,775	1,482	1,362	158	1,032	292	(D)	3,375	(D)
Michigan	907	52,094	7,380	7,120	2,292	5,027	77	898	1,490	(D)
Minnesota	408	56,405	12,664	12,612	9,781	2,340	543	5,603	937	158
Mississippi	670	45,784	6,699	6,699	2,333	4,366	-	233	5,199	-
Missouri	295	43,543	6,055	5,800	3,424	2,631	-	3,261	1,400	-
Montana	4,547	1,095,576	229,569	143,657	14,452	96,816	118,301	10,040	103,971	119,911
Nebraska	1,081	194,500	62,168	62,077	33,281	3,640	25,247	31,807	1,092	29,040
Nevada	947	92,714	32,358	21,643	5,650	16,028	10,680	20,079	42,239	(D)
New Hampshire	110	5,913	290	290	135	(D)	(D)	100	96	(D)
New Jersey	404	14,342	1,582	1,534	572	866	144	288	683	14
New Mexico	5,497	3,620,825	128,819	78,633	42,190	28,636	59,289	68,328	41,066	116,032
New York	631	12,013	1,778	1,778	654	962	216	259	458	65
North Carolina	787	60,307	5,384	3,819	1,686	3,141	557	714	1,930	405
North Dakota	43	42,522	1,776	1,776	622	162	992	581	132	(D)
Ohio	388	19,385	1,235	965	879	(D)	(D)	953	147	57
Oklahoma	485	132,764	26,062	22,162	18,229	7,833	-	15,038	6,078	-
Oregon	8,977	554,179	222,684	98,238	18,599	72,497	131,588	12,539	119,300	189,260
Pennsylvania	727	36,828	1,969	1,906	906	866	197	450	830	(D)
Rhode Island	30	1,386	75	75	32	(D)	8	27	(D)	4
South Carolina	756	96,013	5,675	4,862	3,694	1,981	-	2,605	1,315	-
South Dakota	216	54,202	14,018	12,540	408	5,234	8,376	273	5,640	7,536
Tennessee	495	37,896	1,921	1,505	679	1,003	239	(D)	855	72
Texas	6,565	834,883	153,863	88,693	73,052	35,794	45,017	56,039	19,133	52,775
Utah	7,645	1,626,344	271,438	175,163	15,035	27,323	231,950	27,788	45,828	396,489
Vermont	143	6,688	333	333	171	(D)	52	97	58	10
Virginia	499	36,706	2,000	1,230	1,097	903	-	798	369	-
Washington	6,622	229,525	109,615	74,778	16,549	27,781	65,285	12,508	36,538	158,086
West Virginia	72	4,420	220	220	(D)	116	22	(D)	(D)	10
Wisconsin	398	58,313	8,922	8,700	7,096	1,725	(D)	4,475	755	(D)
Wyoming	2,538	767,153	232,833	141,379	780	105,122	126,931	156	108,442	170,521
Water Resources Areas										
WRA 01 New England	1,202	63,174	3,504	3,298	1,297	1,771	445	782	3,650	(D)
WRA 02 Mid-Atlantic	1,998	83,500	8,055	6,904	4,144	3,476	(D)	2,091	2,157	230
WRA 03 South Atlantic-Gulf	8,998	665,035	98,750	84,539	73,246	23,171	2,333	62,089	13,129	2,259
WRA 04 Great Lakes	1,304	75,113	11,265	11,005	4,461	6,529	291	2,289	2,123	133
WRA 05 Ohio	1,449	116,141	6,777	6,147	3,207	2,923	647	2,294	1,859	195
WRA 06 Tennessee	405	23,472	1,116	1,046	390	666	(D)	(D)	471	(D)
WRA 07 Upper Mississippi	901	110,927	19,769	19,521	15,886	2,326	1,557	9,187	777	791
WRA 08 Lower Mississippi	774	106,753	34,336	33,265	30,260	3,110	1,638	19,433	2,131	821
WRA 09 Souris-Red-Rainy	91	20,128	4,230	4,204	2,712	(D)	-	1,216	877	-
WRA 10 Missouri	8,345	2,106,295	462,975	342,166	59,604	152,181	251,190	68,875	164,206	320,635
WRA 11 Arkansas-White-Red	3,137	1,556,739	169,624	117,444	78,902	40,053	50,669	68,082	44,765	66,631
WRA 12 Texas-Gulf	5,356	595,848	129,693	84,213	59,409	35,794	34,490	57,748	19,133	(D)
WRA 13 Rio Grande	5,296	795,839	71,199	53,260	16,195	13,645	42,655	42,617	17,916	79,699
WRA 14 Upper Colorado	6,518	3,898,646	320,443	194,021	1,925	114,923	203,745	(D)	97,106	333,936
WRA 15 Lower Colorado	2,226	628,721	44,616	19,450	11,036	10,934	22,646	24,076	23,888	79,915
WRA 16 Great Basin	7,224	1,293,419	244,892	174,348	20,331	43,866	183,415	48,539	79,726	338,201
WRA 17 Pacific Northwest	25,503	1,783,065	624,259	328,238	86,880	184,683	354,061	75,353	274,947	624,687
WRA 18 California	23,476	1,190,577	418,554	253,488	174,633	34,650	212,701	359,373	103,829	541,596
WRA 19 Alaska	55	3,072	294	286	200	(D)	11	104	793	(D)
WRA 20 Hawaii	885	19,544	3,089	2,124	292	617	2,205	605	451	(D)

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Table 34. **Irrigated Farm Statistics by Market Value of Agricultural Products Sold: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms with $25,000 to $49,999 in total agricultural products sold									
	Farms with irrigation				Acres irrigated by			Quantity of water applied		
	Farms	Total acres	Irrigated acres	Irrigated cropland harvested (acres)	Ground-water	Surface water		Ground-water (acre-feet)	Surface water	
						On-farm	Off-farm		On-farm (acre-feet)	Off-farm (acre-feet)
U.S. TOTAL . . . . . 2003 . .	21,107	12,198,797	1,990,073	1,627,101	728,112	398,817	866,458	828,463	529,960	2,219,725
1998 . .	20,421	(NA)	2,054,289	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA										
Alabama	71	17,364	2,035	1,705	416	1,462	157	394	869	46
Alaska	9	(D)	308	300	278	(D)	-	(D)	(D)	-
Arizona	266	58,281	18,387	15,094	4,692	6,000	7,695	10,894	18,000	35,735
Arkansas	255	72,396	37,854	37,854	30,709	7,145	-	24,075	10,390	-
California	4,572	239,492	148,581	145,085	71,117	14,628	62,836	121,250	29,880	197,172
Colorado	1,292	1,260,615	229,395	179,493	26,991	71,987	130,417	36,647	94,145	182,950
Connecticut	28	871	264	264	70	194	-	21	94	-
Delaware	14	3,961	1,038	1,038	1,038	-	-	128	-	-
Florida	581	342,991	28,774	22,264	21,504	3,868	3,402	17,011	2,729	2,024
Georgia	220	82,659	13,221	12,816	9,372	3,849	-	3,740	1,419	-
Hawaii	136	(D)	581	553	-	97	484	-	97	614
Idaho	1,536	363,111	230,231	173,439	37,216	39,711	154,004	42,137	53,979	315,737
Illinois	79	16,765	5,321	5,321	4,672	623	26	2,803	260	47
Indiana	71	35,913	4,615	4,615	2,936	1,679	-	1,487	881	-
Iowa	58	16,181	3,960	3,960	3,690	-	270	1,885	-	(D)
Kansas	394	237,197	50,047	50,047	47,773	1,650	2,274	49,399	7,871	551
Kentucky	217	48,531	1,393	1,393	(D)	1,302	14	61	540	3
Louisiana	362	111,608	34,137	32,247	17,064	12,025	5,048	15,904	14,395	8,520
Maine	41	7,419	375	375	-	375	-	-	848	-
Maryland	68	(D)	2,175	2,175	1,475	700	-	248	608	-
Massachusetts	157	7,982	1,982	1,790	407	1,529	110	3,095	4,682	935
Michigan	240	40,127	7,417	7,417	5,061	1,696	(D)	2,251	974	330
Minnesota	208	52,130	15,241	15,241	13,417	1,192	(D)	9,110	460	560
Mississippi	12	9,132	2,400	2,400	1,400	(D)	-	280	(D)	-
Missouri	175	108,813	22,331	22,331	21,009	1,322	-	10,533	791	-
Montana	1,077	1,818,901	180,081	122,161	8,340	46,712	125,029	16,935	33,736	191,175
Nebraska	1,397	537,381	178,033	178,033	172,183	4,050	1,800	140,772	2,835	600
Nevada	206	228,754	46,361	30,069	12,320	12,210	22,731	31,268	21,655	75,315
New Hampshire	29	2,625	170	170	27	143	-	20	84	-
New Jersey	84	13,314	1,198	1,198	315	766	117	123	778	95
New Mexico	365	1,157,370	51,227	27,208	14,976	26,923	9,328	22,761	47,459	27,274
New York	240	19,312	2,028	2,028	1,266	702	60	358	438	26
North Carolina	378	41,076	3,520	3,520	-	3,520	-	-	1,863	-
North Dakota	43	83,694	4,235	4,187	2,564	1,127	544	1,750	1,261	448
Ohio	142	9,806	740	740	354	360	26	194	135	(D)
Oklahoma	191	336,199	24,805	17,030	20,235	3,085	(D)	50,684	2,237	2,228
Oregon	1,387	321,097	114,899	75,784	1,650	48,167	65,082	4,950	71,651	140,607
Pennsylvania	157	16,042	1,276	(D)	291	985	-	(D)	278	-
Rhode Island	21	474	(D)	(D)	20	56	21	2	73	21
South Carolina	24	4,572	702	702	216	486	-	108	99	-
South Dakota	127	159,852	25,323	23,838	6,557	3,410	15,356	3,206	4,669	618,345
Tennessee	62	5,901	532	532	-	532	-	-	174	-
Texas	1,150	1,440,768	169,327	154,475	131,047	14,460	23,820	142,452	19,290	18,838
Utah	903	751,309	122,622	81,330	13,519	12,750	96,353	29,934	13,598	166,578
Vermont	21	3,003	(D)	(D)	15	58	-	4	78	-
Virginia	113	63,633	2,492	2,492	737	1,755	-	182	1,068	-
Washington	1,221	362,568	63,673	57,325	11,471	26,216	25,986	21,592	43,027	78,669
West Virginia	14	(D)	98	(D)	(D)	(D)	-	(D)	(D)	-
Wisconsin	147	25,298	7,527	7,527	4,695	2,832	-	3,041	2,107	-
Wyoming	546	1,650,226	126,971	96,021	2,880	13,400	110,691	4,560	16,420	154,094
Water Resources Areas										
WRA 01 New England	292	22,324	2,921	2,729	539	2,315	131	3,141	5,818	956
WRA 02 Mid-Atlantic	522	100,106	8,635	8,605	5,010	3,508	117	1,020	2,640	(D)
WRA 03 South Atlantic-Gulf	1,076	500,265	48,705	41,460	31,448	13,705	3,552	20,952	7,517	2,069
WRA 04 Great Lakes	473	66,541	11,758	11,758	6,163	4,862	733	2,974	2,279	357
WRA 05 Ohio	392	71,611	4,597	4,597	2,247	2,323	27	1,194	1,104	(D)
WRA 06 Tennessee	268	(D)	1,771	1,771	81	1,683	7	(D)	(D)	1
WRA 07 Upper Mississippi	392	97,739	27,799	27,799	24,305	3,054	440	14,730	2,160	(D)
WRA 08 Lower Mississippi	576	193,609	73,928	72,038	54,255	14,625	5,048	41,228	15,695	8,520
WRA 09 Souris-Red-Rainy	68	47,430	3,412	3,412	2,662	(D)	488	2,066	235	488
WRA 10 Missouri	3,503	4,527,732	544,026	468,963	221,639	102,096	221,941	197,099	115,346	951,866
WRA 11 Arkansas-White-Red	902	1,711,011	120,400	106,125	99,900	18,387	2,113	131,293	24,229	3,928
WRA 12 Texas-Gulf	974	380,906	138,365	133,763	105,085	14,460	18,820	99,043	19,290	15,338
WRA 13 Rio Grande	437	923,933	64,058	36,514	19,887	26,233	17,938	46,062	46,079	35,244
WRA 14 Upper Colorado	1,203	1,349,681	225,586	149,518	-	39,475	186,111	-	(D)	254,302
WRA 15 Lower Colorado	302	208,573	21,259	15,994	4,692	6,900	9,667	10,894	18,525	37,707
WRA 16 Great Basin	816	666,515	124,549	88,513	25,839	16,080	83,530	61,202	23,563	178,150
WRA 17 Pacific Northwest	4,137	1,052,280	407,584	302,474	52,965	109,534	245,785	73,935	162,897	515,883
WRA 18 California	4,629	265,056	159,831	150,215	71,117	19,188	69,526	121,250	35,640	213,897
WRA 19 Alaska	9	(D)	308	300	278	(D)	-	(D)	(D)	-
WRA 20 Hawaii	136	(D)	581	553	-	97	484	-	97	614

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Table 34. **Irrigated Farm Statistics by Market Value of Agricultural Products Sold: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms with $50,000 to $99,999 in total agricultural products sold									
	Farms with irrigation				Acres irrigated by			Quantity of water applied		
	Farms	Total acres	Irrigated acres	Irrigated cropland harvested (acres)	Ground-water	Surface water		Ground-water (acre-feet)	Surface water	
						On-farm	Off-farm		On-farm (acre-feet)	Off-farm (acre-feet)
U.S. TOTAL . . . . . 2003 . .	23,971	18,345,703	3,830,085	3,328,972	1,984,571	692,142	1,182,759	2,300,079	1,025,298	2,016,531
1998 . .	27,412	(NA)	3,946,648	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA										
Alabama	49	16,200	2,601	2,429	1,071	1,524	6	618	606	1
Alaska	1	(D)	(D)	(D)	(D)	-	-	(D)	-	-
Arizona	98	85,295	17,513	15,393	6,444	3,458	8,343	17,317	17,444	34,558
Arkansas	703	268,485	164,631	162,611	147,012	17,619	-	121,500	10,493	-
California	4,854	1,222,286	319,502	268,517	123,774	41,440	155,188	320,575	132,475	454,546
Colorado	984	1,415,766	383,702	274,779	78,209	168,585	141,668	87,272	273,994	194,398
Connecticut	15	(D)	145	125	-	121	(D)	-	(D)	(D)
Delaware	31	10,357	3,779	3,779	3,619	(D)	-	889	(D)	-
Florida	783	88,066	51,244	45,824	40,905	9,359	980	39,032	7,001	784
Georgia	271	108,180	27,698	26,205	12,719	14,979	-	3,466	4,923	-
Hawaii	81	113,551	930	(D)	221	(D)	598	645	(D)	(D)
Idaho	830	958,681	195,758	169,704	36,789	34,109	128,360	78,077	86,655	257,192
Illinois	124	50,916	18,926	18,926	17,166	1,760	-	10,762	296	-
Indiana	287	57,886	14,698	14,698	12,369	2,329	-	3,810	1,221	-
Iowa	120	42,434	11,402	11,392	10,345	(D)	(D)	7,289	103	286
Kansas	729	1,079,605	122,372	122,372	99,826	19,288	9,940	108,750	19,224	7,385
Kentucky	144	27,515	1,782	1,782	865	819	98	506	200	32
Louisiana	228	152,277	56,412	56,032	33,735	20,065	2,612	39,367	34,216	6,424
Maine	12	2,971	439	435	(D)	335	(D)	(D)	241	(D)
Maryland	74	20,610	4,303	4,303	1,567	2,328	408	524	1,025	(D)
Massachusetts	69	9,792	1,473	1,473	(D)	1,448	-	(D)	6,774	-
Michigan	250	47,916	20,278	20,038	10,888	9,390	-	3,512	4,462	-
Minnesota	235	92,197	30,038	29,888	28,200	1,638	(D)	15,622	1,365	(D)
Mississippi	58	36,595	14,418	14,418	14,418	-	-	8,590	-	-
Missouri	213	109,742	41,541	41,541	40,341	440	(D)	27,317	132	(D)
Montana	1,205	3,432,147	363,707	281,181	10,369	114,197	239,141	9,994	128,263	383,179
Nebraska	2,964	1,605,354	623,832	613,228	586,944	12,700	25,934	603,192	11,638	18,732
Nevada	149	198,302	47,902	36,355	17,109	19,728	11,165	36,270	35,251	23,231
New Hampshire	8	3,434	(D)	(D)	-	(D)	(D)	-	98	(D)
New Jersey	48	12,105	3,700	3,700	1,868	2,172	-	827	818	-
New Mexico	265	522,696	49,347	42,711	42,194	5,140	3,157	73,355	10,950	6,733
New York	153	18,664	2,764	2,764	102	1,827	835	20	510	240
North Carolina	465	67,168	11,030	9,259	2,429	8,001	600	1,109	3,260	120
North Dakota	64	99,402	11,731	11,731	6,647	1,915	3,169	5,756	1,489	3,127
Ohio	46	5,428	(D)	859	(D)	800	(D)	(D)	292	(D)
Oklahoma	421	717,754	64,300	56,403	58,116	5,974	(D)	52,920	4,448	(D)
Oregon	1,344	1,031,041	147,908	121,287	49,816	49,937	52,484	88,444	72,535	110,642
Pennsylvania	306	53,260	3,072	3,006	1,208	2,083	(D)	512	728	8
Rhode Island	1	(D)	(D)	(D)	-	(D)	-	-	(D)	-
South Carolina	38	17,226	2,871	2,871	1,167	1,480	(D)	300	786	(D)
South Dakota	308	440,279	54,428	54,040	19,288	5,709	29,431	14,319	(D)	37,180
Tennessee	41	18,008	931	931	(D)	315	-	(D)	114	-
Texas	2,335	1,712,454	468,400	416,005	371,830	2,295	94,275	372,219	1,148	45,874
Utah	513	310,725	149,242	104,785	26,704	4,882	118,776	72,423	13,738	215,927
Vermont	9	904	(D)	(D)	-	(D)	26	-	(D)	7
Virginia	128	68,424	1,549	1,549	80	1,469	-	120	639	-
Washington	1,180	232,661	108,962	100,172	38,472	20,770	49,720	41,632	38,446	92,501
West Virginia	6	(D)	(D)	(D)	(D)	-	-	6	-	-
Wisconsin	123	30,751	8,502	8,502	6,838	1,664	-	3,781	850	-
Wyoming	608	1,727,546	198,724	149,424	21,657	77,298	103,539	26,548	91,699	121,326
Water Resources Areas										
WRA 01 New England	112	17,620	2,196	2,172	(D)	2,035	116	223	7,137	28
WRA 02 Mid-Atlantic	434	76,093	15,796	15,730	8,417	7,510	(D)	2,881	2,955	105
WRA 03 South Atlantic-Gulf	1,701	362,578	96,003	87,147	57,871	36,322	1,810	44,105	16,860	949
WRA 04 Great Lakes	528	92,777	27,969	27,729	15,351	11,733	885	5,365	5,191	290
WRA 05 Ohio	337	94,424	9,936	9,812	6,974	2,864	(D)	2,322	1,469	32
WRA 06 Tennessee	61	(D)	(D)	(D)	(D)	(D)	-	(D)	(D)	-
WRA 07 Upper Mississippi	569	165,107	58,711	58,561	53,855	4,656	(D)	30,349	1,934	(D)
WRA 08 Lower Mississippi	962	480,393	237,961	237,581	203,542	31,807	2,612	163,490	40,995	6,424
WRA 09 Souris-Red-Rainy	50	41,362	8,574	8,574	5,735	1,239	(D)	3,501	1,036	(D)
WRA 10 Missouri	5,589	7,997,299	1,250,159	1,171,226	728,050	186,786	345,599	746,609	307,094	515,885
WRA 11 Arkansas-White-Red	1,555	2,289,659	422,940	388,942	335,912	37,137	56,573	358,480	29,581	57,515
WRA 12 Texas-Gulf	1,897	1,153,362	310,526	263,560	215,756	2,295	92,475	199,551	1,148	41,374
WRA 13 Rio Grande	288	388,068	61,826	46,761	40,614	14,560	7,796	73,132	21,114	14,012
WRA 14 Upper Colorado	707	731,299	290,022	160,198	-	134,519	155,503	-	135,533	214,510
WRA 15 Lower Colorado	104	86,921	18,953	16,593	6,444	4,898	8,343	17,317	23,348	34,558
WRA 16 Great Basin	508	464,346	156,231	125,929	49,013	21,945	86,493	116,492	39,410	165,682
WRA 17 Pacific Northwest	3,473	2,545,815	527,936	430,627	129,597	148,781	257,387	209,171	255,969	483,810
WRA 18 California	5,014	1,237,154	331,621	275,105	125,983	42,340	164,198	325,651	133,915	478,595
WRA 19 Alaska	1	(D)	(D)	(D)	(D)	-	-	(D)	-	-
WRA 20 Hawaii	81	113,551	930	(D)	221	(D)	598	645	(D)	(D)

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Table 34. **Irrigated Farm Statistics by Market Value of Agricultural Products Sold: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms with $100,000 to $249,999 in total agricultural products sold									
	Farms with irrigation				Acres irrigated by			Quantity of water applied		
	Farms	Total acres	Irrigated acres	Irrigated cropland harvested (acres)	Ground-water	Surface water		Ground-water (acre-feet)	Surface water	
						On-farm	Off-farm		On-farm (acre-feet)	Off-farm (acre-feet)
U.S. TOTAL . . . . . 2003 . .	29,648	41,399,087	9,292,738	8,545,172	5,718,199	1,414,263	2,240,285	6,709,883	1,995,187	4,530,147
1998 . .	34,365	(NA)	10,064,300	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA										
Alabama	38	33,796	5,513	4,904	2,799	2,714	-	1,083	623	-
Alaska	6	5,176	760	760	760	-	-	517	-	-
Arizona	159	70,837	54,241	52,721	19,199	5,070	29,972	68,018	22,289	145,523
Arkansas	1,228	959,617	590,069	589,621	504,913	78,363	6,793	534,012	82,766	12,504
California	5,540	2,594,666	973,950	841,043	324,452	158,595	532,687	742,623	331,635	1,459,170
Colorado	961	1,686,642	513,425	460,908	211,987	147,049	160,555	276,461	225,160	251,892
Connecticut	13	2,880	(D)	(D)	(D)	(D)	-	(D)	(D)	-
Delaware	36	20,201	7,621	7,595	7,621	-	-	2,425	-	-
Florida	774	227,978	118,939	108,893	66,864	22,547	29,724	69,904	19,304	41,055
Georgia	412	367,079	90,063	86,639	55,549	35,024	-	23,027	12,148	-
Hawaii	71	6,755	3,022	1,154	(D)	(D)	2,336	(D)	350	(D)
Idaho	1,184	1,071,554	495,942	412,439	113,197	85,922	301,279	152,394	134,659	571,642
Illinois	277	190,905	69,733	69,723	67,816	1,825	(D)	43,577	976	(D)
Indiana	237	151,338	37,976	37,976	29,468	8,496	(D)	12,149	3,428	(D)
Iowa	110	76,159	23,783	23,783	22,093	1,690	-	10,554	794	-
Kansas	1,757	2,793,925	588,391	585,061	567,335	15,734	11,562	634,082	9,833	(D)
Kentucky	137	68,053	4,021	4,021	1,702	2,459	7	618	763	1
Louisiana	435	427,124	190,257	188,597	145,876	39,170	7,501	150,628	54,625	(D)
Maine	12	4,831	622	622	(D)	334	(D)	(D)	522	(D)
Maryland	50	25,993	8,168	8,018	6,942	1,286	-	3,428	772	-
Massachusetts	90	10,612	2,092	2,092	-	1,786	306	-	8,645	1,270
Michigan	342	131,330	44,003	44,003	25,664	17,575	764	12,266	8,682	404
Minnesota	337	166,707	69,879	69,879	64,406	3,753	1,720	38,091	2,931	601
Mississippi	108	133,707	51,570	51,570	48,496	(D)	(D)	42,981	(D)	(D)
Missouri	447	404,206	175,170	174,945	162,625	11,229	1,316	112,119	4,912	526
Montana	1,061	8,062,213	494,025	413,642	10,611	225,475	257,939	16,815	270,760	348,568
Nebraska	5,216	7,592,752	1,991,589	1,989,571	1,853,529	32,033	106,027	2,090,299	25,035	106,208
Nevada	181	487,827	128,424	93,212	35,760	61,465	33,739	101,451	119,194	76,169
New Hampshire	11	(D)	193	193	-	145	(D)	-	86	(D)
New Jersey	104	15,271	4,895	4,875	2,470	2,397	28	2,598	1,533	3
New Mexico	240	917,875	94,962	77,421	75,628	7,340	13,754	164,905	13,602	33,059
New York	61	17,724	3,512	3,152	962	2,465	85	205	613	9
North Carolina	236	101,370	14,092	10,052	1,880	12,212	-	324	5,986	-
North Dakota	157	453,068	42,380	41,237	24,916	8,591	9,006	26,366	9,279	10,391
Ohio	58	12,580	1,168	1,168	(D)	573	416	218	200	155
Oklahoma	432	705,358	128,044	110,658	106,061	16,393	5,950	122,253	14,127	4,215
Oregon	1,168	2,234,160	331,117	250,983	98,001	131,905	112,912	183,793	212,736	230,324
Pennsylvania	242	53,209	5,398	5,308	763	4,623	(D)	908	1,946	4
Rhode Island	2	(D)	(D)	(D)	-	(D)	-	-	(D)	-
South Carolina	52	35,558	6,644	6,624	2,926	3,748	-	2,245	1,723	-
South Dakota	340	582,579	88,402	88,192	57,647	7,197	23,558	41,581	(D)	29,738
Tennessee	77	41,138	3,231	3,231	(D)	2,574	27	(D)	1,171	5
Texas	2,357	4,226,184	1,015,217	950,937	859,635	42,039	113,743	828,876	63,013	217,211
Utah	586	883,142	192,951	154,021	24,953	35,117	133,481	65,535	82,587	291,096
Vermont	27	3,482	(D)	(D)	(D)	179	30	(D)	174	18
Virginia	85	66,209	4,186	4,186	1,136	3,262	496	418	1,442	141
Washington	1,408	595,198	228,911	215,090	55,022	20,515	153,374	81,052	18,824	315,186
West Virginia	5	1,095	373	373	33	(D)	-	17	(D)	-
Wisconsin	207	94,830	33,275	33,175	27,268	6,007	-	16,420	7,837	-
Wyoming	574	2,582,556	360,152	260,517	28,022	144,022	188,108	31,796	208,485	350,418
Water Resources Areas										
WRA 01 New England	142	20,491	3,142	3,142	97	2,469	576	(D)	9,325	1,359
WRA 02 Mid-Atlantic	528	155,266	30,944	30,343	19,002	11,634	398	9,456	5,995	(D)
WRA 03 South Atlantic-Gulf	1,520	798,337	235,526	217,387	130,726	76,346	29,898	96,937	39,636	41,142
WRA 04 Great Lakes	477	188,106	63,964	63,964	39,107	23,646	1,211	19,087	11,318	557
WRA 05 Ohio	327	200,133	27,578	27,533	21,864	5,641	171	10,296	1,724	56
WRA 06 Tennessee	59	19,807	3,520	3,520	(D)	(D)	27	(D)	1,425	5
WRA 07 Upper Mississippi	911	512,159	177,953	177,753	162,926	14,415	612	97,946	11,562	47
WRA 08 Lower Mississippi	1,800	1,558,621	837,232	835,124	717,529	108,254	13,886	700,922	119,749	(D)
WRA 09 Souris-Red-Rainy	81	104,316	23,365	22,765	17,421	3,538	2,406	11,645	3,634	1,706
WRA 10 Missouri	8,359	20,848,150	3,309,922	3,154,515	2,300,837	457,584	555,420	2,587,900	575,212	826,200
WRA 11 Arkansas-White-Red	2,390	3,659,058	1,015,319	953,506	899,244	63,634	59,041	961,088	65,586	66,937
WRA 12 Texas-Gulf	2,007	2,194,515	789,579	748,247	638,521	39,915	111,343	630,916	60,577	207,611
WRA 13 Rio Grande	341	2,038,763	121,626	113,510	95,935	14,800	15,031	183,495	32,904	(D)
WRA 14 Upper Colorado	378	1,167,180	230,319	154,711	(D)	76,182	153,707	125	131,442	271,039
WRA 15 Lower Colorado	256	86,933	66,325	62,769	27,605	8,200	30,520	91,844	30,533	154,113
WRA 16 Great Basin	650	1,218,356	285,929	232,944	54,043	84,497	150,529	143,994	169,923	307,985
WRA 17 Pacific Northwest	3,657	3,886,453	1,024,392	862,580	243,782	243,605	552,802	358,450	359,567	1,062,619
WRA 18 California	5,688	2,730,512	1,042,321	878,945	347,254	176,840	560,371	804,778	364,724	1,520,507
WRA 19 Alaska	6	5,176	760	760	760	-	-	517	-	-
WRA 20 Hawaii	71	6,755	3,022	1,154	(D)	(D)	2,336	(D)	350	(D)

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Table 34. **Irrigated Farm Statistics by Market Value of Agricultural Products Sold: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms with $250,000 to $499,999 in total agricultural products sold									
	Farms with irrigation				Acres irrigated by			Quantity of water applied		
	Farms	Total acres	Irrigated acres	Irrigated cropland harvested (acres)	Ground-water	Surface water		Ground-water (acre-feet)	Surface water	
						On-farm	Off-farm		On-farm (acre-feet)	Off-farm (acre-feet)
U.S. TOTAL . . . . . 2003 . .	18,698	32,647,611	9,505,819	9,049,801	6,693,073	1,034,959	1,871,525	8,322,415	1,597,591	4,202,984
1998 . .	21,696	(NA)	11,271,336	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA										
Alabama	52	56,160	7,454	7,454	2,902	3,932	620	2,263	2,445	278
Alaska	2	(D)	(D)	(D)	(D)	-	-	(D)	-	-
Arizona	149	176,505	86,268	86,148	40,717	8,915	43,069	174,620	25,352	159,247
Arkansas	961	1,275,553	942,826	940,320	805,698	136,708	5,850	865,766	190,039	10,500
California	2,815	1,450,582	904,545	818,257	367,297	142,805	441,403	959,983	434,041	1,300,031
Colorado	875	2,347,456	440,398	394,947	258,756	78,134	112,796	336,421	117,814	280,099
Connecticut	7	(D)	426	426	(D)	372	(D)	(D)	(D)	(D)
Delaware	42	43,631	16,479	16,479	15,142	1,177	(D)	6,421	(D)	(D)
Florida	190	124,743	63,244	58,568	47,659	10,221	5,364	53,196	10,183	7,896
Georgia	320	350,086	116,500	116,000	81,598	34,902	-	32,856	13,528	-
Hawaii	12	(D)	758	(D)	-	(D)	698	-	(D)	(D)
Idaho	668	556,963	319,765	305,559	141,265	33,654	150,104	222,395	40,280	349,039
Illinois	225	268,035	88,002	87,984	86,402	994	606	56,814	322	614
Indiana	221	260,392	65,122	65,102	51,938	13,184	-	23,924	5,180	-
Iowa	149	173,445	46,085	45,890	45,345	740	-	18,326	415	-
Kansas	827	2,061,399	641,932	641,532	606,178	18,242	18,288	801,748	10,806	19,222
Kentucky	43	28,774	2,498	2,498	953	1,545	-	381	755	-
Louisiana	343	482,946	173,698	172,160	131,285	42,949	(D)	142,474	56,445	(D)
Maine	11	6,592	1,167	1,167	-	1,005	(D)	-	221	(D)
Maryland	33	31,569	11,629	11,629	9,474	1,975	(D)	3,301	752	(D)
Massachusetts	47	10,077	3,276	3,276	651	2,565	(D)	(D)	12,740	(D)
Michigan	283	251,637	75,231	74,271	46,313	28,478	480	23,357	13,431	288
Minnesota	240	262,604	82,841	82,761	75,762	7,079	-	46,145	6,887	-
Mississippi	210	287,113	145,874	145,874	137,775	7,514	2,515	118,133	7,400	2,051
Missouri	463	581,098	244,221	243,751	221,906	21,315	(D)	149,661	7,924	(D)
Montana	494	3,179,937	432,690	371,811	36,108	82,589	313,993	45,313	122,334	432,341
Nebraska	3,167	4,429,929	1,901,596	1,898,824	1,802,644	18,059	80,893	2,023,041	17,898	106,651
Nevada	110	544,169	95,108	84,486	49,841	26,393	19,774	151,909	48,435	54,035
New Hampshire	2	(D)	(D)	(D)	-	(D)	-	-	(D)	-
New Jersey	62	12,511	7,069	7,001	4,074	2,995	-	2,103	2,821	-
New Mexico	159	547,451	96,198	86,392	83,850	5,380	9,692	201,486	13,286	22,620
New York	98	42,547	9,354	9,354	3,111	5,908	335	814	1,753	287
North Carolina	135	85,592	12,684	12,424	937	11,747	-	829	6,486	-
North Dakota	102	247,964	34,602	34,602	26,333	2,627	5,642	18,594	2,853	5,181
Ohio	14	8,790	(D)	660	(D)	(D)	-	(D)	243	-
Oklahoma	142	488,535	87,533	84,027	72,064	4,780	12,429	87,388	4,476	15,615
Oregon	595	1,923,913	280,231	225,081	76,440	85,841	125,243	131,645	139,383	275,012
Pennsylvania	109	62,993	2,971	2,821	1,062	1,769	140	372	387	71
Rhode Island	4	(D)	381	381	-	381	-	-	389	-
South Carolina	26	27,595	7,950	7,950	5,910	2,040	-	2,659	423	-
South Dakota	250	1,038,431	80,792	79,192	61,151	6,462	13,179	54,874	4,373	13,617
Tennessee	39	37,312	4,003	4,003	2,835	1,868	(D)	994	926	(D)
Texas	1,821	3,937,479	1,257,446	1,191,018	1,103,756	44,696	108,994	1,227,211	55,021	194,635
Utah	284	1,439,756	171,850	145,510	60,031	18,366	93,453	166,759	41,393	258,410
Vermont	4	1,898	(D)	(D)	(D)	(D)	-	(D)	(D)	-
Virginia	26	23,888	1,997	1,997	-	1,997	-	-	368	-
Washington	1,266	849,165	266,686	252,080	58,575	30,778	177,363	92,011	65,512	462,311
West Virginia	-	-	-	-	-	-	-	-	-	-
Wisconsin	247	185,334	54,374	53,694	46,109	8,225	(D)	31,787	24,044	(D)
Wyoming	354	2,436,247	218,755	173,292	22,540	72,955	125,780	39,499	87,272	227,306
Water Resources Areas										
WRA 01 New England	75	22,975	5,460	5,460	681	4,517	262	4,707	13,489	86
WRA 02 Mid-Atlantic	298	168,063	43,598	43,380	31,593	11,310	695	12,843	5,643	740
WRA 03 South Atlantic-Gulf	723	644,216	207,427	201,991	139,006	62,437	5,984	91,803	32,745	(D)
WRA 04 Great Lakes	413	342,848	102,577	101,597	66,690	35,387	540	29,752	15,339	300
WRA 05 Ohio	204	257,458	46,559	46,559	40,232	6,267	(D)	21,031	2,058	60
WRA 06 Tennessee	55	35,290	(D)	3,054	(D)	(D)	-	(D)	(D)	-
WRA 07 Upper Mississippi	799	811,905	241,040	239,857	208,809	31,585	646	132,783	37,887	630
WRA 08 Lower Mississippi	1,599	2,192,856	1,327,271	1,323,227	1,167,756	161,826	5,695	1,124,291	213,011	6,893
WRA 09 Souris-Red-Rainy	80	133,365	27,578	27,498	25,388	2,130	(D)	14,508	915	(D)
WRA 10 Missouri	5,356	13,121,685	3,079,415	2,972,853	2,308,798	199,882	573,255	2,610,237	267,912	911,704
WRA 11 Arkansas-White-Red	1,395	3,864,839	1,080,737	1,043,359	1,007,414	43,887	34,922	1,282,528	52,442	52,752
WRA 12 Texas-Gulf	1,410	2,668,824	950,058	902,570	800,930	44,696	104,432	920,237	55,021	187,242
WRA 13 Rio Grande	204	517,960	129,778	107,268	95,480	28,056	15,490	170,564	39,661	31,971
WRA 14 Upper Colorado	181	888,209	129,062	103,489	5,070	45,531	78,461	6,369	52,919	154,676
WRA 15 Lower Colorado	157	184,659	90,850	90,696	45,199	8,915	44,433	183,026	25,352	164,839
WRA 16 Great Basin	380	1,953,956	270,417	238,499	122,348	41,089	109,456	333,924	81,358	294,701
WRA 17 Pacific Northwest	2,515	3,330,341	837,915	761,412	253,151	158,724	437,045	413,184	259,234	1,059,116
WRA 18 California	2,840	1,503,755	931,825	836,094	373,560	145,834	459,391	970,310	441,508	1,328,005
WRA 19 Alaska	2	(D)	(D)	(D)	(D)	-	-	(D)	-	-
WRA 20 Hawaii	12	(D)	758	(D)	-	(D)	698	-	(D)	(D)

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Table 34. **Irrigated Farm Statistics by Market Value of Agricultural Products Sold: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms with $500,000 to $999,999 in total agricultural products sold									
	Farms with irrigation				Acres irrigated by			Quantity of water applied		
	Farms	Total acres	Irrigated acres	Irrigated cropland harvested (acres)	Ground-water	Surface water		Ground-water (acre-feet)	Surface water	
						On-farm	Off-farm		On-farm (acre-feet)	Off-farm (acre-feet)
U.S. TOTAL . . . . . 2003 . .	11,949	31,546,611	10,066,667	9,664,529	7,556,529	1,005,007	1,673,553	9,881,450	1,685,455	4,077,011
1998 . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA										
Alabama	34	78,294	13,758	13,749	4,250	9,088	(D)	5,173	4,420	(D)
Alaska	-	-	-	-	-	-	-	-	-	-
Arizona	137	175,541	135,363	133,565	49,924	8,073	89,740	188,787	24,863	407,007
Arkansas	715	1,688,802	1,219,316	1,218,316	1,062,808	144,858	14,150	1,131,840	207,291	22,882
California	2,678	2,759,494	1,405,892	1,337,719	803,767	119,338	583,203	1,976,067	488,437	1,749,095
Colorado	358	1,333,166	370,762	364,559	278,696	58,919	47,851	414,679	117,938	68,618
Connecticut	7	2,141	255	255	(D)	243	-	(D)	143	-
Delaware	43	68,336	24,308	24,308	23,108	1,915	(D)	10,378	(D)	(D)
Florida	209	295,057	126,274	120,738	97,653	9,450	19,171	103,021	13,300	26,244
Georgia	392	586,242	218,172	216,822	167,647	50,605	-	61,332	21,736	-
Hawaii	14	(D)	1,531	(D)	(D)	(D)	986	(D)	(D)	(D)
Idaho	424	811,480	449,022	422,061	219,218	40,207	198,585	433,198	86,489	412,669
Illinois	188	366,077	109,130	109,130	104,659	3,991	(D)	67,857	1,958	(D)
Indiana	142	258,803	80,649	80,627	66,681	13,968	-	32,080	5,930	-
Iowa	55	108,858	26,114	26,114	25,408	(D)	(D)	9,992	268	(D)
Kansas	487	1,868,834	594,193	590,613	583,445	7,656	4,232	747,104	5,868	2,083
Kentucky	24	27,664	3,089	3,089	2,463	724	-	1,902	219	-
Louisiana	275	633,646	218,480	216,727	176,410	41,375	(D)	167,082	45,682	(D)
Maine	48	47,771	2,585	2,485	70	1,616	899	7	481	160
Maryland	53	60,141	14,950	14,950	11,766	3,184	-	3,198	1,266	-
Massachusetts	15	7,130	1,546	1,546	(D)	1,532	-	(D)	7,139	-
Michigan	161	236,540	103,039	103,039	71,066	32,053	(D)	36,617	13,684	(D)
Minnesota	109	205,465	66,642	66,642	59,723	4,314	(D)	40,204	5,814	(D)
Mississippi	256	564,737	302,136	302,076	282,343	15,815	(D)	245,856	13,884	(D)
Missouri	256	515,989	293,262	293,262	282,198	11,064	-	187,857	5,194	-
Montana	169	2,713,891	250,303	195,083	2,740	96,052	151,511	9,384	98,738	214,863
Nebraska	1,648	4,502,914	1,801,383	1,752,814	1,725,441	41,952	33,990	1,969,393	41,145	44,027
Nevada	93	1,385,285	132,044	100,544	46,129	51,354	36,561	129,361	98,310	77,208
New Hampshire	-	-	-	-	-	-	-	-	-	-
New Jersey	62	26,778	11,280	11,280	6,854	5,402	-	3,957	3,369	-
New Mexico	99	325,844	104,184	98,517	95,462	5,854	10,404	213,661	12,759	28,118
New York	47	37,279	9,329	9,311	3,289	5,559	481	1,408	3,560	400
North Carolina	173	186,696	24,559	22,969	1,343	22,316	900	258	9,625	180
North Dakota	78	343,734	46,326	45,200	30,575	7,404	8,937	20,663	7,795	25,269
Ohio	5	8,960	(D)	1,788	588	-	(D)	204	-	(D)
Oklahoma	78	241,294	73,386	68,750	56,923	8,114	9,559	72,336	6,601	(D)
Oregon	474	1,722,174	235,828	183,870	78,569	83,884	86,305	130,398	165,082	203,073
Pennsylvania	28	30,689	2,523	2,523	419	1,044	1,060	(D)	497	202
Rhode Island	-	-	-	-	-	-	-	-	-	-
South Carolina	37	50,009	9,747	9,747	6,884	4,185	(D)	3,010	2,015	(D)
South Dakota	136	403,848	61,839	61,839	49,303	5,798	6,738	33,034	7,388	8,826
Tennessee	23	42,535	5,847	4,247	5,262	477	(D)	2,384	94	(D)
Texas	747	2,675,930	958,678	918,632	876,733	21,848	60,097	1,109,364	38,206	87,214
Utah	92	479,429	82,744	74,587	19,799	(D)	61,097	49,813	(D)	173,944
Vermont	-	-	-	-	-	-	-	-	-	-
Virginia	35	51,349	8,200	8,200	1,250	6,950	-	600	2,829	-
Washington	576	425,169	265,539	259,297	111,749	16,129	137,661	210,637	40,650	323,033
West Virginia	1	(D)	(D)	(D)	-	(D)	-	-	(D)	-
Wisconsin	150	206,147	55,390	55,300	49,008	5,642	740	38,280	12,147	98
Wyoming	118	2,983,876	145,254	116,080	14,864	32,164	98,226	18,743	57,396	177,718
Water Resources Areas										
WRA 01 New England	70	57,042	4,386	4,286	(D)	3,391	899	(D)	7,762	160
WRA 02 Mid-Atlantic	226	212,291	63,185	63,185	46,285	17,781	(D)	19,411	8,322	267
WRA 03 South Atlantic-Gulf	853	1,182,366	388,627	380,151	274,837	95,121	20,079	168,659	52,514	26,426
WRA 04 Great Lakes	229	316,020	135,091	135,073	93,191	41,379	1,121	49,882	19,781	488
WRA 05 Ohio	144	270,234	58,696	58,696	51,691	5,447	1,558	26,907	2,041	(D)
WRA 06 Tennessee	33	(D)	11,899	(D)	4,688	(D)	(D)	(D)	(D)	(D)
WRA 07 Upper Mississippi	477	864,816	235,548	235,436	214,339	19,869	1,340	141,536	18,057	698
WRA 08 Lower Mississippi	1,302	2,990,467	1,808,100	1,805,287	1,644,012	155,675	10,913	1,558,567	208,446	(D)
WRA 09 Souris-Red-Rainy	68	191,264	43,491	43,071	35,782	5,694	(D)	22,075	6,698	(D)
WRA 10 Missouri	2,418	11,582,842	2,600,442	2,475,463	2,134,539	184,922	288,181	2,454,420	207,070	463,898
WRA 11 Arkansas-White-Red	922	3,567,921	1,157,919	1,120,643	1,050,762	71,143	39,996	1,347,814	101,156	43,835
WRA 12 Texas-Gulf	509	1,759,157	622,704	608,409	542,408	19,381	60,915	653,625	32,731	92,493
WRA 13 Rio Grande	152	230,842	138,955	133,674	126,884	15,413	10,086	302,674	26,885	24,549
WRA 14 Upper Colorado	48	330,106	73,762	62,242	5,734	(D)	40,805	7,429	65,412	80,528
WRA 15 Lower Colorado	151	203,069	141,125	139,327	53,026	8,073	92,400	202,690	24,863	423,233
WRA 16 Great Basin	169	1,791,010	205,558	166,769	64,576	53,510	89,780	170,521	102,147	204,779
WRA 17 Pacific Northwest	1,460	3,106,841	936,444	858,205	401,876	139,899	416,279	755,046	269,621	918,772
WRA 18 California	2,704	2,814,416	1,439,204	1,362,791	811,787	133,668	594,165	1,995,507	526,982	1,773,169
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	14	(D)	1,531	(D)	(D)	(D)	986	(D)	(D)	(D)

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Table 34. **Irrigated Farm Statistics by Market Value of Agricultural Products Sold: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms with $1,000,000 or more in total agricultural products sold									
	Farms with irrigation				Acres irrigated by			Quantity of water applied		
	Farms	Total acres	Irrigated acres	Irrigated cropland harvested (acres)	Ground-water	Surface water		Ground-water (acre-feet)	Surface water	
						On-farm	Off-farm		On-farm (acre-feet)	Off-farm (acre-feet)
U.S. TOTAL . . . . . 2003 . .	9,647	45,241,573	15,220,609	14,672,413	9,017,326	2,055,420	4,667,402	14,582,914	4,094,164	12,159,076
1998 . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA										
Alabama	21	89,682	18,711	18,711	11,630	7,081	-	11,288	3,904	-
Alaska	-	-	-	-	-	-	-	-	-	-
Arizona	191	646,868	500,604	496,054	162,978	39,253	321,907	678,248	148,780	1,485,398
Arkansas	306	1,343,993	962,732	962,232	846,726	121,281	-	825,367	197,216	-
California	3,523	6,301,833	4,334,098	4,244,363	1,958,075	536,569	2,209,022	5,179,435	1,485,297	6,520,191
Colorado	184	1,500,825	326,548	297,854	219,562	61,080	49,235	358,228	142,669	100,278
Connecticut	7	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	80
Delaware	17	45,702	15,683	15,683	14,232	1,451	-	5,326	(D)	-
Florida	321	2,531,814	1,042,749	992,631	439,314	356,984	259,297	556,126	606,705	215,599
Georgia	235	506,794	231,673	229,413	184,109	49,302	-	109,704	22,088	-
Hawaii	15	163,849	68,627	39,132	33,103	15,242	43,692	126,205	67,241	(D)
Idaho	416	1,608,459	1,173,274	1,128,755	611,713	63,635	511,486	1,129,672	107,444	1,160,043
Illinois	74	323,308	79,962	79,962	76,674	3,288	-	46,217	1,377	-
Indiana	82	327,249	70,952	70,952	63,005	7,967	-	35,199	5,523	-
Iowa	28	146,279	19,743	19,743	18,590	(D)	-	10,389	600	-
Kansas	250	1,258,819	532,107	522,868	511,166	12,492	14,531	666,755	7,634	(D)
Kentucky	13	69,217	6,284	6,284	4,098	2,186	-	1,734	924	-
Louisiana	171	527,057	152,467	152,467	119,874	27,943	5,050	111,482	39,939	5,324
Maine	8	90,791	11,685	11,685	(D)	11,155	-	(D)	6,915	-
Maryland	11	(D)	10,642	10,642	8,093	2,749	-	4,473	788	-
Massachusetts	8	10,810	4,300	4,209	(D)	4,080	(D)	(D)	34,047	(D)
Michigan	183	460,457	175,317	175,317	125,166	46,119	4,032	72,784	21,451	1,299
Minnesota	102	318,233	157,195	155,860	149,636	3,019	4,540	102,389	4,372	(D)
Mississippi	253	1,103,621	646,696	646,350	628,911	15,665	2,120	482,228	21,062	1,436
Missouri	117	526,530	238,148	237,776	229,728	7,340	(D)	166,938	3,454	(D)
Montana	72	2,743,429	181,580	145,347	13,849	62,701	107,849	22,319	79,404	165,877
Nebraska	805	3,711,946	957,570	935,079	800,920	9,426	169,463	992,503	11,524	183,038
Nevada	36	1,151,555	157,113	121,034	92,912	54,535	11,034	280,500	108,518	(D)
New Hampshire	1	(D)	(D)	(D)	-	(D)	-	-	(D)	-
New Jersey	43	32,328	16,955	16,885	10,334	6,621	-	9,158	6,062	-
New Mexico	116	1,464,723	245,050	219,112	147,721	10,517	101,034	416,276	26,257	258,485
New York	54	127,936	19,780	19,780	2,905	16,175	700	1,402	4,891	300
North Carolina	107	155,996	29,786	28,531	6,284	24,300	1,052	3,682	17,921	315
North Dakota	54	206,654	66,722	66,722	61,057	3,555	2,110	57,333	3,251	(D)
Ohio	17	32,839	(D)	7,902	4,646	2,756	(D)	6,431	5,562	(D)
Oklahoma	70	459,783	104,712	98,942	81,439	16,393	6,880	106,711	22,409	7,925
Oregon	260	2,126,711	398,993	347,787	98,567	157,619	147,007	166,441	336,848	301,644
Pennsylvania	20	23,593	2,424	(D)	581	1,733	(D)	(D)	559	(D)
Rhode Island	-	-	-	-	-	-	-	-	-	-
South Carolina	18	69,937	18,457	18,457	10,360	8,097	-	7,114	5,882	-
South Dakota	67	589,636	65,604	65,404	39,246	5,590	20,768	52,965	(D)	24,869
Tennessee	22	115,951	17,964	17,964	15,614	2,350	-	6,775	1,751	-
Texas	466	5,637,578	924,814	887,907	758,787	23,041	142,986	1,086,514	19,613	300,181
Utah	47	794,916	91,366	63,201	31,801	(D)	55,324	74,982	(D)	101,723
Vermont	-	-	-	-	-	-	-	-	-	-
Virginia	19	47,773	13,211	13,211	2,319	11,741	-	684	3,228	-
Washington	589	2,329,831	763,396	748,016	192,554	150,019	432,493	407,028	331,004	1,034,326
West Virginia	2	(D)	(D)	(D)	(D)	-	-	(D)	-	-
Wisconsin	142	443,884	223,773	223,773	204,394	19,341	(D)	163,959	46,668	(D)
Wyoming	84	3,037,574	132,348	105,100	23,933	67,192	41,223	38,597	117,550	128,176
Water Resources Areas										
WRA 01 New England	24	105,620	16,801	16,710	(D)	15,678	479	(D)	41,229	(D)
WRA 02 Mid-Atlantic	136	200,914	63,389	63,319	37,218	27,110	(D)	21,117	13,392	(D)
WRA 03 South Atlantic-Gulf	696	3,319,663	1,335,776	1,282,143	650,747	441,114	260,349	687,123	653,610	(D)
WRA 04 Great Lakes	270	716,220	259,257	259,257	188,787	65,238	5,232	114,726	28,219	1,849
WRA 05 Ohio	75	383,400	66,147	66,147	61,823	4,324	-	35,541	5,105	-
WRA 06 Tennessee	10	47,305	8,360	8,360	(D)	(D)	-	(D)	(D)	-
WRA 07 Upper Mississippi	310	1,092,514	385,021	383,686	353,078	29,805	(D)	261,606	52,225	1,364
WRA 08 Lower Mississippi	804	3,269,532	1,880,178	1,878,960	1,726,964	146,444	7,170	1,487,059	237,503	6,760
WRA 09 Souris-Red-Rainy	53	212,969	72,940	72,940	66,076	2,954	(D)	58,017	4,477	(D)
WRA 10 Missouri	1,243	10,904,620	1,675,460	1,575,329	1,149,553	200,852	350,113	1,486,510	351,208	523,180
WRA 11 Arkansas-White-Red	504	3,999,306	1,318,149	1,285,307	1,199,321	54,561	78,824	1,589,485	63,102	166,701
WRA 12 Texas-Gulf	286	1,798,256	343,368	322,417	222,052	24,611	96,705	321,785	29,690	(D)
WRA 13 Rio Grande	126	3,165,402	212,050	192,487	175,197	4,866	46,338	469,480	12,499	(D)
WRA 14 Upper Colorado	33	900,085	97,009	76,276	(D)	(D)	86,289	(D)	(D)	183,459
WRA 15 Lower Colorado	197	662,576	514,317	509,767	175,511	39,253	323,087	715,297	148,780	1,497,398
WRA 16 Great Basin	74	1,924,108	229,199	169,455	114,013	58,776	57,778	323,383	114,936	111,294
WRA 17 Pacific Northwest	1,258	6,033,986	2,321,096	2,217,218	900,278	358,831	1,091,417	1,695,723	737,611	2,490,490
WRA 18 California	3,533	6,341,248	4,353,465	4,253,503	1,960,631	549,011	2,213,391	5,186,853	1,522,981	6,532,914
WRA 19 Alaska	-	-	-	-	-	-	-	-	-	-
WRA 20 Hawaii	15	163,849	68,627	39,132	33,103	15,242	43,692	126,205	67,241	(D)

Table 35. **Irrigated Farms by Percent of Sales from Irrigated Crop and Livestock Sales: 2003**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Number of farms by percent of sales from -									
	Irrigated crops						Livestock			
	None	1 to 24 percent	25 to 49 percent	50 to 74 percent	75 to 99 percent	100 percent	None	1 to 49 percent	50 to 99 percent	100 percent
U.S. TOTAL . . . . . 2003 . .	17,018	20,417	15,104	17,912	38,045	111,667	145,929	40,266	18,928	15,040
1998 . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2003 DATA										
Alabama	4	115	63	69	79	248	365	142	67	4
Alaska	-	13	6	11	15	28	58	12	3	-
Arizona	22	290	7	225	394	1,839	2,017	451	287	22
Arkansas	101	234	521	561	1,525	1,892	4,206	322	306	-
California	3,431	756	335	507	1,694	40,118	41,536	2,376	528	2,401
Colorado	368	1,236	629	823	2,937	5,574	6,816	2,716	1,667	368
Connecticut	-	32	23	43	34	102	200	15	19	-
Delaware	-	48	51	39	35	40	154	36	23	-
Florida	271	417	126	587	845	6,089	7,248	695	131	261
Georgia	76	306	424	424	595	1,022	2,006	570	195	76
Hawaii	25	62	10	93	88	936	1,130	60	8	16
Idaho	2,898	857	744	632	2,799	6,373	6,752	3,161	1,750	2,640
Illinois	-	357	223	243	149	223	1,025	131	39	-
Indiana	-	382	336	234	160	81	846	273	74	-
Iowa	10	275	164	115	78	67	508	128	73	-
Kansas	18	1,225	965	1,104	1,116	450	2,765	1,435	660	18
Kentucky	-	281	164	163	117	218	485	283	175	-
Louisiana	51	223	228	346	353	1,079	1,994	255	31	-
Maine	2	45	78	77	21	284	461	43	1	2
Maryland	31	134	40	72	72	160	324	136	20	29
Massachusetts	6	47	110	39	89	551	758	78	-	6
Michigan	-	496	390	299	370	811	2,005	163	198	-
Minnesota	22	413	222	264	251	467	1,084	287	246	22
Mississippi	-	74	168	226	299	800	1,531	33	3	-
Missouri	51	381	334	323	437	440	1,395	379	141	51
Montana	292	1,299	1,034	593	2,278	3,129	3,664	2,681	1,988	292
Nebraska	91	2,448	2,447	3,167	5,840	2,285	7,622	5,428	3,137	91
Nevada	224	125	85	53	364	871	936	368	208	210
New Hampshire	-	24	21	16	26	74	143	11	7	-
New Jersey	-	89	69	134	66	449	730	45	32	-
New Mexico	947	594	96	251	1,690	3,163	3,664	1,812	343	922
New York	-	257	197	127	144	559	1,032	244	8	-
North Carolina	59	682	220	107	255	958	1,761	196	275	49
North Dakota	7	212	126	54	55	87	293	145	97	6
Ohio	4	135	94	108	87	242	507	114	49	-
Oklahoma	45	593	181	286	318	396	814	660	335	10
Oregon	3,502	1,063	295	1,362	2,378	5,605	6,150	3,652	1,060	3,343
Pennsylvania	12	428	265	148	169	567	1,021	323	236	9
Rhode Island	-	17	5	1	16	19	54	-	4	-
South Carolina	10	326	24	35	176	380	510	293	138	10
South Dakota	13	475	255	277	171	253	575	501	355	13
Tennessee	20	105	123	122	92	297	504	171	64	20
Texas	1,320	549	1,653	1,815	3,500	6,604	9,775	3,232	1,114	1,320
Utah	1,430	621	543	632	2,503	4,341	4,809	2,841	1,221	1,199
Vermont	-	45	42	12	47	58	152	46	6	-
Virginia	10	191	378	90	97	139	421	304	180	-
Washington	1,421	692	161	499	1,527	8,562	9,823	1,090	543	1,406
West Virginia	-	34	8	15	17	26	69	25	6	-
Wisconsin	-	228	155	195	309	527	1,000	296	118	-
Wyoming	224	486	266	294	1,368	2,184	2,231	1,608	759	224
Water Resources Areas										
WRA 01 New England	8	186	261	188	216	1,058	1,691	187	31	8
WRA 02 Mid-Atlantic	53	945	666	410	505	1,563	2,944	753	407	38
WRA 03 South Atlantic-Gulf	420	1,859	808	1,274	1,947	9,259	12,366	2,016	785	400
WRA 04 Great Lakes	-	726	639	563	572	1,194	2,986	473	235	-
WRA 05 Ohio	22	836	545	472	344	709	1,850	674	386	18
WRA 06 Tennessee	-	94	247	68	97	385	709	116	66	-
WRA 07 Upper Mississippi	22	1,184	728	740	624	1,061	3,130	781	426	22
WRA 08 Lower Mississippi	53	601	909	1,177	2,157	2,920	7,063	574	178	2
WRA 09 Souris-Red-Rainy	1	147	106	44	78	115	318	114	59	-
WRA 10 Missouri	447	5,960	4,473	4,894	10,324	8,715	16,710	10,643	7,023	437
WRA 11 Arkansas-White-Red	1,107	1,752	1,506	1,511	2,429	2,500	5,844	2,817	1,173	971
WRA 12 Texas-Gulf	872	500	968	1,566	2,977	5,556	8,241	2,748	578	872
WRA 13 Rio Grande	357	457	413	267	1,473	3,877	4,291	1,584	637	332
WRA 14 Upper Colorado	926	740	658	675	2,062	4,007	4,427	2,289	1,500	852
WRA 15 Lower Colorado	81	312	14	225	431	2,330	2,508	488	316	81
WRA 16 Great Basin	1,641	850	344	600	2,411	3,975	4,364	2,678	1,560	1,219
WRA 17 Pacific Northwest	7,005	2,427	1,448	2,616	7,540	20,967	23,368	8,808	3,003	6,824
WRA 18 California	3,978	766	355	518	1,755	40,512	41,931	2,451	554	2,948
WRA 19 Alaska	-	13	6	11	15	28	58	12	3	-
WRA 20 Hawaii	25	62	10	93	88	936	1,130	60	8	16

Table 36. **Methods Used in Deciding When to Irrigate: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms	Farms reporting method used [1]											
		Any method	Condition of crop	Feel of soil	Soil moisture sensing device	Plant moisture sensing device	Commercial or government scheduling service	Reports on daily crop-water evapo-transpiration (ET)	Scheduled by water delivery organization	Personal calender schedule	Computer simulation models	When neighbors begin to irrigate	Other
U.S. TOTAL . . . . . 2003 . .	220,163	220,163	175,560	76,731	14,452	3,193	14,190	15,323	26,537	42,551	1,285	14,080	19,298
1998 . .	223,932	220,770	163,303	90,434	17,869	(NA)	7,238	10,841	22,567	40,338	2,237	(NA)	15,601
2003 DATA													
Alabama	578	578	523	231	32	3	3	18	-	75	-	5	22
Alaska	73	73	70	43	11	4	4	4	4	12	4	4	1
Arizona	2,777	2,777	2,073	766	100	11	81	62	273	1,138	7	5	241
Arkansas	4,834	4,834	4,482	1,268	153	31	362	204	44	772	109	334	232
California	46,841	46,841	33,110	16,667	4,592	1,419	2,523	3,936	5,367	12,745	327	1,895	2,647
Colorado	11,567	11,567	8,858	2,908	480	55	1,141	987	2,989	1,505	13	1,000	1,576
Connecticut	234	234	217	110	2	-	-	2	-	21	-	-	24
Delaware	213	213	190	122	17	-	12	6	4	25	7	14	13
Florida	8,335	8,335	7,592	2,270	866	2	150	191	16	671	5	514	745
Georgia	2,847	2,847	2,556	966	114	22	71	185	15	371	36	61	77
Hawaii	1,214	1,214	1,096	359	33	5	9	28	11	167	5	9	101
Idaho	14,303	14,303	11,375	5,026	364	61	1,264	479	3,136	3,696	25	1,423	1,493
Illinois	1,195	1,195	1,150	622	34	6	19	68	4	164	7	86	89
Indiana	1,193	1,193	1,103	604	54	4	15	65	3	138	9	102	95
Iowa	709	709	655	381	32	1	15	48	4	132	-	34	27
Kansas	4,878	4,878	4,299	1,429	459	73	970	650	64	425	41	100	1,036
Kentucky	943	943	790	389	67	-	2	24	7	67	-	44	19
Louisiana	2,280	2,280	2,187	450	83	25	84	47	21	223	25	134	187
Maine	507	507	466	277	19	-	4	7	-	44	34	34	11
Maryland	509	509	426	300	52	-	14	14	-	15	-	7	41
Massachusetts	842	842	748	321	93	33	78	42	5	132	-	34	154
Michigan	2,366	2,366	2,200	1,371	150	15	100	301	8	378	39	93	170
Minnesota	1,639	1,639	1,492	980	141	26	91	256	24	147	23	174	147
Mississippi	1,567	1,567	1,526	693	52	3	26	84	4	136	9	409	69
Missouri	1,966	1,966	1,842	730	38	6	72	118	-	230	24	133	111
Montana	8,625	8,625	7,639	2,575	422	15	215	279	1,168	1,873	5	1,260	1,002
Nebraska	16,278	16,278	14,151	7,921	1,369	132	2,257	3,015	577	1,735	20	1,869	1,991
Nevada	1,722	1,722	1,302	604	25	4	97	34	239	484	5	151	142
New Hampshire	161	161	142	106	10	-	-	6	-	20	-	-	13
New Jersey	807	807	752	500	96	9	9	30	5	80	1	10	32
New Mexico	6,741	6,741	4,184	1,537	114	70	670	48	2,042	1,753	29	361	577
New York	1,284	1,284	1,153	402	53	63	9	31	9	56	14	29	185
North Carolina	2,281	2,281	2,041	878	42	-	77	129	-	259	3	17	367
North Dakota	541	541	466	292	51	10	54	73	16	63	6	32	54
Ohio	670	670	605	367	37	-	-	18	-	79	-	16	55
Oklahoma	1,819	1,819	1,619	411	45	9	67	38	7	269	-	134	364
Oregon	14,205	14,205	10,710	4,457	398	33	505	202	1,292	3,276	16	1,168	2,160
Pennsylvania	1,589	1,589	1,539	728	158	65	39	79	33	205	65	5	72
Rhode Island	58	58	52	41	7	-	-	-	-	6	-	-	4
South Carolina	951	951	931	474	33	11	16	12	9	61	9	3	28
South Dakota	1,444	1,444	1,296	658	154	10	31	78	65	216	2	153	142
Tennessee	759	759	654	238	50	18	42	20	18	110	21	4	42
Texas	15,441	15,441	13,956	3,207	1,637	590	764	1,505	1,008	2,738	13	252	1,198
Utah	10,070	10,070	5,572	2,239	362	264	1,429	339	5,379	2,016	263	545	358
Vermont	204	204	178	127	6	-	-	6	-	24	-	-	13
Virginia	905	905	788	357	31	1	5	3	-	85	3	26	12
Washington	12,862	12,862	9,397	7,126	1,037	43	691	1,367	1,375	2,580	41	897	553
West Virginia	100	100	97	43	9	-	6	6	-	11	-	-	6
Wisconsin	1,414	1,414	1,338	829	151	3	34	125	1	139	9	63	191
Wyoming	4,822	4,822	3,972	1,331	117	38	63	54	1,291	984	11	437	409
Water Resources Areas													
WRA 01 New England	1,917	1,917	1,726	927	137	33	82	63	5	240	34	68	213
WRA 02 Mid-Atlantic	4,142	4,142	3,736	2,006	356	105	52	123	18	387	52	60	287
WRA 03 South Atlantic-Gulf	15,567	15,567	14,235	5,012	1,080	35	317	535	40	1,427	53	963	1,234
WRA 04 Great Lakes	3,694	3,694	3,448	2,049	277	20	123	387	12	552	51	123	281
WRA 05 Ohio	2,928	2,928	2,683	1,258	164	36	70	99	43	236	41	116	172
WRA 06 Tennessee	891	891	777	391	37	21	18	25	18	111	18	13	28
WRA 07 Upper Mississippi	4,359	4,359	4,065	2,488	268	33	136	387	25	529	37	341	406
WRA 08 Lower Mississippi	7,817	7,817	7,305	2,214	322	43	457	364	56	1,101	129	496	495
WRA 09 Souris-Red-Rainy	491	491	413	283	43	6	52	93	7	50	6	30	53
WRA 10 Missouri	34,813	34,813	30,644	13,766	2,399	206	3,437	4,277	3,334	4,558	47	3,662	3,910
WRA 11 Arkansas-White-Red	10,805	10,805	9,174	2,447	761	127	1,196	900	720	1,278	71	464	1,668
WRA 12 Texas-Gulf	12,439	12,439	11,464	2,591	1,390	571	624	1,227	593	2,380	12	216	544
WRA 13 Rio Grande	6,844	6,844	3,967	1,685	182	95	709	280	2,447	1,782	39	318	751
WRA 14 Upper Colorado	9,068	9,068	6,441	2,146	111	33	612	145	2,658	1,806	26	802	1,375
WRA 15 Lower Colorado	3,393	3,393	2,394	1,012	175	11	101	65	680	1,374	7	5	246
WRA 16 Great Basin	9,821	9,821	5,734	2,100	295	258	1,209	353	4,739	1,986	252	604	496
WRA 17 Pacific Northwest	42,003	42,003	32,204	17,160	1,810	132	2,452	2,019	5,661	9,594	74	3,825	4,362
WRA 18 California	47,884	47,884	33,984	16,794	4,601	1,419	2,530	3,949	5,466	12,981	327	1,961	2,675
WRA 19 Alaska	73	73	70	43	11	4	4	4	4	12	4	4	1
WRA 20 Hawaii	1,214	1,214	1,096	359	33	5	9	28	11	167	5	9	101

[1] Respondents could choose more than one method.

Table 37. **Water Management Practices Used by Operators with Gravity Flow Systems: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms	Acres irrigated	Conservation technique used [1]					
			Farms	Acres irrigated	Tailwater pits		Restricting run-off by diking end of field	
					Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	101,239	23,124,131	53,227	12,923,287	7,078	1,506,763	15,632	2,641,308
1998 . .	118,114	27,273,419	51,285	14,111,752	12,301	2,954,205	(NA)	(NA)
2003 DATA								
Alabama	27	572	8	91	-	-	-	-
Alaska	1	(D)	1	(D)	-	-	-	-
Arizona	2,021	751,568	1,377	577,856	95	41,257	701	134,825
Arkansas	3,972	3,390,951	1,948	1,558,024	340	162,168	660	299,412
California	21,549	5,261,073	12,015	3,430,433	1,993	830,856	3,747	681,915
Colorado	8,845	1,315,863	4,252	581,242	648	53,187	850	63,158
Connecticut	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-
Florida	1,183	531,476	501	201,019	12	31,099	371	45,278
Georgia	89	39,148	-	-	-	-	-	-
Hawaii	114	2,305	41	547	4	215	12	111
Idaho	8,206	929,177	4,158	553,159	969	46,216	1,538	95,330
Illinois	72	3,286	19	2,765	3	1,200	17	1,970
Indiana	39	2,426	3	495	3	270	-	-
Iowa	114	7,428	59	6,061	-	-	14	1,484
Kansas	1,815	278,088	1,477	209,705	362	38,710	672	83,113
Kentucky	39	1,232	15	(D)	1	(D)	1	(D)
Louisiana	1,891	737,470	940	365,267	14	4,503	285	122,907
Maine	4	70	2	(D)	-	-	-	-
Maryland	24	(D)	24	120	-	-	-	-
Massachusetts	82	1,073	71	557	8	(D)	37	(D)
Michigan	26	208	-	-	-	-	-	-
Minnesota	47	16,203	11	9,041	-	-	2	(D)
Mississippi	767	795,237	361	372,907	14	3,637	126	62,877
Missouri	985	602,552	412	283,448	2	(D)	64	25,413
Montana	6,267	1,361,731	2,744	655,634	21	1,485	362	44,095
Nebraska	9,016	1,957,597	6,155	1,426,244	1,810	177,109	1,459	341,955
Nevada	1,371	425,829	654	221,416	22	17,910	132	23,672
New Hampshire	9	77	2	(D)	-	-	-	-
New Jersey	38	699	14	675	4	190	10	555
New Mexico	5,573	370,202	3,275	172,686	11	2,480	931	27,640
New York	-	-	-	-	-	-	-	-
North Carolina	5	1,550	2	(D)	-	-	2	(D)
North Dakota	140	36,365	71	24,832	-	-	30	2,942
Ohio	75	918	16	550	-	-	16	340
Oklahoma	359	77,402	224	56,405	41	7,872	114	19,246
Oregon	3,610	685,264	1,817	313,206	61	9,655	285	60,627
Pennsylvania	12	148	3	6	3	3	-	-
Rhode Island	5	80	1	(D)	1	(D)	1	(D)
South Carolina	27	2,570	12	220	2	(D)	10	60
South Dakota	566	105,123	359	57,894	13	374	119	11,573
Tennessee	80	1,431	1	(D)	-	-	1	(D)
Texas	7,901	1,401,607	3,586	880,403	260	39,539	2,048	416,689
Utah	6,961	602,590	2,651	341,398	160	14,150	659	43,564
Vermont	22	63	12	18	-	-	-	-
Virginia	-	-	-	-	-	-	-	-
Washington	3,346	268,122	2,065	174,854	105	8,686	148	8,662
West Virginia	1	(D)	-	-	-	-	-	-
Wisconsin	23	1,726	6	468	-	-	6	468
Wyoming	3,920	1,155,461	1,862	441,485	96	12,144	202	19,237
Water Resources Areas								
WRA 01 New England	112	1,318	88	683	9	338	38	243
WRA 02 Mid-Atlantic	82	1,026	38	795	4	190	10	555
WRA 03 South Atlantic-Gulf	1,333	576,352	523	202,580	14	31,219	383	46,588
WRA 04 Great Lakes	52	286	-	-	-	-	-	-
WRA 05 Ohio	134	2,455	34	(D)	3	3	16	340
WRA 06 Tennessee	18	(D)	-	-	-	-	-	-
WRA 07 Upper Mississippi	193	21,209	56	9,461	6	1,470	23	2,438
WRA 08 Lower Mississippi	6,612	4,961,696	3,257	2,352,758	333	158,148	922	470,747
WRA 09 Souris-Red-Rainy	31	15,545	11	7,641	-	-	4	1,730
WRA 10 Missouri	21,880	4,680,387	12,852	2,775,538	2,240	222,646	2,627	460,265
WRA 11 Arkansas-White-Red	5,194	1,411,668	2,757	767,329	773	92,300	1,167	204,349
WRA 12 Texas-Gulf	5,828	1,057,809	2,144	611,272	49	6,239	1,433	321,650
WRA 13 Rio Grande	6,050	370,828	4,087	240,389	24	5,792	1,332	50,073
WRA 14 Upper Colorado	6,349	1,035,866	2,573	341,194	236	21,353	387	25,679
WRA 15 Lower Colorado	2,270	779,022	1,475	591,828	95	41,257	766	138,026
WRA 16 Great Basin	7,419	911,009	3,064	505,828	164	36,404	783	69,015
WRA 17 Pacific Northwest	15,594	1,940,866	8,058	1,051,660	1,115	57,693	1,960	155,293
WRA 18 California	21,973	5,354,436	12,168	3,463,160	2,009	831,496	3,769	694,206
WRA 19 Alaska	1	(D)	1	(D)	-	-	-	-
WRA 20 Hawaii	114	2,305	41	547	4	215	12	111

See footnote(s) at end of table.

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Table 37. **Water Management Practices Used by Operators with Gravity Flow Systems: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Conservation technique used [1]							
	Surge flow or cablegation		Shortening of furrow length		Reducing set time or number of irrigations		Alternate row irrigation	
	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	1,859	374,966	1,682	434,168	21,145	2,794,661	11,826	2,572,135
1998 . .	4,409	872,951	2,973	725,104	21,754	3,447,670	18,930	4,083,609
2003 DATA								
Alabama	-	-	-	-	-	-	-	-
Alaska	-	-	-	-	-	-	-	-
Arizona	77	8,405	23	22,834	415	110,050	142	72,029
Arkansas	15	3,840	37	7,400	246	129,295	797	314,539
California	38	22,476	409	224,045	4,037	546,868	1,247	356,509
Colorado	195	13,074	177	15,665	2,448	220,977	1,181	88,167
Connecticut	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-
Florida	-	-	-	-	30	19,294	-	-
Georgia	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	8	40	17	197
Idaho	15	2,076	191	2,871	2,720	190,033	566	52,721
Illinois	-	-	16	140	1	(D)	14	70
Indiana	-	-	-	-	-	-	-	-
Iowa	-	-	1	(D)	34	2,191	28	2,860
Kansas	242	39,492	106	17,266	418	59,468	776	95,415
Kentucky	-	-	-	-	7	21	-	-
Louisiana	21	2,920	5	1,400	126	48,266	220	59,155
Maine	-	-	-	-	-	-	2	(D)
Maryland	-	-	-	-	24	120	-	-
Massachusetts	-	-	-	-	31	(D)	-	-
Michigan	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-
Mississippi	4	340	20	8,183	65	44,711	181	130,361
Missouri	63	27,440	7	3,404	104	56,656	229	125,252
Montana	31	1,948	24	7,510	1,222	229,479	172	39,701
Nebraska	520	95,843	119	16,128	1,868	273,624	3,612	779,867
Nevada	1	(D)	5	1,620	173	35,137	2	(D)
New Hampshire	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	7	(D)	4	60
New Mexico	59	5,971	81	2,800	1,049	61,301	634	22,770
New York	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-
North Dakota	2	(D)	4	335	9	5,030	11	2,872
Ohio	-	-	-	-	-	-	-	-
Oklahoma	15	2,236	14	4,432	55	13,291	60	18,957
Oregon	9	2,748	25	6,437	1,213	134,001	155	31,287
Pennsylvania	3	6	-	-	-	-	-	-
Rhode Island	-	-	-	-	1	(D)	-	-
South Carolina	-	-	-	-	-	-	-	-
South Dakota	3	900	3	(D)	170	18,760	69	8,370
Tennessee	-	-	-	-	-	-	-	-
Texas	405	122,548	235	63,570	739	176,508	774	243,521
Utah	22	6,687	12	5,778	1,442	146,105	183	6,285
Vermont	-	-	-	-	-	-	6	6
Virginia	-	-	-	-	-	-	-	-
Washington	26	1,599	64	8,479	1,250	72,527	455	59,742
West Virginia	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-
Wyoming	93	13,617	104	13,646	1,233	200,209	289	61,118
Water Resources Areas								
WRA 01 New England	-	-	-	-	32	99	8	(D)
WRA 02 Mid-Atlantic	-	-	-	-	31	335	4	(D)
WRA 03 South Atlantic-Gulf	-	-	-	-	30	19,294	-	-
WRA 04 Great Lakes	-	-	-	-	-	-	-	-
WRA 05 Ohio	3	6	-	-	7	21	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	-	-	16	140	12	615	28	1,511
WRA 08 Lower Mississippi	90	30,161	69	20,387	467	243,237	1,356	586,778
WRA 09 Souris-Red-Rainy	-	-	-	-	-	-	-	-
WRA 10 Missouri	901	134,098	333	46,791	5,252	766,749	5,044	993,327
WRA 11 Arkansas-White-Red	332	79,729	260	59,827	996	197,491	890	216,204
WRA 12 Texas-Gulf	241	68,680	121	31,999	474	114,979	588	142,547
WRA 13 Rio Grande	67	16,371	62	2,040	1,040	76,441	587	21,756
WRA 14 Upper Colorado	44	4,105	92	920	1,758	150,710	586	31,986
WRA 15 Lower Colorado	77	8,405	23	22,834	429	113,410	146	73,907
WRA 16 Great Basin	16	4,512	17	7,398	1,502	147,341	99	3,537
WRA 17 Pacific Northwest	50	6,423	278	16,697	4,942	406,114	1,224	142,940
WRA 18 California	38	22,476	411	225,135	4,165	557,785	1,249	357,369
WRA 19 Alaska	-	-	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	8	40	17	197

See footnote(s) at end of table.

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Table 37. **Water Management Practices Used by Operators with Gravity Flow Systems: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Conservation technique used [1]							
	Use of polyacrylamide (PAM)		Mulch or other type of row covers		Use of laser leveling		Special furrowing	
	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated	Farms	Acres irrigated
U.S. TOTAL . . . . . 2003 . .	1,817	385,231	1,942	227,497	13,181	3,716,712	6,205	1,278,474
1998 . .	3,044	382,987	(NA)	(NA)	(NA)	(NA)	8,011	2,003,570
2003 DATA								
Alabama	-	-	7	14	1	(D)	-	-
Alaska	1	(D)	-	-	-	-	-	-
Arizona	14	15,550	16	8,504	632	363,265	119	54,789
Arkansas	-	-	37	14,070	890	440,609	440	185,386
California	45	22,624	1,157	60,452	5,851	1,517,713	1,816	291,008
Colorado	275	33,848	54	19,208	152	18,392	292	62,953
Connecticut	-	-	-	-	-	-	-	-
Delaware	-	-	-	-	-	-	-	-
Florida	-	-	47	14,207	30	38,850	160	39,191
Georgia	-	-	-	-	-	-	-	-
Hawaii	-	-	1	(D)	1	(D)	8	(D)
Idaho	704	132,840	113	17,551	454	50,714	168	41,720
Illinois	-	-	-	-	3	1,510	2	(D)
Indiana	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	14	857	4	380
Kansas	-	-	140	11,433	147	17,268	221	27,846
Kentucky	-	-	14	28	1	(D)	7	21
Louisiana	-	-	6	3,946	520	182,898	79	11,379
Maine	-	-	-	-	-	-	2	(D)
Maryland	-	-	24	96	-	-	-	-
Massachusetts	-	-	31	31	3	255	-	-
Michigan	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	11	9,041	-	-
Mississippi	-	-	9	2,250	190	179,599	59	31,481
Missouri	6	2,172	22	7,992	235	158,479	56	18,653
Montana	164	35,687	10	5,100	940	196,603	289	73,824
Nebraska	1	(D)	36	21,780	194	53,665	279	31,520
Nevada	4	1,260	2	(D)	369	82,100	32	10,036
New Hampshire	-	-	-	-	-	-	2	(D)
New Jersey	-	-	-	-	4	140	-	-
New Mexico	10	2,500	8	1,760	1,421	90,958	183	15,238
New York	-	-	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-
North Dakota	-	-	-	-	22	15,716	17	5,349
Ohio	-	-	14	280	-	-	-	-
Oklahoma	2	(D)	1	(D)	9	3,090	7	2,102
Oregon	135	26,994	63	8,414	92	12,193	219	20,382
Pennsylvania	-	-	-	-	-	-	-	-
Rhode Island	-	-	-	-	-	-	-	-
South Carolina	-	-	-	-	-	-	-	-
South Dakota	-	-	29	909	17	4,350	64	11,085
Tennessee	-	-	-	-	1	(D)	-	-
Texas	29	508	37	18,015	372	161,483	964	235,957
Utah	16	2,682	35	5,917	527	103,667	135	21,708
Vermont	-	-	12	18	-	-	6	(D)
Virginia	-	-	-	-	-	-	-	-
Washington	298	69,800	15	3,946	3	2,700	291	24,503
West Virginia	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-
Wyoming	113	36,813	2	(D)	75	9,855	284	61,513
Water Resources Areas								
WRA 01 New England	-	-	43	49	3	255	10	42
WRA 02 Mid-Atlantic	-	-	24	(D)	4	(D)	-	-
WRA 03 South Atlantic-Gulf	-	-	54	14,221	31	38,920	160	39,191
WRA 04 Great Lakes	-	-	-	-	-	-	-	-
WRA 05 Ohio	-	-	28	308	1	(D)	7	21
WRA 06 Tennessee	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	-	-	-	-	22	6,341	2	(D)
WRA 08 Lower Mississippi	6	2,172	64	25,376	1,701	869,900	465	222,083
WRA 09 Souris-Red-Rainy	-	-	-	-	9	6,041	-	-
WRA 10 Missouri	398	91,626	98	34,799	1,226	290,065	942	181,377
WRA 11 Arkansas-White-Red	134	15,650	189	27,480	274	117,958	695	195,302
WRA 12 Texas-Gulf	4	(D)	16	10,640	330	135,989	355	110,944
WRA 13 Rio Grande	10	2,500	6	1,700	1,465	115,352	564	17,950
WRA 14 Upper Colorado	48	1,522	20	7,230	20	810	159	39,875
WRA 15 Lower Colorado	14	15,550	16	8,504	636	365,725	141	57,163
WRA 16 Great Basin	20	3,942	35	6,715	891	184,307	140	26,755
WRA 17 Pacific Northwest	1,137	229,634	191	29,911	714	66,511	737	94,255
WRA 18 California	45	22,624	1,157	60,452	5,853	1,518,373	1,820	293,108
WRA 19 Alaska	1	(D)	-	-	-	-	-	-
WRA 20 Hawaii	-	-	1	(D)	1	(D)	8	(D)

[1] More than one technique can be used on an irrigated acre during the survey year.

Table 38. **Irrigators Participating in Government Programs: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Received direct payments, counter-cyclical payments, loan deficiency payments or marketing loans, or participated in a quota program or buy-out program				
	Farms	Acres in farms	Total cropland acres	Acres irrigated	Acre-feet of water applied
U.S. TOTAL . . . . . 2003 . .	78,503	126,374,765	78,218,017	37,120,403	57,397,495
1998 . .	72,861	103,064,705	58,957,102	31,953,266	52,082,820
2003 DATA					
Alabama	167	235,635	180,401	37,378	18,794
Alaska	10	(D)	(D)	(D)	(D)
Arizona	730	895,183	722,498	637,319	2,975,678
Arkansas	3,900	5,289,714	4,991,066	3,746,191	4,052,020
California	6,293	6,699,324	4,724,791	4,020,814	13,205,337
Colorado	4,051	7,531,723	3,981,080	1,699,742	2,420,933
Connecticut	21	2,700	1,574	516	154
Delaware	156	156,153	141,393	52,356	22,731
Florida	672	571,681	266,697	152,426	215,197
Georgia	1,446	1,663,786	1,081,221	580,815	254,422
Hawaii	6	(D)	(D)	(D)	(D)
Idaho	4,552	3,979,394	3,041,188	2,330,732	4,550,679
Illinois	903	1,131,896	1,068,605	345,637	221,558
Indiana	777	995,208	946,343	244,559	110,669
Iowa	520	538,738	511,926	127,338	58,455
Kansas	4,224	8,439,580	6,895,832	2,194,442	2,741,543
Kentucky	519	219,992	176,343	15,901	7,160
Louisiana	1,775	2,203,169	1,876,400	763,237	842,632
Maine	56	86,607	27,950	9,225	3,802
Maryland	169	148,359	133,614	41,527	15,812
Massachusetts	106	19,755	8,303	4,270	24,122
Michigan	1,052	1,043,053	922,337	363,776	184,121
Minnesota	1,228	1,008,471	895,630	357,980	238,871
Mississippi	865	1,994,230	1,837,486	1,098,321	893,842
Missouri	1,526	2,151,839	2,001,002	959,694	631,479
Montana	3,205	15,875,684	5,772,407	1,217,022	1,525,973
Nebraska	14,552	19,092,744	14,274,786	6,764,673	7,599,545
Nevada	318	1,012,379	343,056	208,363	498,822
New Hampshire	15	4,170	1,516	223	176
New Jersey	93	40,332	34,696	12,584	5,363
New Mexico	884	2,224,705	560,658	395,434	873,067
New York	290	170,628	142,307	23,721	8,676
North Carolina	979	574,020	349,895	67,266	31,733
North Dakota	467	1,292,180	1,009,177	183,655	178,239
Ohio	160	64,521	57,396	8,191	12,643
Oklahoma	1,088	2,416,940	1,272,362	387,231	446,384
Oregon	2,087	4,068,194	2,362,019	715,641	1,376,254
Pennsylvania	448	206,937	156,916	9,693	4,552
Rhode Island	6	454	269	65	15
South Carolina	293	240,975	150,862	39,721	20,242
South Dakota	1,155	2,394,048	1,442,796	339,911	933,730
Tennessee	283	241,834	204,562	23,880	10,493
Texas	8,155	15,979,314	9,505,791	4,391,283	5,419,138
Utah	2,438	3,456,180	903,557	625,534	1,398,513
Vermont	9	2,584	1,089	44	26
Virginia	397	248,921	140,559	24,886	8,083
Washington	3,216	2,478,881	1,512,401	1,023,268	2,077,461
West Virginia	29	3,428	2,346	322	402
Wisconsin	679	637,392	541,369	239,543	170,578
Wyoming	1,533	6,607,442	1,029,085	629,898	1,104,152
Water Resources Areas					
WRA 01 New England	207	115,370	40,011	14,337	28,293
WRA 02 Mid-Atlantic	1,055	626,491	547,869	141,240	57,233
WRA 03 South Atlantic-Gulf	3,612	3,358,309	2,029,809	872,388	537,505
WRA 04 Great Lakes	1,549	1,453,365	1,288,444	481,775	243,402
WRA 05 Ohio	1,314	1,217,670	1,071,498	200,697	104,960
WRA 06 Tennessee	394	177,246	139,047	23,799	12,476
WRA 07 Upper Mississippi	2,973	2,999,951	2,729,347	921,148	588,822
WRA 08 Lower Mississippi	6,882	10,110,862	9,365,130	5,868,758	5,661,887
WRA 09 Souris-Red-Rainy	408	674,962	613,035	152,714	115,429
WRA 10 Missouri	24,154	51,189,409	27,860,782	10,554,814	13,171,631
WRA 11 Arkansas-White-Red	7,600	17,170,151	10,933,158	4,501,514	5,571,044
WRA 12 Texas-Gulf	5,592	8,713,263	6,190,665	2,842,198	3,415,244
WRA 13 Rio Grande	1,514	3,526,581	603,812	489,159	1,115,356
WRA 14 Upper Colorado	1,822	2,716,132	1,198,812	517,149	804,838
WRA 15 Lower Colorado	912	1,043,203	741,476	655,084	3,034,315
WRA 16 Great Basin	2,833	4,186,140	1,343,141	790,313	1,731,586
WRA 17 Pacific Northwest	9,204	10,244,995	6,699,822	3,990,360	7,807,954
WRA 18 California	6,462	6,816,977	4,809,699	4,098,801	13,392,295
WRA 19 Alaska	10	(D)	(D)	(D)	(D)
WRA 20 Hawaii	6	(D)	(D)	(D)	(D)

Table 39. **Energy or Water Conservation Improvements: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Implemented improvements in the last five years				Effect of improvements [1]					
					Improved crop yield or quality			Reduced energy cost		
	Farms	Acres in farms	Acres irrigated [2]	Acre-feet applied [2]	Farms	Acres irrigated [2]	Acre-feet applied [2]	Farms	Acres irrigated [2]	Acre-feet applied [2]
U.S. TOTAL . . . . . 2003 . .	70,336	90,158,756	26,417,975	45,959,276	40,488	18,726,207	31,605,313	27,430	15,332,574	24,709,696
1998 . .	70,521	103,745,548	29,535,722	53,990,722	39,759	18,809,314	34,492,789	29,011	17,744,523	29,868,103
2003 DATA										
Alabama	112	97,218	17,577	11,632	70	11,659	7,235	21	9,566	5,948
Alaska	32	10,456	1,864	1,024	21	1,339	(D)	8	520	267
Arizona	875	647,427	451,064	2,113,994	569	285,301	1,321,969	318	187,301	830,266
Arkansas	1,551	2,529,253	1,864,681	2,245,430	1,318	1,665,076	2,032,405	1,008	1,327,842	1,666,061
California	13,323	6,283,703	4,259,775	12,923,963	6,563	2,697,003	7,903,387	4,897	2,208,919	6,208,024
Colorado	3,920	5,237,273	1,235,748	1,915,319	2,191	867,925	1,310,537	1,112	584,486	855,126
Connecticut	75	6,686	914	367	18	591	250	33	357	140
Delaware	74	71,172	26,070	12,398	36	17,694	8,280	48	15,561	7,756
Florida	2,110	1,419,004	523,026	506,975	1,138	367,695	301,667	515	307,154	313,241
Georgia	531	534,765	212,005	105,564	329	115,584	56,012	328	149,017	77,565
Hawaii	214	154,070	64,752	294,702	117	64,200	293,974	67	48,881	(D)
Idaho	5,135	2,998,010	1,848,829	3,556,967	2,957	1,358,599	2,488,426	1,776	966,737	1,798,673
Illinois	289	396,893	142,156	90,826	148	96,946	64,656	195	108,874	71,547
Indiana	214	307,237	82,109	43,635	128	41,626	24,272	105	63,171	36,172
Iowa	162	131,392	41,660	21,979	116	22,529	12,231	69	31,344	14,860
Kansas	2,326	5,277,647	1,394,510	1,859,607	1,440	991,112	1,361,552	1,415	880,706	1,230,523
Kentucky	182	48,713	5,178	2,807	147	3,359	1,843	27	2,405	1,784
Louisiana	568	893,398	316,062	363,897	382	228,765	238,061	332	186,384	238,004
Maine	133	39,838	5,562	3,988	93	4,232	3,576	48	4,107	3,618
Maryland	103	60,491	21,867	7,009	88	14,573	4,564	80	15,841	5,357
Massachusetts	350	36,220	8,517	53,660	204	5,926	45,343	63	3,209	28,318
Michigan	584	537,057	259,123	145,412	414	188,139	110,127	283	209,738	117,525
Minnesota	396	387,510	182,050	130,806	274	113,200	81,104	293	155,900	113,663
Mississippi	281	743,715	456,421	420,496	201	345,438	324,406	179	315,711	327,873
Missouri	530	753,778	367,640	246,431	372	265,512	187,327	313	282,451	189,052
Montana	2,581	12,052,712	1,075,445	1,420,925	1,361	677,356	867,346	655	392,616	538,235
Nebraska	6,552	11,670,635	4,014,056	4,684,138	4,902	3,069,283	3,758,815	4,753	3,163,429	3,725,969
Nevada	723	2,048,031	375,482	991,494	448	254,448	688,942	147	144,514	440,889
New Hampshire	47	5,854	187	195	35	(D)	189	17	(D)	14
New Jersey	219	61,504	26,949	24,029	145	21,313	17,683	145	21,805	20,409
New Mexico	1,935	5,307,845	383,563	903,414	951	278,994	655,670	462	197,672	467,996
New York	375	118,909	25,434	9,443	273	17,157	7,164	132	15,144	5,792
North Carolina	605	207,606	34,983	27,310	230	14,949	8,675	124	14,461	6,899
North Dakota	150	358,360	83,199	85,602	75	55,839	63,938	89	60,480	51,904
Ohio	154	33,826	7,104	13,272	102	5,020	3,248	26	5,620	12,333
Oklahoma	580	1,232,340	227,105	272,368	303	140,387	156,526	314	123,793	152,961
Oregon	4,592	4,902,362	832,641	1,697,866	2,324	577,056	1,201,130	1,318	421,248	886,436
Pennsylvania	473	85,849	7,663	3,243	207	5,553	2,405	244	5,552	1,766
Rhode Island	13	(D)	129	317	5	(D)	(D)	1	(D)	(D)
South Carolina	200	114,165	30,700	17,508	160	18,700	11,916	157	22,085	13,474
South Dakota	470	1,517,862	146,960	150,333	303	77,103	77,450	169	81,358	72,952
Tennessee	78	59,488	10,118	5,060	35	5,477	2,346	23	624	(D)
Texas	5,627	8,759,480	2,794,083	3,468,037	4,031	2,091,833	2,596,554	2,472	1,500,498	1,869,257
Utah	3,013	3,532,950	523,803	1,210,685	1,772	388,077	932,880	483	169,997	446,253
Vermont	44	(D)	245	131	33	216	(D)	7	115	(D)
Virginia	272	99,426	17,875	6,055	226	12,905	4,525	109	10,912	3,602
Washington	5,179	2,083,943	1,135,277	2,541,875	1,790	678,751	1,490,510	1,592	624,650	1,317,684
West Virginia	33	5,012	200	207	7	52	(D)	7	34	(D)
Wisconsin	398	472,427	214,005	201,465	230	136,323	138,893	237	173,879	154,101
Wyoming	1,953	5,819,714	661,609	1,145,415	1,206	425,129	733,948	214	115,781	145,396
Water Resources Areas										
WRA 01 New England	636	91,742	15,380	58,553	367	11,059	49,651	163	7,823	32,381
WRA 02 Mid-Atlantic	1,201	370,559	110,685	55,910	738	80,418	40,064	688	75,044	40,703
WRA 03 South Atlantic-Gulf	3,322	2,349,600	810,645	664,992	1,812	523,801	382,462	1,161	501,091	416,535
WRA 04 Great Lakes	953	760,507	346,846	197,807	702	249,695	148,999	405	277,729	160,322
WRA 05 Ohio	586	323,814	55,134	34,897	342	24,948	11,152	109	41,209	28,969
WRA 06 Tennessee	313	72,042	12,604	6,328	166	7,669	(D)	34	2,502	(D)
WRA 07 Upper Mississippi	1,063	1,229,278	483,869	378,066	654	308,192	255,849	696	388,423	300,892
WRA 08 Lower Mississippi	2,461	4,275,222	2,694,805	2,908,872	1,908	2,226,549	2,439,804	1,536	1,853,451	2,117,085
WRA 09 Souris-Red-Rainy	136	217,534	77,647	60,757	72	39,355	30,454	73	62,991	49,492
WRA 10 Missouri	13,476	34,932,609	6,790,868	8,654,812	8,891	4,925,525	6,425,931	6,893	4,398,926	5,354,695
WRA 11 Arkansas-White-Red	4,056	9,751,340	2,831,963	3,667,405	2,725	2,137,301	2,773,933	2,183	1,648,316	2,169,896
WRA 12 Texas-Gulf	4,221	5,767,159	1,716,351	2,094,335	3,129	1,223,476	1,474,261	1,983	959,412	1,190,088
WRA 13 Rio Grande	2,246	2,192,552	470,109	1,062,371	1,022	351,962	808,076	547	246,793	575,706
WRA 14 Upper Colorado	2,761	5,212,152	502,148	829,455	1,391	333,406	509,968	284	75,841	100,785
WRA 15 Lower Colorado	1,213	791,612	479,263	2,194,766	825	308,966	1,386,771	409	200,536	874,486
WRA 16 Great Basin	3,010	5,086,599	820,136	2,014,785	1,833	586,444	1,483,300	553	307,517	826,327
WRA 17 Pacific Northwest	14,606	10,088,180	3,778,679	7,650,545	7,151	2,571,470	5,072,576	4,716	1,997,737	3,975,757
WRA 18 California	13,830	6,481,729	4,354,227	13,128,893	6,622	2,750,432	8,013,442	4,922	2,237,832	6,261,289
WRA 19 Alaska	32	10,456	1,864	1,024	21	1,339	(D)	8	520	267
WRA 20 Hawaii	214	154,070	64,752	294,702	117	64,200	293,974	67	48,881	(D)

See footnote(s) at end of table.

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Table 39. **Energy or Water Conservation Improvements: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Effect of improvements [1]								
	Reduced water applied			Reduced labor costs			Reduced fertilizer or pesticide losses		
	Farms	Acres irrigated [2]	Acre-feet applied [2]	Farms	Acres irrigated [2]	Acre-feet applied [2]	Farms	Acres irrigated [2]	Acre-feet applied [2]
U.S. TOTAL . . . . . 2003 . .	41,161	18,564,914	32,423,950	27,602	13,820,768	24,673,324	10,009	5,746,541	10,377,254
1998 . .	43,797	20,401,324	37,676,600	34,294	14,896,047	27,966,583	(NA)	(NA)	(NA)
2003 DATA									
Alabama	28	9,088	5,577	24	6,272	2,509	5	1,413	749
Alaska	16	649	302	8	952	629	8	293	70
Arizona	657	355,250	1,676,344	286	315,123	1,475,010	120	164,905	735,677
Arkansas	1,057	1,360,130	1,664,131	1,069	1,314,359	1,645,969	236	339,630	378,823
California	7,249	3,063,320	9,028,384	5,420	2,414,393	6,999,029	2,626	1,344,783	3,665,333
Colorado	2,015	856,593	1,275,656	1,361	581,411	896,196	644	266,216	388,734
Connecticut	61	722	252	5	216	(D)	15	455	160
Delaware	22	10,077	3,212	9	5,867	1,789	7	4,822	1,965
Florida	810	372,335	401,968	868	162,395	187,210	166	66,041	65,901
Georgia	197	119,150	60,892	93	65,729	33,697	45	29,468	20,433
Hawaii	114	47,217	(D)	90	10,671	12,337	59	11,609	39,390
Idaho	3,201	1,295,152	2,556,674	1,762	1,201,724	2,349,862	812	434,492	760,964
Illinois	131	92,697	57,063	108	50,731	33,666	24	4,847	6,303
Indiana	122	55,491	28,664	58	25,764	15,428	33	6,293	5,502
Iowa	73	28,434	14,078	73	19,681	10,973	15	4,450	1,809
Kansas	1,909	1,124,071	1,476,480	1,060	628,575	855,850	539	297,130	384,278
Kentucky	50	2,592	(D)	62	2,008	1,199	14	301	120
Louisiana	290	176,898	212,282	221	158,372	168,084	82	67,477	92,860
Maine	84	4,319	3,745	50	4,167	2,915	8	752	177
Maryland	75	14,000	5,199	17	7,564	3,002	61	6,034	2,642
Massachusetts	281	5,518	35,392	92	2,336	16,756	89	1,990	9,036
Michigan	271	158,277	89,721	308	139,372	79,045	104	51,513	27,345
Minnesota	210	123,845	92,751	117	61,761	45,338	47	23,206	16,670
Mississippi	193	332,638	336,565	198	321,260	315,784	58	113,781	128,746
Missouri	280	236,988	172,375	217	199,676	151,992	50	50,098	34,007
Montana	1,567	841,457	1,114,742	1,417	693,325	925,835	366	269,423	343,966
Nebraska	4,362	2,956,663	3,371,377	2,492	1,800,546	2,064,502	1,122	887,363	994,306
Nevada	460	242,109	667,541	253	177,549	461,448	30	28,806	108,368
New Hampshire	30	112	88	18	(D)	102	10	47	15
New Jersey	186	22,863	16,915	120	20,463	18,755	56	13,191	12,693
New Mexico	1,344	263,179	608,655	543	163,812	451,246	151	67,552	179,021
New York	142	11,246	5,682	188	16,903	5,612	87	7,048	3,789
North Carolina	76	16,766	16,483	337	18,709	9,767	51	6,813	5,121
North Dakota	76	48,242	60,140	44	24,456	34,702	9	9,463	7,018
Ohio	87	6,164	12,743	66	6,026	12,620	19	1,111	(D)
Oklahoma	352	156,409	186,448	174	82,535	96,738	24	28,018	35,907
Oregon	2,076	527,699	1,077,133	2,093	422,266	845,183	207	113,194	252,583
Pennsylvania	257	5,283	2,130	116	4,299	1,518	73	2,324	556
Rhode Island	9	125	317	1	(D)	(D)	4	12	36
South Carolina	155	22,377	13,400	30	14,999	9,628	17	9,251	7,569
South Dakota	251	93,551	95,364	149	41,156	45,903	36	11,617	10,881
Tennessee	42	4,460	3,155	45	1,197	1,219	23	1,332	(D)
Texas	4,166	1,821,336	2,274,047	2,003	1,365,735	1,717,149	642	454,852	531,707
Utah	1,632	370,154	838,960	954	277,441	674,537	174	85,358	164,536
Vermont	11	95	78	12	114	87	-	-	-
Virginia	88	12,491	4,183	86	7,339	2,091	77	4,782	1,761
Washington	2,936	831,065	1,896,812	1,958	540,513	1,270,411	665	322,129	730,758
West Virginia	21	170	201	7	64	169	6	36	36
Wisconsin	148	76,238	72,227	155	107,966	107,046	43	53,895	49,788
Wyoming	1,291	389,209	654,401	765	332,783	612,454	250	76,925	166,972
Water Resources Areas									
WRA 01 New England	465	10,796	39,795	172	6,936	20,115	126	3,256	9,423
WRA 02 Mid-Atlantic	630	69,493	33,163	451	53,707	29,812	198	33,415	20,495
WRA 03 South Atlantic-Gulf	1,254	535,168	495,871	1,243	264,214	240,704	282	112,716	100,153
WRA 04 Great Lakes	394	198,686	115,485	462	179,312	101,904	208	79,078	46,984
WRA 05 Ohio	318	38,740	27,851	131	15,379	15,920	117	2,572	1,062
WRA 06 Tennessee	45	5,578	(D)	155	5,727	3,260	27	2,602	1,030
WRA 07 Upper Mississippi	497	265,352	194,870	404	203,326	172,331	125	59,554	58,540
WRA 08 Lower Mississippi	1,528	1,859,093	2,076,286	1,442	1,748,710	1,982,124	357	496,496	540,828
WRA 09 Souris-Red-Rainy	56	52,918	46,419	25	19,469	16,217	14	13,259	9,608
WRA 10 Missouri	8,681	4,996,415	6,274,452	5,530	3,273,685	4,235,118	2,146	1,437,258	1,793,055
WRA 11 Arkansas-White-Red	2,931	2,020,334	2,546,258	1,858	1,216,023	1,552,983	698	536,985	682,625
WRA 12 Texas-Gulf	3,088	1,152,003	1,429,076	1,568	986,438	1,207,190	470	293,261	340,829
WRA 13 Rio Grande	1,803	362,164	804,364	583	236,744	613,915	236	97,503	224,318
WRA 14 Upper Colorado	1,106	258,325	398,782	769	228,208	403,773	327	74,871	101,919
WRA 15 Lower Colorado	750	366,599	1,716,160	384	328,538	1,521,862	130	170,410	760,102
WRA 16 Great Basin	1,795	557,775	1,379,768	954	446,040	1,065,557	167	110,277	239,243
WRA 17 Pacific Northwest	8,354	2,645,631	5,455,274	5,551	2,137,340	4,401,933	1,672	849,343	1,697,219
WRA 18 California	7,336	3,121,978	9,155,500	5,822	2,459,349	7,075,639	2,642	1,361,783	3,710,360
WRA 19 Alaska	16	649	302	8	952	629	8	293	70
WRA 20 Hawaii	114	47,217	(D)	90	10,671	12,337	59	11,609	39,390

[1] Respondents could choose more than one improvement project.
[2] Acres irrigated and acre-feet applied are totals for all irrigation on these farms and not the amounts conserved as a result of the conservation improvement.

Table 39. **Energy or Water Conservation Improvements: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Effect of improvements [1]								
	Reduced soil erosion			Reduced tailwater			Other		
	Farms	Acres irrigated [2]	Acre-feet applied [2]	Farms	Acres irrigated [2]	Acre-feet applied [2]	Farms	Acres irrigated [2]	Acre-feet applied [2]
U.S. TOTAL . . . . . 2003 . .	21,629	9,984,454	17,490,360	16,073	8,717,549	17,246,752	5,924	831,589	1,469,819
1998 . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	7,426	1,483,527	2,516,372
2003 DATA									
Alabama	5	1,213	1,149	-	-	-	15	236	225
Alaska	14	784	530	4	64	23	1	(D)	(D)
Arizona	247	198,663	934,589	210	223,040	1,045,912	70	15,197	47,312
Arkansas	607	928,357	1,096,829	589	783,767	1,049,765	38	36,664	29,840
California	4,272	1,639,171	4,866,076	3,670	2,225,488	6,955,541	1,964	122,384	382,396
Colorado	1,404	518,173	801,948	860	329,427	559,507	536	63,672	82,247
Connecticut	22	278	74	2	(D)	(D)	2	(D)	(D)
Delaware	8	7,712	5,627	2	(D)	(D)	6	4,157	(D)
Florida	154	27,768	27,692	104	23,143	29,511	330	16,226	25,489
Georgia	113	76,671	44,298	21	8,298	3,626	33	11,015	6,613
Hawaii	57	6,990	31,265	11	42	66	27	101	65
Idaho	1,861	876,956	1,567,732	1,392	373,422	806,237	592	89,442	177,743
Illinois	47	30,637	16,163	1	(D)	(D)	7	4,264	2,638
Indiana	13	4,626	2,580	3	600	265	12	3,530	1,527
Iowa	31	1,576	686	2	(D)	(D)	13	1,226	771
Kansas	788	461,605	602,526	804	515,819	682,520	37	46,192	70,756
Kentucky	37	590	300	8	829	920	14	21	5
Louisiana	197	149,757	195,264	90	84,582	107,213	45	16,250	17,731
Maine	45	3,864	2,842	1	(D)	(D)	33	165	17
Maryland	45	6,074	2,683	26	340	70	-	-	-
Massachusetts	51	522	2,410	48	1,391	9,326	14	975	5,160
Michigan	178	80,538	46,272	32	6,636	2,876	7	2,722	1,298
Minnesota	85	62,939	47,555	9	4,616	2,592	13	4,445	2,339
Mississippi	128	223,721	229,378	139	248,663	264,144	7	7,640	8,180
Missouri	112	108,951	79,342	129	130,541	105,929	12	8,672	5,175
Montana	871	468,465	642,602	998	427,922	557,870	23	22,548	34,722
Nebraska	2,125	1,402,240	1,490,965	2,012	1,204,324	1,359,505	111	98,095	94,945
Nevada	256	102,491	292,820	109	81,376	227,453	66	6,490	11,445
New Hampshire	8	30	10	-	-	-	6	(D)	(D)
New Jersey	78	13,700	12,607	17	2,574	4,574	2	(D)	(D)
New Mexico	715	109,155	261,317	262	92,289	251,046	240	15,430	48,591
New York	42	8,379	4,677	5	1,250	1,250	-	-	-
North Carolina	77	9,130	4,282	6	720	848	68	1,989	833
North Dakota	35	25,720	36,252	6	3,075	4,249	9	1,310	1,376
Ohio	53	4,600	3,304	2	(D)	(D)	16	67	198
Oklahoma	73	53,959	68,318	64	51,946	75,562	69	6,372	7,004
Oregon	879	286,264	611,160	773	195,397	407,095	428	32,024	76,662
Pennsylvania	162	3,264	1,010	75	252	106	35	189	52
Rhode Island	8	16	36	1	(D)	(D)	-	-	-
South Carolina	24	9,995	7,663	4	4,330	3,887	12	2,600	2,060
South Dakota	193	43,792	51,045	67	13,051	14,037	16	4,881	2,947
Tennessee	41	826	446	1	(D)	(D)	2	(D)	(D)
Texas	1,736	960,493	1,187,117	1,429	959,632	1,171,147	111	73,697	67,967
Utah	1,420	195,521	408,722	544	145,348	336,161	252	23,321	50,989
Vermont	-	-	-	-	-	-	-	-	-
Virginia	21	7,371	2,998	-	-	-	10	100	50
Washington	1,296	501,043	1,137,008	720	327,491	804,107	456	35,234	67,387
West Virginia	6	36	36	1	(D)	(D)	6	6	3
Wisconsin	46	50,602	37,762	3	3,775	2,870	4	640	256
Wyoming	943	309,226	622,396	817	238,608	396,773	154	50,750	131,652
Water Resources Areas									
WRA 01 New England	134	4,710	5,372	52	1,910	9,701	55	1,170	5,183
WRA 02 Mid-Atlantic	302	42,298	26,507	88	5,103	5,822	53	4,846	3,201
WRA 03 South Atlantic-Gulf	376	126,007	86,213	135	36,491	37,871	441	31,046	34,913
WRA 04 Great Lakes	239	107,618	65,879	38	9,686	5,476	22	3,835	1,858
WRA 05 Ohio	137	10,534	5,106	39	(D)	(D)	29	1,221	516
WRA 06 Tennessee	8	850	469	-	-	-	19	(D)	(D)
WRA 07 Upper Mississippi	168	105,435	69,551	14	8,059	5,293	38	9,221	5,107
WRA 08 Lower Mississippi	905	1,243,026	1,390,633	783	1,064,603	1,297,695	93	50,616	45,072
WRA 09 Souris-Red-Rainy	38	36,654	29,314	1	(D)	(D)	7	(D)	(D)
WRA 10 Missouri	4,704	2,514,420	3,278,860	4,191	2,108,162	2,685,514	285	176,032	252,763
WRA 11 Arkansas-White-Red	1,277	957,702	1,190,730	1,319	1,002,650	1,242,131	215	112,648	133,654
WRA 12 Texas-Gulf	1,447	664,315	801,746	969	608,710	746,953	44	41,120	32,135
WRA 13 Rio Grande	657	138,296	316,365	270	124,557	355,233	224	21,553	57,004
WRA 14 Upper Colorado	998	216,572	403,398	697	154,096	275,040	572	37,252	60,093
WRA 15 Lower Colorado	566	218,852	993,704	368	234,539	1,089,873	70	15,197	47,312
WRA 16 Great Basin	1,131	266,274	603,177	403	198,514	483,500	316	32,227	67,493
WRA 17 Pacific Northwest	4,134	1,640,747	3,231,671	2,631	897,937	2,001,083	1,424	157,814	297,871
WRA 18 California	4,337	1,682,370	4,959,871	4,060	2,259,141	7,003,754	1,989	132,058	423,819
WRA 19 Alaska	14	784	530	4	64	23	1	(D)	(D)
WRA 20 Hawaii	57	6,990	31,265	11	42	66	27	101	65

See footnote(s) at end of table.

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Table 40. **Barriers to Making Improvements to Reduce Energy Use or Conserve Water: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Total [1]				Investigating improvements not a priority at this time		
	Farms	Acres in farms	Acres irrigated	Acre-feet applied	Farms	Acres irrigated [2]	Acre-feet applied [2]
U.S. TOTAL . . . . . 2003 . .	149,827	106,356,634	26,165,456	40,934,755	9,409	2,558,302	4,237,773
1998 . .	153,411	90,783,642	24,714,243	43,344,569	55,873	8,150,674	13,285,056
2003 DATA							
Alabama	466	217,865	35,145	23,998	15	(D)	1,784
Alaska	41	3,261	388	893	9	352	149
Arizona	1,902	707,548	385,523	1,637,840	154	35,389	163,304
Arkansas	3,283	3,174,440	2,080,186	2,020,878	162	144,812	139,563
California	33,518	9,430,329	4,212,161	11,923,266	829	465,823	1,400,207
Colorado	7,647	6,309,436	1,326,581	2,069,622	651	121,508	209,253
Connecticut	159	6,894	1,299	556	27	185	85
Delaware	139	121,321	43,018	15,415	35	3,190	1,014
Florida	6,225	2,557,521	974,627	1,344,348	576	111,518	68,590
Georgia	2,316	1,543,855	498,888	207,966	105	20,337	7,525
Hawaii	1,000	154,541	13,786	15,633	37	(D)	(D)
Idaho	9,168	3,338,053	1,278,028	2,506,979	1,023	142,135	234,515
Illinois	906	851,560	232,763	145,970	46	33,332	23,927
Indiana	979	796,660	194,185	88,049	60	11,896	(D)
Iowa	547	445,596	92,504	40,688	35	5,483	2,587
Kansas	2,552	4,292,986	1,149,440	1,285,895	205	108,630	123,711
Kentucky	761	249,585	15,507	6,658	42	1,315	544
Louisiana	1,712	1,480,846	522,655	561,650	78	34,511	35,989
Maine	374	152,874	12,601	7,106	38	1,242	332
Maryland	406	127,191	31,867	14,212	9	2,544	998
Massachusetts	492	37,958	7,634	36,228	48	285	1,053
Michigan	1,782	683,044	173,542	72,833	133	25,395	12,286
Minnesota	1,243	766,231	252,450	162,854	85	27,584	15,687
Mississippi	1,286	1,436,974	713,372	536,574	40	61,048	82,146
Missouri	1,436	1,536,143	653,088	438,431	180	73,231	46,786
Montana	6,044	10,993,382	1,056,510	1,402,994	113	54,113	54,249
Nebraska	9,726	10,904,141	3,502,115	3,766,330	919	369,006	440,193
Nevada	999	2,040,575	263,828	599,406	55	31,695	82,121
New Hampshire	114	8,698	631	347	8	8	4
New Jersey	588	65,145	19,730	11,201	42	5,822	3,644
New Mexico	4,806	3,248,939	386,224	915,057	67	17,580	50,824
New York	909	156,566	23,111	8,573	31	4,338	1,000
North Carolina	1,676	490,599	66,072	27,696	164	5,362	2,373
North Dakota	391	1,118,678	124,573	118,395	34	15,700	28,640
Ohio	516	63,962	7,372	2,611	25	145	313
Oklahoma	1,239	1,849,347	281,737	336,006	41	17,304	15,065
Oregon	9,613	5,010,913	899,019	1,588,438	1,361	127,332	223,331
Pennsylvania	1,116	190,765	11,970	5,321	220	1,466	1,488
Rhode Island	45	2,478	519	275	8	16	36
South Carolina	751	186,745	21,346	12,824	16	5,523	2,541
South Dakota	974	1,750,965	243,446	831,072	102	30,605	27,886
Tennessee	681	239,253	24,311	12,089	7	3,179	(D)
Texas	9,814	11,705,796	2,153,662	2,486,788	296	197,918	193,479
Utah	7,057	2,752,671	558,410	1,087,805	491	22,714	40,409
Vermont	160	12,829	580	380	8	32	7
Virginia	633	258,556	15,760	6,831	16	1,720	1,025
Washington	7,683	2,940,174	671,505	1,362,696	425	102,950	293,190
West Virginia	67	5,151	601	668	14	118	50
Wisconsin	1,016	572,130	177,758	155,099	49	33,313	29,463
Wyoming	2,869	9,365,464	753,428	1,031,307	275	67,072	114,742
Water Resources Areas							
WRA 01 New England	1,281	217,504	23,030	44,687	135	1,748	1,511
WRA 02 Mid-Atlantic	2,941	625,674	122,917	55,636	322	16,785	8,812
WRA 03 South Atlantic-Gulf	12,245	5,122,860	1,600,169	1,619,621	879	145,040	83,812
WRA 04 Great Lakes	2,741	1,037,118	265,035	114,492	177	39,620	18,068
WRA 05 Ohio	2,342	1,069,587	165,156	81,230	114	10,089	4,958
WRA 06 Tennessee	578	145,125	18,461	12,949	9	(D)	591
WRA 07 Upper Mississippi	3,296	2,425,889	661,972	438,750	172	79,324	62,427
WRA 08 Lower Mississippi	5,356	6,517,009	3,504,201	3,098,523	314	275,456	263,423
WRA 09 Souris-Red-Rainy	355	533,300	105,943	85,756	29	13,012	(D)
WRA 10 Missouri	21,337	36,156,014	6,131,531	7,998,254	1,676	609,428	775,720
WRA 11 Arkansas-White-Red	6,749	10,897,193	2,453,125	2,910,526	436	217,424	267,297
WRA 12 Texas-Gulf	8,218	4,783,709	1,567,942	1,793,027	192	130,446	126,232
WRA 13 Rio Grande	4,598	5,868,255	329,383	757,072	70	21,045	46,733
WRA 14 Upper Colorado	6,307	4,053,054	864,055	1,216,526	568	56,302	79,419
WRA 15 Lower Colorado	2,180	1,269,840	418,182	1,737,429	165	38,829	173,208
WRA 16 Great Basin	6,811	4,225,111	696,639	1,395,121	464	52,056	114,683
WRA 17 Pacific Northwest	27,397	11,650,601	2,900,947	5,405,541	2,427	357,027	737,178
WRA 18 California	34,054	9,600,989	4,322,594	12,153,089	1,214	481,973	1,412,789
WRA 19 Alaska	41	3,261	388	893	9	352	149
WRA 20 Hawaii	1,000	154,541	13,786	15,633	37	(D)	(D)

See footnote(s) at end of table.

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Table 40. **Barriers to Making Improvements to Reduce Energy Use or Conserve Water: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Risk of reduced yield or poor crop quality			Physical field/crop condition limit system improvements			Improvements will not reduce costs enough to cover installation costs		
	Farms	Acres irrigated [2]	Acre-feet applied [2]	Farms	Acres irrigated [2]	Acre-feet applied [2]	Farms	Acres irrigated [2]	Acre-feet applied [2]
U.S. TOTAL . . . . . 2003 . .	10,311	4,724,156	8,902,293	9,134	4,386,546	8,065,032	21,856	10,457,690	18,372,578
1998 . .	28,552	6,686,590	12,992,919	24,074	9,159,513	17,371,693	49,690	15,524,749	28,746,579
2003 DATA									
Alabama	14	196	211	11	2,597	631	26	5,474	4,105
Alaska	1	(D)	(D)	2	(D)	(D)	11	(D)	224
Arizona	123	78,656	377,864	190	79,359	352,198	161	135,379	620,817
Arkansas	215	397,714	469,744	224	330,473	378,493	464	517,829	605,186
California	1,979	810,823	2,751,881	2,503	816,993	2,655,440	4,684	1,807,099	5,382,489
Colorado	652	305,198	519,504	547	331,501	511,481	1,823	506,247	827,845
Connecticut	9	9	1	-	-	-	2	(D)	(D)
Delaware	13	7,748	5,353	5	4,139	4,148	8	4,483	1,388
Florida	82	53,031	67,608	39	61,672	71,391	544	204,520	191,276
Georgia	101	42,287	19,212	68	19,730	11,112	170	67,099	36,581
Hawaii	43	(D)	(D)	6	(D)	(D)	40	46,577	(D)
Idaho	519	351,859	662,423	355	377,343	702,586	1,600	814,695	1,641,251
Illinois	63	28,816	17,431	47	25,065	17,061	66	44,938	23,853
Indiana	21	15,014	8,345	25	16,559	11,447	36	22,723	13,807
Iowa	24	1,545	1,742	18	8,593	3,173	48	13,143	7,359
Kansas	365	292,871	416,957	367	166,272	215,371	856	562,270	780,103
Kentucky	36	1,184	668	14	329	125	35	140	85
Louisiana	63	56,012	64,865	79	52,163	61,019	202	98,417	119,077
Maine	44	1,102	999	6	394	(D)	9	1,926	(D)
Maryland	34	5,492	849	6	(D)	53	65	10,893	(D)
Massachusetts	45	1,967	13,204	8	1,030	(D)	85	1,175	7,878
Michigan	175	58,687	32,543	120	52,448	28,407	186	145,896	84,446
Minnesota	31	18,491	11,073	31	18,305	15,274	139	70,290	45,410
Mississippi	31	68,924	58,297	50	91,351	82,891	84	147,603	116,415
Missouri	53	64,431	43,752	48	48,609	38,486	195	162,545	116,541
Montana	310	156,692	202,066	680	271,170	337,810	835	475,054	619,329
Nebraska	737	562,011	765,677	782	643,212	767,320	2,347	1,649,230	1,902,721
Nevada	91	55,458	121,941	91	55,346	129,753	184	131,700	380,569
New Hampshire	-	-	-	5	11	1	-	-	-
New Jersey	16	3,874	4,329	23	3,239	1,578	57	9,073	4,435
New Mexico	460	53,382	143,736	177	43,050	109,845	501	97,600	217,082
New York	16	2,545	1,858	24	8,875	3,406	145	7,174	3,427
North Carolina	10	1,400	1,768	45	3,298	1,248	56	6,653	4,168
North Dakota	24	12,418	25,814	14	5,947	5,918	44	20,945	34,421
Ohio	20	320	310	15	79	41	37	2,230	481
Oklahoma	93	50,285	58,110	33	12,747	19,933	166	53,053	56,966
Oregon	358	95,108	185,488	299	123,596	274,981	749	318,272	664,628
Pennsylvania	86	971	322	72	704	285	222	2,217	853
Rhode Island	4	12	36	-	-	-	4	12	36
South Carolina	4	3,666	1,451	13	4,474	1,311	16	4,242	1,952
South Dakota	78	27,219	(D)	105	17,718	20,815	138	43,256	37,659
Tennessee	6	(D)	(D)	8	439	(D)	24	522	128
Texas	1,315	638,188	830,364	282	184,216	234,125	1,741	1,291,158	1,526,794
Utah	358	55,930	132,689	569	72,517	144,911	554	159,139	379,969
Vermont	-	-	-	-	-	-	5	(D)	1
Virginia	15	(D)	1,756	15	3,058	1,300	91	1,946	915
Washington	1,258	189,618	498,139	592	185,613	464,696	1,456	429,600	1,045,253
West Virginia	-	-	-	6	24	19	12	(D)	25
Wisconsin	93	32,152	37,046	81	38,273	32,070	133	85,315	78,509
Wyoming	223	72,417	116,091	434	198,607	344,292	800	277,469	549,982
Water Resources Areas									
WRA 01 New England	102	3,090	14,240	19	1,435	4,589	100	3,181	10,224
WRA 02 Mid-Atlantic	131	23,225	12,567	99	13,137	8,054	539	31,741	12,179
WRA 03 South Atlantic-Gulf	207	100,782	90,384	176	91,771	85,693	799	286,808	237,603
WRA 04 Great Lakes	216	80,090	(D)	164	70,332	38,451	256	188,261	111,923
WRA 05 Ohio	93	11,101	5,487	58	11,846	(D)	129	21,257	(D)
WRA 06 Tennessee	7	98	15	5	127	46	30	(D)	588
WRA 07 Upper Mississippi	192	65,142	56,750	161	73,539	58,200	310	160,280	125,659
WRA 08 Lower Mississippi	324	525,507	563,237	346	466,862	483,242	799	834,294	843,220
WRA 09 Souris-Red-Rainy	21	(D)	6,187	16	(D)	8,157	55	24,889	15,790
WRA 10 Missouri	1,701	1,054,638	1,466,347	2,207	1,309,953	1,732,161	4,749	2,777,300	3,588,708
WRA 11 Arkansas-White-Red	586	720,571	965,425	402	261,809	351,669	1,568	1,245,723	1,572,244
WRA 12 Texas-Gulf	826	276,212	360,674	237	142,838	180,966	1,277	713,345	847,512
WRA 13 Rio Grande	855	111,269	239,402	179	68,711	143,018	538	127,769	290,720
WRA 14 Upper Colorado	399	75,351	148,973	500	147,244	229,188	1,179	185,433	373,330
WRA 15 Lower Colorado	128	80,406	383,114	195	83,492	365,069	245	142,558	644,680
WRA 16 Great Basin	362	101,625	246,944	600	116,803	253,368	641	271,705	709,130
WRA 17 Pacific Northwest	2,095	628,076	1,323,700	1,254	693,307	1,447,643	3,891	1,571,165	3,332,731
WRA 18 California	2,022	818,993	2,773,631	2,508	821,267	2,666,674	4,700	1,823,426	5,416,228
WRA 19 Alaska	1	(D)	(D)	2	(D)	(D)	11	(D)	224
WRA 20 Hawaii	43	(D)	(D)	6	(D)	(D)	40	46,577	(D)

See footnote(s) at end of table.

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Table 40. **Barriers to Making Improvements to Reduce Energy Use or Conserve Water: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Cannot finance improvements			Landlord will not share in cost			Uncertainty about future availability of water		
	Farms	Acres irrigated [2]	Acre-feet applied [2]	Farms	Acres irrigated [2]	Acre-feet applied [2]	Farms	Acres irrigated [2]	Acre-feet applied [2]
U.S. TOTAL . . . . . 2003 . .	20,631	8,337,601	14,855,178	8,234	6,386,635	11,029,536	14,034	5,417,875	9,605,186
1998 . .	48,522	14,580,598	26,710,383	16,047	8,691,912	13,683,854	20,168	6,218,474	11,612,753
2003 DATA									
Alabama	17	1,486	1,044	6	2,013	1,049	-	-	-
Alaska	13	665	333	1	(D)	(D)	3	6	19
Arizona	156	156,846	776,176	117	152,619	703,810	125	106,569	513,056
Arkansas	634	681,728	842,870	470	651,894	861,989	155	176,072	220,725
California	3,770	1,261,657	3,713,560	1,907	1,022,051	3,113,270	1,405	710,803	2,310,115
Colorado	1,310	391,183	565,076	339	267,025	419,295	1,996	505,713	738,061
Connecticut	14	254	142	-	-	-	1	(D)	(D)
Delaware	1	(D)	(D)	4	1,208	147	4	2,540	3,633
Florida	257	79,448	99,441	18	19,895	25,634	58	19,906	30,154
Georgia	133	45,995	31,289	92	35,773	29,490	103	32,659	(D)
Hawaii	63	14,656	41,252	6	(D)	(D)	23	(D)	(D)
Idaho	1,973	770,392	1,471,338	393	432,283	848,275	1,251	485,641	826,519
Illinois	50	9,493	6,624	25	22,757	16,693	-	-	-
Indiana	24	12,928	6,515	21	16,636	9,244	3	960	96
Iowa	20	2,411	1,781	7	4,396	1,575	1	(D)	(D)
Kansas	718	418,457	541,264	406	349,791	542,089	1,007	487,073	695,815
Kentucky	18	637	100	1	(D)	(D)	-	-	-
Louisiana	155	83,613	93,256	111	84,331	95,086	26	15,946	18,886
Maine	9	1,549	430	-	-	-	10	1,734	(D)
Maryland	32	2,646	818	2	(D)	(D)	1	(D)	(D)
Massachusetts	148	3,153	25,585	5	120	50	31	186	(D)
Michigan	182	65,093	37,978	64	58,927	35,016	55	26,350	14,644
Minnesota	103	30,903	20,389	21	24,234	16,900	12	6,960	2,716
Mississippi	77	98,826	76,913	87	178,627	158,530	6	6,554	3,058
Missouri	141	75,230	56,347	100	106,576	65,554	13	(D)	4,512
Montana	1,017	496,680	650,282	265	209,077	299,084	647	251,795	300,277
Nebraska	1,911	1,172,301	1,443,256	1,501	1,184,618	1,325,220	1,132	649,653	822,095
Nevada	199	119,919	366,059	22	30,271	83,945	173	79,525	183,991
New Hampshire	14	39	11	-	-	-	2	(D)	(D)
New Jersey	58	10,053	10,143	10	3,493	1,402	15	2,059	2,462
New Mexico	455	160,921	351,281	72	46,588	150,410	727	117,555	257,210
New York	94	8,033	3,766	-	-	-	7	2,150	725
North Carolina	169	6,391	3,792	8	3,380	1,420	1	(D)	(D)
North Dakota	31	12,583	13,641	16	16,900	17,465	13	2,761	3,115
Ohio	24	1,890	10,035	-	-	-	1	(D)	(D)
Oklahoma	143	61,360	76,017	43	33,668	48,935	114	41,579	48,112
Oregon	1,358	338,260	712,626	108	97,931	194,493	845	187,380	411,193
Pennsylvania	89	1,441	566	34	(D)	123	42	366	140
Rhode Island	-	-	-	-	-	-	-	-	-
South Carolina	19	8,254	6,783	3	(D)	(D)	-	-	-
South Dakota	175	44,273	46,013	52	21,695	17,953	58	14,318	13,567
Tennessee	40	356	409	2	(D)	(D)	-	-	-
Texas	1,733	855,941	1,036,734	1,270	900,364	1,093,121	1,636	922,965	1,034,167
Utah	793	180,165	389,034	161	51,366	120,291	794	127,439	264,032
Vermont	10	10	3	-	-	-	2	(D)	(D)
Virginia	19	2,351	830	5	1,290	447	3	300	150
Washington	1,532	369,306	843,744	246	207,552	480,182	797	173,989	376,547
West Virginia	6	(D)	(D)	-	-	-	-	-	-
Wisconsin	99	40,095	36,068	15	34,031	27,607	34	970	518
Wyoming	625	237,444	443,505	198	103,988	218,523	702	212,225	279,981
Water Resources Areas									
WRA 01 New England	185	4,995	26,169	5	120	50	44	2,022	2,789
WRA 02 Mid-Atlantic	225	20,487	13,370	19	8,103	2,421	38	7,552	7,175
WRA 03 South Atlantic-Gulf	498	141,054	142,023	127	63,061	59,419	165	53,720	(D)
WRA 04 Great Lakes	309	84,480	50,947	77	71,591	43,952	57	26,700	14,863
WRA 05 Ohio	68	5,313	11,525	40	7,836	3,661	33	33	17
WRA 06 Tennessee	132	1,898	1,094	5	(D)	(D)	-	-	-
WRA 07 Upper Mississippi	214	68,110	52,307	66	76,658	57,598	46	(D)	2,557
WRA 08 Lower Mississippi	814	811,074	878,503	663	926,473	1,058,279	184	193,187	231,712
WRA 09 Souris-Red-Rainy	32	13,221	9,439	9	6,933	4,647	5	2,796	2,550
WRA 10 Missouri	4,406	2,162,452	2,898,929	2,232	1,740,074	2,230,519	3,576	1,385,903	1,832,321
WRA 11 Arkansas-White-Red	1,280	840,130	1,071,976	782	876,926	1,188,935	1,490	822,776	1,046,651
WRA 12 Texas-Gulf	1,373	608,259	730,460	998	478,261	601,733	972	678,572	761,901
WRA 13 Rio Grande	465	170,595	413,838	70	46,798	147,884	1,171	182,197	388,133
WRA 14 Upper Colorado	780	192,713	268,849	155	70,255	74,401	952	135,028	161,291
WRA 15 Lower Colorado	164	161,308	796,952	199	159,679	735,034	287	117,259	534,210
WRA 16 Great Basin	876	274,716	699,546	99	73,067	166,670	654	182,489	410,307
WRA 17 Pacific Northwest	4,925	1,459,682	2,921,479	766	748,562	1,527,089	2,846	832,857	1,541,449
WRA 18 California	3,809	1,301,793	3,826,188	1,915	1,027,165	3,124,179	1,488	750,271	2,415,141
WRA 19 Alaska	13	665	333	1	(D)	(D)	3	6	19
WRA 20 Hawaii	63	14,656	41,252	6	(D)	(D)	23	(D)	(D)

See footnote(s) at end of table.

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Table 40. **Barriers to Making Improvements to Reduce Energy Use or Conserve Water: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Will not be farming this operation long enough to justify improvements			Other		
	Farms	Acres irrigated [2]	Acre-feet applied [2]	Farms	Acres irrigated [2]	Acre-feet applied [2]
U.S. TOTAL . . . . . 2003 . .	6,573	1,798,734	3,672,184	17,742	5,841,855	10,842,319
1998 . .	24,670	4,334,691	7,856,227	12,640	3,495,650	6,668,005
2003 DATA						
Alabama	3	450	38	46	9,441	4,953
Alaska	1	(D)	(D)	7	653	302
Arizona	63	100,441	486,647	234	105,745	485,000
Arkansas	28	39,506	33,607	325	468,939	546,570
California	1,616	345,991	1,228,174	4,412	1,169,575	3,677,304
Colorado	151	79,087	97,186	353	180,644	338,524
Connecticut	8	8	16	37	499	205
Delaware	2	(D)	(D)	23	12,550	5,448
Florida	454	20,488	28,344	554	114,010	126,916
Georgia	69	8,237	3,260	130	76,285	38,980
Hawaii	29	3,505	(D)	66	249	643
Idaho	336	190,305	388,299	854	340,058	665,916
Illinois	32	9,015	1,686	88	31,768	24,948
Indiana	10	6,978	4,142	72	21,437	10,243
Iowa	14	2,173	927	50	13,124	7,092
Kansas	103	72,181	87,957	591	307,398	388,155
Kentucky	-	-	-	81	2,214	1,499
Louisiana	85	15,521	13,599	137	76,583	79,105
Maine	4	82	34	44	833	278
Maryland	4	140	208	15	4,474	2,004
Massachusetts	68	184	635	77	2,298	10,228
Michigan	84	21,042	11,083	132	47,964	25,651
Minnesota	34	10,633	6,013	98	58,586	49,173
Mississippi	34	46,898	44,346	67	107,372	105,010
Missouri	78	18,044	12,355	76	57,343	35,626
Montana	114	36,069	43,093	674	202,677	270,214
Nebraska	601	245,173	304,326	1,689	750,247	895,093
Nevada	23	23,553	65,807	309	90,675	217,234
New Hampshire	5	26	7	20	114	172
New Jersey	12	944	596	84	6,318	6,994
New Mexico	72	17,026	40,938	513	103,567	276,828
New York	5	60	5	107	4,700	1,977
North Carolina	8	1,858	2,134	210	13,187	14,052
North Dakota	8	2,833	1,786	35	27,400	19,560
Ohio	33	524	127	14	2,074	(D)
Oklahoma	16	9,491	12,344	228	73,882	104,543
Oregon	507	65,086	135,969	918	156,221	336,816
Pennsylvania	70	262	325	241	3,599	1,200
Rhode Island	-	-	-	5	113	(D)
South Carolina	10	2,000	2,000	135	7,225	3,062
South Dakota	20	8,568	7,127	110	35,393	39,152
Tennessee	2	(D)	(D)	3	60	42
Texas	730	233,780	275,664	1,301	515,071	723,286
Utah	194	30,631	63,328	692	139,718	350,226
Vermont	-	-	-	26	203	(D)
Virginia	-	-	-	142	8,395	2,245
Washington	608	85,497	180,058	1,453	351,864	738,733
West Virginia	-	-	-	13	58	(D)
Wisconsin	60	12,430	11,447	72	57,158	52,729
Wyoming	165	30,930	74,164	179	81,894	155,585
Water Resources Areas						
WRA 01 New England	85	300	692	195	3,916	11,190
WRA 02 Mid-Atlantic	60	2,181	1,199	396	37,680	18,469
WRA 03 South Atlantic-Gulf	544	33,033	35,775	955	214,730	184,510
WRA 04 Great Lakes	108	26,539	14,169	220	61,208	34,159
WRA 05 Ohio	66	557	144	293	12,371	6,343
WRA 06 Tennessee	2	(D)	(D)	134	5,817	3,521
WRA 07 Upper Mississippi	119	32,567	19,910	298	141,965	115,483
WRA 08 Lower Mississippi	152	104,652	87,309	512	620,352	669,014
WRA 09 Souris-Red-Rainy	5	2,670	1,383	32	31,905	26,832
WRA 10 Missouri	1,052	381,320	503,141	2,917	1,212,210	1,547,570
WRA 11 Arkansas-White-Red	173	161,463	181,370	1,071	635,192	850,234
WRA 12 Texas-Gulf	675	172,318	225,325	998	300,750	430,981
WRA 13 Rio Grande	74	10,046	21,960	391	92,557	245,016
WRA 14 Upper Colorado	140	26,683	39,091	399	112,714	255,345
WRA 15 Lower Colorado	63	100,441	486,647	248	109,455	492,735
WRA 16 Great Basin	129	47,104	111,988	947	226,109	529,285
WRA 17 Pacific Northwest	1,467	342,693	701,129	3,218	829,249	1,679,535
WRA 18 California	1,629	350,386	1,238,651	4,445	1,192,773	3,741,153
WRA 19 Alaska	1	(D)	(D)	7	653	302
WRA 20 Hawaii	29	3,505	(D)	66	249	643

[1] Respondents could choose more than one barrier to improvement.
[2] Acres irrigated and acre-feet applied are totals for all irrigation on these farms.

Table 41. **Source of Irrigation Information Relied on to Reduce Irrigation Costs or to Conserve Water: 2003 and 1998**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Total [1]		Extension agents or university specialists		Private irrigation specialists or consultants		Irrigation equipment dealers		Irrigation district or water supplier	
	Farms	Acres irrigated [2]	Farms	Acres irrigated [2]	Farms	Acres irrigated [2]	Farms	Acres irrigated [2]	Farms	Acres irrigated [2]
U.S. TOTAL . . . . . 2003 . .	220,163	52,583,431	72,498	21,593,616	32,462	16,003,669	52,233	18,611,979	31,431	7,266,219
1998 . .	167,760	43,382,118	69,372	21,732,619	17,357	10,811,453	57,669	20,750,691	30,160	6,283,778
2003 DATA										
Alabama	578	52,722	213	28,126	72	9,218	112	25,510	-	-
Alaska	73	2,252	14	410	-	-	10	500	-	-
Arizona	2,777	836,587	881	400,671	160	175,736	441	165,485	544	140,276
Arkansas	4,834	3,944,867	2,587	2,387,395	782	874,534	971	886,769	234	185,900
California	46,841	8,471,936	13,578	3,170,696	8,345	2,786,934	9,043	2,463,138	9,191	1,968,422
Colorado	11,567	2,562,329	2,770	921,116	1,573	829,254	2,361	728,842	2,336	350,747
Connecticut	234	2,213	48	878	32	451	44	965	2	(D)
Delaware	213	69,088	100	34,225	52	16,409	134	34,706	-	-
Florida	8,335	1,497,653	2,866	770,718	667	365,707	1,849	318,283	146	81,971
Georgia	2,847	710,893	1,504	378,675	169	96,247	983	297,680	14	6,848
Hawaii	1,214	78,538	221	55,071	92	22,254	181	66,329	27	189
Idaho	14,303	3,126,857	3,527	1,220,838	1,073	1,019,218	3,767	1,589,895	3,059	610,854
Illinois	1,195	374,919	348	111,925	148	79,174	563	249,589	8	3,787
Indiana	1,193	276,294	241	84,805	146	49,183	534	164,879	28	3,225
Iowa	709	134,164	241	53,223	83	28,417	265	70,972	13	1,274
Kansas	4,878	2,543,950	1,834	861,744	2,460	1,549,317	1,516	949,483	476	245,569
Kentucky	943	20,685	264	8,262	34	1,280	190	9,455	-	-
Louisiana	2,280	838,717	1,112	451,840	248	125,751	660	263,672	124	56,001
Maine	507	18,163	242	6,432	46	6,699	132	10,097	6	374
Maryland	509	53,734	127	20,191	73	19,796	207	37,667	-	-
Massachusetts	842	16,151	367	9,456	106	3,906	249	8,791	32	(D)
Michigan	2,366	432,665	1,039	188,051	283	151,940	944	306,098	57	22,164
Minnesota	1,639	434,500	635	203,740	206	116,362	615	234,602	18	13,495
Mississippi	1,567	1,169,793	892	671,885	160	212,962	623	397,590	33	63,089
Missouri	1,966	1,020,728	847	505,352	206	161,750	722	401,887	36	27,602
Montana	8,625	2,131,955	2,396	773,687	564	333,660	1,403	800,992	1,036	351,855
Nebraska	16,278	7,516,171	6,116	2,723,789	5,372	3,245,467	4,669	2,919,628	1,057	623,967
Nevada	1,722	639,310	509	198,541	66	62,876	266	196,803	289	103,686
New Hampshire	161	818	95	444	6	(D)	58	(D)	-	-
New Jersey	807	46,679	358	34,888	65	9,176	294	34,013	2	(D)
New Mexico	6,741	769,787	2,078	211,088	480	147,767	403	176,996	1,897	65,481
New York	1,284	48,545	364	23,604	37	3,765	270	24,471	3	945
North Carolina	2,281	101,055	1,250	58,025	349	30,996	669	49,124	7	910
North Dakota	541	207,772	245	91,614	113	64,108	216	96,816	40	18,481
Ohio	670	14,476	209	3,783	49	2,222	220	8,703	-	-
Oklahoma	1,819	508,842	536	122,026	296	159,211	587	165,949	36	28,744
Oregon	14,205	1,731,660	5,480	706,524	1,850	355,759	3,936	650,951	2,129	233,948
Pennsylvania	1,589	19,633	701	10,130	175	4,007	590	12,188	3	180
Rhode Island	58	648	22	178	2	(D)	5	(D)	-	-
South Carolina	951	52,046	361	25,003	42	12,758	343	29,749	3	1,940
South Dakota	1,444	390,406	596	171,303	197	79,522	403	151,205	121	24,224
Tennessee	759	34,429	236	14,148	42	12,384	243	16,352	3	(D)
Texas	15,441	4,947,745	4,905	2,096,749	1,990	1,670,233	3,264	1,843,554	2,480	1,250,768
Utah	10,070	1,082,213	3,302	503,088	1,052	190,177	1,744	346,973	2,234	202,950
Vermont	204	825	75	358	7	37	61	397	-	-
Virginia	905	33,635	540	15,655	104	12,718	219	16,404	116	696
Washington	12,862	1,806,782	3,715	590,356	1,945	687,819	3,793	848,748	2,427	209,152
West Virginia	100	801	31	215	10	100	22	178	-	-
Wisconsin	1,414	391,763	378	152,739	170	76,033	732	276,807	8	7,876
Wyoming	4,822	1,415,037	1,502	519,956	263	140,245	707	261,692	1,156	357,236
Water Resources Areas										
WRA 01 New England	1,917	38,410	808	17,556	199	11,223	514	20,448	40	652
WRA 02 Mid-Atlantic	4,142	233,602	1,667	122,337	469	62,114	1,376	141,157	121	(D)
WRA 03 South Atlantic-Gulf	15,567	2,410,814	6,453	1,248,518	1,284	508,646	4,174	714,617	170	91,669
WRA 04 Great Lakes	3,694	611,881	1,487	261,257	421	183,223	1,355	425,579	69	24,909
WRA 05 Ohio	2,928	220,290	826	71,393	119	22,903	942	130,006	20	1,725
WRA 06 Tennessee	891	31,065	352	19,745	28	10,724	290	16,938	2	(D)
WRA 07 Upper Mississippi	4,359	1,145,841	1,378	429,130	574	261,047	1,996	721,193	44	26,472
WRA 08 Lower Mississippi	7,817	6,199,006	4,213	3,633,703	1,163	1,223,395	2,007	1,716,704	312	305,795
WRA 09 Souris-Red-Rainy	491	183,590	247	84,549	95	61,206	208	75,815	10	2,910
WRA 10 Missouri	34,813	12,922,399	12,049	4,859,045	7,936	4,723,436	8,681	4,901,371	4,411	1,527,774
WRA 11 Arkansas-White-Red	10,805	5,285,088	3,422	1,933,068	3,555	2,539,687	2,659	1,769,045	708	701,838
WRA 12 Texas-Gulf	12,439	3,284,293	4,175	1,350,468	1,243	807,065	2,715	1,155,028	2,032	769,236
WRA 13 Rio Grande	6,844	799,492	1,886	295,053	629	217,206	544	236,454	2,013	93,310
WRA 14 Upper Colorado	9,068	1,366,203	2,223	433,064	365	94,412	1,719	244,941	1,740	266,607
WRA 15 Lower Colorado	3,393	897,445	1,228	425,009	236	181,356	681	185,048	603	143,376
WRA 16 Great Basin	9,821	1,516,775	3,318	630,838	865	251,572	1,619	527,993	2,153	278,443
WRA 17 Pacific Northwest	42,003	6,679,626	12,644	2,475,722	4,813	2,011,434	10,776	3,011,220	7,302	1,016,773
WRA 18 California	47,884	8,676,821	13,887	3,247,680	8,376	2,810,766	9,786	2,551,593	9,654	2,013,150
WRA 19 Alaska	73	2,252	14	410	-	-	10	500	-	-
WRA 20 Hawaii	1,214	78,538	221	55,071	92	22,254	181	66,329	27	189

See footnote(s) at end of table.

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Table 41. **Source of Irrigation Information Relied on to Reduce Irrigation Costs or to Conserve Water: 2003 and 1998** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	NRCS, local conservation district, other Federal or State agencies		Media reports		Neighboring farmers		Electronic information services (DTN and other internet links)		Other	
	Farms	Acres irrigated [2]	Farms	Acres irrigated [2]	Farms	Acres irrigated [2]	Farms	Acres irrigated [2]	Farms	Acres irrigated [2]
U.S. TOTAL . . . . . 2003 . .	30,544	10,407,323	25,573	7,832,885	117,145	26,341,525	13,036	5,676,029	15,136	3,038,442
1998 . .	30,066	12,323,638	27,435	9,299,941	82,625	21,543,738	(NA)	(NA)	15,020	2,305,898
2003 DATA										
Alabama	36	6,383	46	5,068	300	26,994	21	2,167	24	2,237
Alaska	-	-	1	(D)	54	820	4	36	16	1,023
Arizona	405	279,251	365	114,992	1,496	426,109	366	65,545	293	71,229
Arkansas	1,036	960,426	546	376,871	2,728	1,968,590	297	266,160	424	240,437
California	4,566	1,051,217	6,238	1,316,799	25,801	4,393,975	2,257	897,220	2,683	450,478
Colorado	2,302	695,989	1,021	309,896	6,729	1,299,867	515	309,916	1,161	164,534
Connecticut	16	518	30	213	98	1,297	11	112	47	104
Delaware	10	2,541	42	12,747	114	35,651	11	2,999	8	1,488
Florida	584	392,589	580	47,125	4,546	707,719	582	182,491	447	46,506
Georgia	241	76,165	284	32,418	1,253	322,024	114	27,372	103	28,502
Hawaii	95	(D)	91	(D)	715	7,243	38	44,602	161	(D)
Idaho	1,737	561,092	1,260	456,334	8,866	1,683,211	451	362,838	760	192,603
Illinois	51	21,019	146	45,954	580	159,735	108	35,662	87	18,044
Indiana	17	6,208	120	28,294	693	146,825	51	22,255	63	15,157
Iowa	22	(D)	122	29,920	353	56,591	53	18,277	44	3,652
Kansas	603	394,916	926	388,519	2,173	1,195,565	633	309,546	216	61,950
Kentucky	51	1,137	45	(D)	605	10,582	31	779	66	1,007
Louisiana	405	193,438	135	80,640	1,146	397,231	69	44,048	87	32,440
Maine	49	2,113	9	1,399	225	7,007	6	501	72	439
Maryland	17	4,122	75	6,180	288	25,482	35	5,371	18	3,476
Massachusetts	222	6,255	139	1,936	400	4,262	79	790	87	1,214
Michigan	191	55,612	277	62,252	927	164,441	206	79,632	169	28,077
Minnesota	111	36,982	186	66,204	806	231,429	135	57,320	97	10,902
Mississippi	211	280,308	133	177,810	768	601,613	43	78,212	367	37,080
Missouri	178	177,867	214	144,823	1,030	549,480	192	71,231	106	51,424
Montana	1,983	662,018	515	308,940	5,589	1,116,999	182	166,955	455	138,467
Nebraska	2,258	1,274,009	2,709	1,516,137	7,195	3,311,276	1,549	903,704	1,727	558,449
Nevada	463	225,464	149	53,194	1,089	335,414	104	48,884	187	61,911
New Hampshire	12	70	14	105	60	412	14	21	25	45
New Jersey	105	14,348	95	6,353	285	13,924	75	3,280	64	1,656
New Mexico	1,158	208,817	622	74,461	3,859	490,722	172	64,550	450	19,306
New York	26	4,593	51	4,759	810	23,658	101	6,801	236	5,961
North Carolina	380	17,207	256	9,941	1,195	34,495	295	8,754	11	2,580
North Dakota	80	28,193	58	22,727	261	89,333	40	25,421	36	16,136
Ohio	18	159	63	1,198	399	4,622	52	295	31	259
Oklahoma	337	77,684	153	77,634	779	258,170	99	42,258	297	39,400
Oregon	1,007	272,061	1,751	227,057	6,318	938,329	689	119,670	644	142,842
Pennsylvania	53	1,385	156	2,869	948	6,438	187	3,744	95	(D)
Rhode Island	3	91	9	161	26	431	9	153	8	36
South Carolina	177	11,771	18	4,596	473	26,647	118	5,401	12	725
South Dakota	225	69,110	275	73,501	793	194,447	128	48,027	124	25,884
Tennessee	46	2,452	58	4,335	480	12,591	36	7,107	62	1,917
Texas	3,725	1,015,038	2,307	1,038,238	6,826	2,613,756	1,183	684,463	1,610	290,239
Utah	2,213	355,623	1,170	154,404	5,730	544,846	489	109,358	572	58,172
Vermont	6	6	12	39	109	459	5	10	17	144
Virginia	176	1,340	156	4,731	352	9,880	196	2,379	61	1,091
Washington	1,527	365,877	1,255	276,753	7,193	909,623	647	305,197	526	69,401
West Virginia	12	12	8	56	65	445	5	5	7	(D)
Wisconsin	30	13,030	171	39,400	615	148,505	122	60,580	89	22,237
Wyoming	1,368	529,936	511	212,312	3,002	832,360	231	173,930	184	71,822
Water Resources Areas										
WRA 01 New England	308	9,053	201	3,814	875	13,643	119	1,577	245	1,862
WRA 02 Mid-Atlantic	315	26,492	536	33,933	2,108	97,325	576	21,910	426	(D)
WRA 03 South Atlantic-Gulf	1,386	500,787	1,095	100,605	7,984	1,115,468	1,020	224,651	925	79,945
WRA 04 Great Lakes	217	57,476	373	79,082	1,641	239,901	277	98,299	286	39,061
WRA 05 Ohio	71	9,539	227	22,435	1,804	99,155	114	24,775	166	16,408
WRA 06 Tennessee	145	(D)	145	(D)	602	15,075	125	3,696	46	2,058
WRA 07 Upper Mississippi	200	60,379	540	140,574	2,176	542,069	394	131,496	231	49,669
WRA 08 Lower Mississippi	1,517	1,436,501	762	667,887	3,956	3,058,359	329	375,041	550	302,295
WRA 09 Souris-Red-Rainy	52	27,274	33	26,217	183	83,111	29	23,073	71	16,274
WRA 10 Missouri	5,980	2,816,557	5,320	2,456,166	17,867	5,939,643	2,602	1,536,560	2,954	850,611
WRA 11 Arkansas-White-Red	2,064	965,889	1,485	971,907	5,387	2,840,067	1,286	853,219	651	218,007
WRA 12 Texas-Gulf	2,703	735,183	1,797	530,569	6,090	1,745,143	857	301,973	1,129	226,777
WRA 13 Rio Grande	1,311	204,310	631	92,421	3,170	412,897	189	68,805	846	32,092
WRA 14 Upper Colorado	2,274	447,522	241	104,718	5,758	830,721	125	69,750	905	101,702
WRA 15 Lower Colorado	678	305,915	374	118,650	1,799	456,723	441	68,932	298	74,129
WRA 16 Great Basin	1,863	464,976	1,213	201,861	5,794	759,779	538	173,410	583	101,785
WRA 17 Pacific Northwest	4,747	1,196,500	4,171	925,465	23,066	3,601,784	1,714	755,604	1,889	387,538
WRA 18 California	4,618	1,089,774	6,337	1,342,343	26,116	4,482,599	2,259	898,620	2,758	482,764
WRA 19 Alaska	-	-	1	(D)	54	820	4	36	16	1,023
WRA 20 Hawaii	95	(D)	91	(D)	715	7,243	38	44,602	161	(D)

[1] Respondents could choose more than one source of information.
[2] Acres irrigated are totals for all irrigation on these farms.

Table 42. **Discontinuance of All Irrigation since 2002 by Reason: 2003**

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms that discontinued irrigation since 2002				Reason of discontinuance [1]					
	Farms	Acres irrigated in 2002 [2]	Farms reporting discontinuance to be permanent		Sufficient soil moisture		Shortage of surface water		Shortage of ground water	
			Farms	Acres irrigated in 2002 [2]	Farms	Acres irrigated in 2002 [2]	Farms	Acres irrigated in 2002 [2]	Farms	Acres irrigated in 2002 [2]
U.S. TOTAL . . . . . 2003 . .	32,422	1,789,503	2,770	149,202	27,010	1,453,010	1,608	101,842	1,084	23,159
1998 . .	23,675	1,360,312	4,063	281,698	5,970	328,007	1,246	56,595	955	26,423
2003 DATA										
Alabama	579	28,510	75	3,729	534	27,368	13	25	-	-
Alaska	7	(D)	4	4	3	(D)	-	-	-	-
Arizona	473	13,159	-	-	367	8,492	6	1,212	81	1,935
Arkansas	503	57,143	106	6,909	479	47,218	-	-	-	-
California	2,250	111,397	4	4,640	1,846	62,966	-	-	-	-
Colorado	1,369	81,738	259	9,756	733	42,486	576	24,610	266	13,324
Connecticut	128	1,254	11	61	120	1,222	-	-	2	(D)
Delaware	143	23,279	1	(D)	126	21,162	-	-	-	-
Florida	1,596	63,630	283	9,526	1,302	53,434	-	-	-	-
Georgia	1,469	123,726	46	9,193	1,410	121,047	-	-	-	-
Hawaii	237	1,054	2	(D)	229	1,046	-	-	-	-
Idaho	138	40,864	-	-	129	30,380	1	(D)	-	-
Illinois	183	9,529	14	(D)	169	9,116	-	-	-	-
Indiana	563	28,208	41	785	483	27,243	-	-	-	-
Iowa	137	8,953	10	1,582	117	8,312	9	45	-	-
Kansas	471	87,189	4	6,812	344	67,833	36	4,320	74	1,036
Kentucky	1,926	16,198	105	434	1,834	15,578	14	35	-	-
Louisiana	414	58,458	27	7,719	353	43,215	-	-	-	-
Maine	119	1,993	2	(D)	84	1,817	-	-	-	-
Maryland	309	20,060	5	646	296	18,066	-	-	-	-
Massachusetts	160	1,966	63	188	97	1,871	-	-	32	64
Michigan	664	22,548	71	2,097	466	18,480	10	1,240	2	(D)
Minnesota	290	29,073	24	2,094	213	21,391	4	2,384	-	-
Mississippi	501	41,221	13	1,851	486	35,521	-	-	-	-
Missouri	651	36,958	112	967	570	32,058	4	1,560	4	1,560
Montana	1,154	64,116	65	4,290	692	50,298	235	8,988	163	815
Nebraska	211	43,188	82	19,434	119	41,900	19	11,666	-	-
Nevada	35	22,810	8	4,360	20	18,840	-	-	-	-
New Hampshire	90	225	12	33	74	206	5	14	5	14
New Jersey	444	12,121	35	472	413	11,075	-	-	-	-
New Mexico	655	64,646	-	-	431	39,928	171	22,840	5	1,570
New York	914	29,660	62	780	908	28,613	3	1,037	1	(D)
North Carolina	2,545	125,125	368	12,784	2,519	122,553	3	600	3	600
North Dakota	57	6,979	8	764	45	5,933	12	1,046	-	-
Ohio	626	10,057	118	439	550	(D)	-	-	-	-
Oklahoma	506	27,140	91	3,450	355	18,159	-	-	-	-
Oregon	725	43,629	11	2,640	347	38,127	14	(D)	-	-
Pennsylvania	826	12,674	9	351	772	12,335	9	105	3	45
Rhode Island	43	243	4	8	38	201	-	-	4	(D)
South Carolina	545	24,351	26	1,180	535	23,976	-	-	-	-
South Dakota	185	21,425	-	-	157	17,585	2	(D)	-	-
Tennessee	786	8,640	62	277	726	8,406	2	(D)	-	-
Texas	2,718	236,605	412	25,234	2,211	187,081	382	764	382	764
Utah	509	20,647	3	1,650	267	15,688	20	3,350	-	-
Vermont	72	395	5	(D)	71	375	-	-	-	-
Virginia	1,746	45,161	96	1,422	1,654	41,977	57	171	57	171
Washington	1,185	37,691	-	-	781	24,681	-	-	-	-
West Virginia	156	(D)	11	16	144	778	-	-	-	-
Wisconsin	270	8,746	-	-	253	8,729	-	-	-	-
Wyoming	139	13,765	-	-	138	10,265	1	(D)	-	-
Water Resources Areas										
WRA 01 New England	560	5,785	92	316	433	5,421	5	14	43	102
WRA 02 Mid-Atlantic	2,682	100,275	113	3,007	2,496	93,295	9	105	-	-
WRA 03 South Atlantic-Gulf	7,754	391,447	820	36,957	7,298	372,877	73	796	60	771
WRA 04 Great Lakes	1,548	48,933	92	2,200	1,312	41,282	13	2,277	3	1,237
WRA 05 Ohio	3,437	47,769	328	(D)	3,229	45,933	16	235	3	45
WRA 06 Tennessee	831	(D)	48	262	788	8,989	-	-	-	-
WRA 07 Upper Mississippi	1,000	51,530	94	1,116	855	43,157	13	1,605	4	1,560
WRA 08 Lower Mississippi	837	148,517	173	17,361	729	120,187	-	-	-	-
WRA 09 Souris-Red-Rainy	51	13,211	6	2,556	39	10,955	4	2,384	-	-
WRA 10 Missouri	2,181	204,474	262	34,155	1,411	160,659	357	32,400	290	7,151
WRA 11 Arkansas-White-Red	1,904	224,174	99	15,802	1,042	151,643	694	42,150	218	9,594
WRA 12 Texas-Gulf	2,891	169,623	407	10,364	2,393	141,489	382	(D)	382	764
WRA 13 Rio Grande	214	47,552	1	(D)	88	27,810	-	-	-	-
WRA 14 Upper Colorado	741	22,878	203	406	740	19,378	1	(D)	-	-
WRA 15 Lower Colorado	478	15,159	-	-	372	(D)	6	1,212	81	1,935
WRA 16 Great Basin	429	36,377	11	6,010	172	27,448	20	3,350	-	-
WRA 17 Pacific Northwest	2,377	134,829	11	2,640	1,522	102,633	15	11,050	-	-
WRA 18 California	2,263	116,197	4	4,640	1,859	67,766	-	-	-	-
WRA 19 Alaska	7	(D)	4	4	3	(D)	-	-	-	-
WRA 20 Hawaii	237	1,054	2	(D)	229	1,046	-	-	-	-

See footnote(s) at end of table.

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Table 42. **Discontinuance of All Irrigation since 2002 by Reason: 2003** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Reason of discontinuance [1]							
	Irrigation is uneconomical		Abandoned irrigation because of land degradation (erosion, salinity, etc.)		Loss of water rights		Sold or leased water	
	Farms	Acres irrigated in 2002 [2]	Farms	Acres irrigated in 2002 [2]	Farms	Acres irrigated in 2002 [2]	Farms	Acres irrigated in 2002 [2]
U.S. TOTAL . . . . . 2003 . .	1,781	86,292	159	17,124	-	-	270	35,369
1998 . .	1,213	81,283	(NA)	(NA)	8	16	44	4,816
2003 DATA								
Alabama	48	1,163	-	-	-	-	-	-
Alaska	4	4	-	-	-	-	-	-
Arizona	37	2,510	-	-	-	-	-	-
Arkansas	19	3,420	-	-	-	-	-	-
California	397	16,440	-	-	-	-	49	23,471
Colorado	53	5,300	-	-	-	-	4	4,800
Connecticut	10	(D)	-	-	-	-	-	-
Delaware	2	(D)	-	-	-	-	-	-
Florida	358	10,993	-	-	-	-	-	-
Georgia	19	1,520	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-
Illinois	-	-	-	-	-	-	-	-
Indiana	21	736	-	-	-	-	-	-
Iowa	2	(D)	-	-	-	-	-	-
Kansas	-	-	-	-	-	-	-	-
Kentucky	14	133	-	-	-	-	-	-
Louisiana	-	-	2	(D)	-	-	-	-
Maine	1	(D)	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	3	270
Massachusetts	-	-	-	-	-	-	-	-
Michigan	2	(D)	-	-	-	-	-	-
Minnesota	15	2,250	-	-	-	-	-	-
Mississippi	-	-	-	-	-	-	-	-
Missouri	9	864	-	-	-	-	-	-
Montana	64	3,200	-	-	-	-	-	-
Nebraska	-	-	-	-	-	-	-	-
Nevada	2	(D)	-	-	-	-	-	-
New Hampshire	3	3	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	-	-
New Mexico	72	4,158	5	1,570	-	-	-	-
New York	6	1,347	-	-	-	-	-	-
North Carolina	-	-	-	-	-	-	-	-
North Dakota	5	260	5	(D)	-	-	-	-
Ohio	-	-	-	-	-	-	-	-
Oklahoma	123	6,663	-	-	-	-	-	-
Oregon	-	-	-	-	-	-	-	-
Pennsylvania	-	-	-	-	-	-	-	-
Rhode Island	4	4	-	-	-	-	-	-
South Carolina	10	532	-	-	-	-	-	-
South Dakota	23	805	-	-	-	-	-	-
Tennessee	3	45	-	-	-	-	-	-
Texas	441	18,332	13	7,774	-	-	-	-
Utah	-	-	-	-	-	-	80	3,210
Vermont	-	-	-	-	-	-	-	-
Virginia	9	162	-	-	-	-	-	-
Washington	3	1,638	134	5,360	-	-	134	3,618
West Virginia	-	-	-	-	-	-	-	-
Wisconsin	2	(D)	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-
Water Resources Areas								
WRA 01 New England	18	119	-	-	-	-	-	-
WRA 02 Mid-Atlantic	5	768	-	-	-	-	3	270
WRA 03 South Atlantic-Gulf	444	14,370	-	-	-	-	-	-
WRA 04 Great Lakes	5	1,317	-	-	-	-	-	-
WRA 05 Ohio	36	254	-	-	-	-	-	-
WRA 06 Tennessee	-	-	-	-	-	-	-	-
WRA 07 Upper Mississippi	12	1,460	-	-	-	-	-	-
WRA 08 Lower Mississippi	9	864	2	(D)	-	-	-	-
WRA 09 Souris-Red-Rainy	2	(D)	-	-	-	-	-	-
WRA 10 Missouri	88	7,675	5	(D)	-	-	4	4,800
WRA 11 Arkansas-White-Red	150	22,143	5	1,570	-	-	-	-
WRA 12 Texas-Gulf	433	6,272	13	7,774	-	-	-	-
WRA 13 Rio Grande	72	4,158	-	-	-	-	-	-
WRA 14 Upper Colorado	-	-	-	-	-	-	7	1,750
WRA 15 Lower Colorado	37	2,510	-	-	-	-	-	-
WRA 16 Great Basin	2	(D)	-	-	-	-	73	1,460
WRA 17 Pacific Northwest	67	4,838	134	5,360	-	-	134	3,618
WRA 18 California	397	16,440	-	-	-	-	49	23,471
WRA 19 Alaska	4	4	-	-	-	-	-	-
WRA 20 Hawaii	-	-	-	-	-	-	-	-

See footnote(s) at end of table.

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Table 42. **Discontinuance of All Irrigation since 2002 by Reason: 2003** - Con.

[Excludes abnormal and horticultural specialty farms. For meaning of abbreviations and symbols, see introductory text]

Geographic area	Reason of discontinuance [1]							
	Coverted to non-agricultural uses		Converted to agricultural enterprise that does not require irrigation		Available surface water too salty due to drought conditions		Other	
	Farms	Acres irrigated in 2002 [2]	Farms	Acres irrigated in 2002 [2]	Farms	Acres irrigated in 2002 [2]	Farms	Acres irrigated in 2002 [2]
U.S. TOTAL . . . . . 2003 . .	68	3,611	2,380	150,615	190	13,214	16,375	934,355
1998 . .	301	13,787	15,595	888,184	(NA)	(NA)	426	40,735
2003 DATA								
Alabama	6	84	29	762	-	-	307	11,877
Alaska	-	-	-	-	-	-	3	(D)
Arizona	-	-	-	-	-	-	367	8,492
Arkansas	-	-	-	-	-	-	401	28,379
California	-	-	8	18,520	104	10,400	1,796	52,966
Colorado	-	-	56	9,842	-	-	733	42,486
Connecticut	-	-	-	-	-	-	47	142
Delaware	-	-	15	2,015	-	-	42	2,203
Florida	-	-	40	5,820	-	-	1,052	43,734
Georgia	-	-	59	2,679	-	-	414	20,812
Hawaii	-	-	8	8	9	9	95	625
Idaho	-	-	8	4,384	-	-	129	30,380
Illinois	7	350	14	(D)	1	(D)	132	6,917
Indiana	19	19	42	927	-	-	378	18,917
Iowa	-	-	11	596	-	-	79	6,391
Kansas	-	-	16	10,600	-	-	344	67,833
Kentucky	-	-	78	585	16	160	511	2,886
Louisiana	12	1,560	47	11,523	-	-	223	28,347
Maine	-	-	34	116	-	-	38	291
Maryland	-	-	10	1,724	24	24	97	1,892
Massachusetts	-	-	31	31	-	-	65	323
Michigan	-	-	188	2,828	-	-	314	11,057
Minnesota	-	-	64	7,092	1	(D)	154	18,747
Mississippi	-	-	15	5,700	2	(D)	413	13,521
Missouri	-	-	68	2,476	-	-	419	25,652
Montana	-	-	163	1,630	-	-	529	47,038
Nebraska	-	-	92	1,288	-	-	119	41,900
Nevada	-	-	17	5,970	-	-	20	18,840
New Hampshire	5	14	13	(D)	-	-	45	129
New Jersey	-	-	32	384	-	-	98	976
New Mexico	5	1,570	-	-	-	-	431	39,928
New York	-	-	5	250	-	-	435	4,970
North Carolina	-	-	132	2,190	-	-	748	18,478
North Dakota	-	-	-	-	5	260	35	5,120
Ohio	14	14	67	2,778	-	-	217	1,511
Oklahoma	-	-	28	2,318	-	-	278	13,493
Oregon	-	-	367	2,202	-	-	336	35,487
Pennsylvania	-	-	51	324	2	(D)	115	1,989
Rhode Island	-	-	5	42	-	-	17	54
South Carolina	-	-	10	375	-	-	273	7,575
South Dakota	-	-	26	2,760	-	-	116	15,105
Tennessee	-	-	63	264	-	-	261	2,207
Texas	-	-	66	31,192	-	-	1,779	167,036
Utah	-	-	149	(D)	-	-	267	15,688
Vermont	-	-	1	(D)	-	-	55	189
Virginia	-	-	104	3,766	9	126	443	7,625
Washington	-	-	136	4,032	-	-	781	24,681
West Virginia	-	-	12	24	-	-	51	(D)
Wisconsin	-	-	-	-	17	17	235	8,313
Wyoming	-	-	-	-	-	-	138	10,265
Water Resources Areas								
WRA 01 New England	5	14	83	205	-	-	232	1,043
WRA 02 Mid-Atlantic	-	-	179	5,931	26	184	613	13,329
WRA 03 South Atlantic-Gulf	6	84	304	14,014	9	126	3,192	105,120
WRA 04 Great Lakes	-	-	227	5,678	-	-	843	17,524
WRA 05 Ohio	33	33	167	1,898	16	160	1,131	20,392
WRA 06 Tennessee	-	-	43	176	-	-	397	(D)
WRA 07 Upper Mississippi	7	350	88	6,332	18	(D)	637	36,548
WRA 08 Lower Mississippi	12	1,560	80	17,241	2	(D)	473	72,571
WRA 09 Souris-Red-Rainy	-	-	12	2,816	1	(D)	28	9,504
WRA 10 Missouri	-	-	349	16,495	5	260	1,324	155,868
WRA 11 Arkansas-White-Red	5	1,570	36	7,118	-	-	917	135,649
WRA 12 Texas-Gulf	-	-	65	21,862	-	-	1,961	121,444
WRA 13 Rio Grande	-	-	54	15,584	-	-	88	27,810
WRA 14 Upper Colorado	-	-	-	-	-	-	740	19,378
WRA 15 Lower Colorado	-	-	-	-	-	-	372	10,492
WRA 16 Great Basin	-	-	166	6,119	-	-	172	27,448
WRA 17 Pacific Northwest	-	-	511	10,618	-	-	1,348	96,733
WRA 18 California	-	-	8	18,520	104	10,400	1,809	57,766
WRA 19 Alaska	-	-	-	-	-	-	3	(D)
WRA 20 Hawaii	-	-	8	8	9	9	95	625

[1] Repondents could choose more than one reason for not irrigating in 2003.
[2] Acres irrigated are totals for all irrigation on these farms. Data on acres irrigated in 2002 for these farms were acquired from the 2002 Census of Agriculture results.

Appendix
Report Forms and Instruction Sheets

The report forms and instruction sheets are shown on the following pages.

DUE BY FEBRUARY 20, 2004

OMB No. 0535-0234: Approval Expires 12/31/2004

NOTICE - Response to this inquiry is required by law (Title 7, U.S. Code). By the same law, YOUR REPORT IS CONFIDENTIAL and it will only be used for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.

2003 FARM AND RANCH IRRIGATION SURVEY

Form Number: 03-A62
(10/28/03)

United States Department of Agriculture

Please return your completed report to:

Census of Agriculture
1201 East 10th Street
Jeffersonville, IN 47132

OFFICE USE ONLY		
016	017	018

USE BLUE OR BLACK BALL POINT PEN

Please make corrections to name, address, and ZIP Code if necessary.

We need to receive your report. The statistical sampling procedures we follow do not allow other farms or ranches to take your place in this survey. If you have any questions about this report call us on our toll-free number **1-888-424-7828**.

If you received extra report forms for the **SAME** operation, complete one form and return **all** others in the same envelope.

Thank you for taking part in this effort to improve the quality of agricultural statistics.

National Agricultural Statistics Service

SECTION 1 **ACREAGE IN 2003**

Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization named on the label above.

*(**Include** ALL LAND, REGARDLESS OF LOCATION OR USE - cropland, Conservation Reserve Program (CRP) and Wetlands Reserve Program (WRP) land, pastureland, rangeland, wasteland, woodland, idle land, farmsteads, etc. **Exclude** land used on a per-head or animal unit month (AUM) basis under a grazing permit.)*

	None		NUMBER OF ACRES
1. All **land owned** →	☐	025	
2. All **land rented or leased FROM OTHERS,** including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. *(**Include** Federal, State, and railroad land leased on a per-acre basis. **Exclude** all land (i.e., private, Federal, State, railroad, etc.) used on a per-head or animal unit month (AUM) basis under a grazing permit.)* →	☐	026 +	
3. All **land rented or leased TO OTHERS,** including land worked on shares by others and land subleased →	☐	027 -	
4. **TOTAL ACRES IN "THIS OPERATION"** - *(Items 1 + 2 - 3 = 4)* →		028 =	

PENALTY FOR FAILURE TO REPORT

062018

SECTION 2 **LAND USED IN 2003**

Distribute all acres in **"THIS OPERATION"** in column 1. Distribute all irrigated land in **"THIS OPERATION"** in column 2, items 1 through 4. If the same land had more than one use in 2003, report that land only once in the first use listed below that applies.

For column 2, in addition to fully irrigated land, report as irrigated any land to which partial, supplemental, or semi-irrigation was applied. Also include any acreage which received only preplant irrigation (watered before planting). Hayland, pastureland or rangeland should be reported as irrigated if spring flood water was spread by canals, ditches, spreader dikes, pipes, or other works.

	None		Column 1 TOTAL ACRES	None		Column 2 ACRES IRRIGATED
1. Cropland - *Report acres only once in one of the following categories*						
a. **Cropland harvested -** ***Include*** *all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, and vineyards* →	☐	029		☐	030	
b. **Cropland used only for pasture or grazing -** ***Include*** *rotation pasture and grazing land that could have been used for crops without additional improvements* →	☐	031		☐	032	
c. **Other cropland -** ***Include*** *cropland used for cover crops, cropland on which all crops failed, cropland in cultivated summer fallow, and cropland idle* →	☐	033		☐	034	
2. Woodland - ***Include*** *woodland pastured and woodland not pastured* →	☐	035				
3. Other pastured land and rangeland - ***Include*** *any pastured land other than cropland and woodland pastured* →	☐	037		☐	038	
4. All other land - ***Include*** *any land not reported above.* ***Include*** *land in farmsteads, buildings, livestock facilities, ponds, roads, wasteland, etc.* →	☐	039				
			"THIS OPERATION"			**IRRIGATED**
5. TOTAL ACRES - *ADD acres in each column and enter the totals. (Column 1 total should be equal to item 4 in section 1.)* →		041			042	

NOTE: *If the total irrigated acres in column 2, item 5 is '0', go to section 20.*

6. For "THIS OPERATION" what county and state had the most irrigated acres?

County Name 950 _____ State 951 _____

SECTION 3 **GOVERNMENT PROGRAMS**

1. During 2003, did you receive direct payments, counter-cyclical payments, loan deficiency payments, marketing loans, or participate in any quota programs or any buy-out programs?

691 1 ☐ **Yes** 2 ☐ **No**

2. In the past 5 years have you received cost-share payments for irrigation or drainage improvements from any of the following organizations?

795 1 ☐ **Yes** - *Continue* 2 ☐ **No** - *Go to section 4*

a. Mark (X) all that apply.

698
1 ☐ USDA - Environmental Quality Incentive Program (EQIP)
2 ☐ Non-USDA Federal programs - Include EPA, Bureau of Reclamation, or other programs
3 ☐ State programs, local water management or supply district programs
4 ☐ Other - *Specify* → _____

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SECTION 4 **METHOD OF WATER DISTRIBUTION IN 2003**

Report acres irrigated by each type of ON FIELD distribution or delivery system listed below. If same land was irrigated by more than one method of distribution, report acres irrigated by each method used.

DO NOT report information for the delivery system used to convey water from the source to the field, only report information for the FIELD distribution system.

1. GRAVITY IRRIGATION	None	ACRES IRRIGATED BY GRAVITY SYSTEM (FIELD WATER CONVEYANCE METHOD)					
		TOTAL	OPEN UN-LINED DITCH	OPEN LINED DITCH	POLY TUBING (or other single-year-use, lay-flat tubing)	ABOVE-GROUND PIPE (except poly-tubing) 1/	UNDER-GROUND PIPE 2/
a. Down rows or furrows →	☐	855	859	857	056	057	858
b. Controlled flooding *(between borders or within basins)* →	☐	865	869	867	066	067	868
c. Uncontrolled flooding *(rangeland, pastureland, etc.)* →	☐	875	879	877	076	077	878
d. Other →	☐	885	889	887	086	087	888

*1/ **Includes** gated-pipe, and riser or hydrant systems connected to above ground pipe.*
*2/ **Includes** riser or hydrant systems connected to underground pipe.*

2. SPRINKLER IRRIGATION - *Inlet pressure*	None	ACRES IRRIGATED BY SPRINKLER SYSTEMS			
		VERY LOW PRESSURE (UNDER 15 PSI)	LOW PRESSURE (15 TO 29 PSI)	MEDIUM PRESSURE (30 TO 59 PSI)	HIGH PRESSURE (60 PSI OR MORE)
a. Center pivot systems *(circle)* →	☐	569	576	575	570
b. Linear move tower systems *(and other linear continuous move drive systems)* →	☐	571	577	578	579
c. Solid set and permanent systems *(except low-flow micro systems)* →	☐	568	565	566	567

	None	ACRES IRRIGATED (ALL PRESSURES)
d. Mechanical move systems -		
(1) Side roll, wheel move, or other mechanical move systems *(and other discrete move systems)* →	☐	240
(2) Big Gun or Traveller systems →	☐	241
e. Hand move systems →	☐	242

3. DRIP, TRICKLE OR LOW-FLOW MICRO IRRIGATION *(except poly and lay-flat tubing)*	None	ACRES IRRIGATED (ALL PRESSURES)
a. Surface drip *(on or above ground)* →	☐	248
b. Sub-surface drip *(root zone)* →	☐	246
c. Low-flow micro sprinklers (sprays) *(apply water at low pressure and are not self-propelled or easily moved)* →	☐	247

4. SUB-IRRIGATION - Water seepage, or use of a drainage system to maintain aquifer water table at a predetermined depth (***Exclude** methods reported above)* →	None	ACRES IRRIGATED
	☐	249

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SECTION 5 **ACRES IRRIGATED and ESTIMATED QUANTITY OF WATER USED ON "THIS OPERATION" BY SOURCE IN 2003**

Report quantity of water in the unit or units of measure most convenient for you.
If measurements are not available, give your best estimate for quantity of water used.
If average acre-feet cannot be estimated, give combined pumping capacity and duration in days, or total depth of water applied, or in flow quantities and duration of flow in days.

	BY WATER SOURCE		
	GROUND WATER *(from wells)*	SURFACE WATER	
		ON FARM	OFF-FARM *(All Suppliers)*
1. ACRES IRRIGATED *(Include cropland and pastureland.)*	444 ACRES	449 ACRES	454 ACRES
2. ESTIMATED QUANTITY OF WATER USED ON "THIS OPERATION" IN 2003 *(Report for only one of the following options items a through e, in the unit most convenient for you.)*	TOTAL ACRE FEET		
a. Total acre feet (If total feet is reported, go to item 3)	955 ▪___	960 ▪___	965 ▪___
or			
b. Average acre-feet per acre irrigated *(One acre foot covers one acre one foot deep)*	ACRE-FEET PER ACRE		
	445 ▪___	450 ▪___	966 ▪___
or			
c. Average inches applied per acre	INCHES PER ACRE		
	448	453	967
or			
d. Average gallons of water applied per minute **(GPM)**	GPM		
	446	451	968
Total number of 24-hour day equivalents water was applied	DURATION		
	447 DAYS	452 DAYS	969 DAYS
or			
e. Average flow in cubic feet per second **(CFS)**	CFS		
	956	961	970
Total number of 24-hour day equivalents water flow was applied	DURATION		
	957 DAYS	962 DAYS	971 DAYS

If no Off-farm supplied water, go to section 6.

	DOLLARS	
3. Total cost of Off-farm supplied water	456 $	.00

a. If water was received at no cost, check → 675 1 ☐ No Cost

4. Supplier of off-farm water - How much of this operation's off-farm water was supplied, delivered, or transferred through a project financed, constructed, or managed by -

a. U.S. Bureau of Reclamation *(Include reclamation water delivered through a local district.)*	664	1 ☐ None 2 ☐ Some 3 ☐ All 4 ☐ Unknown
b. Other Federal agencies such as the U.S. Army Corp of Engineers, Bureau of Indian Affairs, USDA small watershed project, etc.	665	1 ☐ None 2 ☐ Some 3 ☐ All 4 ☐ Unknown
c. All other suppliers	666	1 ☐ None 2 ☐ Some 3 ☐ All 4 ☐ Unknown

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SECTION 6 WATER TRANSFERS IN 2003

Water leased or rented on an annual or multi-year basis for use off your farm when the permanent right to the water is maintained by the operator. **Include** water rented or leased directly by your operation or your irrigation provider.

1. In 2003, did you rent or lease water to others for use off your farm?
*(**Include** both agricultural and non-agricultural purposes.)*

531 1 ☐ **Yes -** *Continue* 2 ☐ **No -** *Go to section 7*

2. Report quantity of water transferred to others in 2003 -

	None	WATER QUANTITY ACRE - FEET
a. Ground water from on-farm wells →	☐	532
b. Surface water from on-farm sources →	☐	533
c. Water normally received from an off-farm supplier →	☐	534

3. Report recipients or uses of transferred water - *Check all that apply.*

535 1 ☐ Other agricultural producers
2 ☐ Municipal or industrial water users
3 ☐ Environmental uses *(water quality, instream flow, habitat improvement)*
4 ☐ Unknown use of transferred water - *(If unknown, check item a or b below)*

536 1 ☐ **a.** Water was part of a pool used for several purposes
2 ☐ **b.** Water rented or leased was arranged by your irrigation provider

SECTION 7 EXPENDITURES for IRRIGATION FACILITIES and EQUIPMENT ON "THIS OPERATION" IN 2003

Report expenditures made and sources of funding assistance in 2003 for the construction of irrigation facilities and purchase of irrigation equipment and machinery on **"THIS OPERATION"**. **Include** estimates of expenditures made or shared with others *(landlords, government agencies, including programs such as Environmental Quality Incentive Program (EQIP), etc)*. **Report the cost of maintenance and repairs in section 13.**

	None	TOTAL EXPENDITURES DOLLARS	PRINCIPAL PURPOSE OF EXPENDITURES Mark (X) only one	PRIMARY SOURCE OF FUNDING ASSISTANCE Mark (X) only one
1. Purchase of new or replacement irrigation equipment and machinery *(**Include** sprinklers, pipes, siphons, nozzles, pumps, motors, engines, etc., at net cost. **DO NOT** include computers.)* →	☐	511 $ .00	512 1 ☐ Replacement 2 ☐ Water Conservation 3 ☐ New Expansion	513 1 ☐ EQIP cost share program 2 ☐ Other USDA cost share programs 3 ☐ Other public cost share programs 4 ☐ No public funding
2. New well construction or deepening of existing wells *(**Include** drilling costs, cost of casing, and any costs to prepare well for installation of pump. **DO NOT** include cost of pumps or motors.)* →	☐	515 $ .00	516 1 ☐ Replacement 2 ☐ Water Conservation 3 ☐ New Expansion	517 1 ☐ EQIP cost share program 2 ☐ Other USDA cost share programs 3 ☐ Other public cost share programs 4 ☐ No public funding
3. Construction or improvement of permanent storage and distribution systems (dams, ponds, reservoirs, permanent ditches, canals, flumes, etc.) →	☐	519 $ .00	520 1 ☐ Replacement 2 ☐ Water Conservation 3 ☐ New Expansion	521 1 ☐ EQIP cost share program 2 ☐ Other USDA cost share programs 3 ☐ Other public cost share programs 4 ☐ No public funding
4. Land clearing and leveling for irrigation purposes →	☐	523 $ .00	524 1 ☐ Replacement 2 ☐ Water Conservation 3 ☐ New Expansion	525 1 ☐ EQIP cost share program 2 ☐ Other USDA cost share programs 3 ☐ Other public cost share programs 4 ☐ No public funding
5. Computers, control panels, and software for irrigation water management →	☐	544 $ .00	545 1 ☐ Replacement 2 ☐ Water Conservation 3 ☐ New Expansion	546 1 ☐ EQIP cost share program 2 ☐ Other USDA cost share programs 3 ☐ Other public cost share programs 4 ☐ No public funding

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SECTION 8 **ACRES HARVESTED and CROP YIELDS IN 2003**

For each crop harvested, report separately the acreage and average yield from irrigated land and non-irrigated land.

Report harvested crops as irrigated if any water was artificially applied either before planting or during the crop growing season in 2003. Report the crop as irrigated if water was applied to supplement rainfall, even if the amount of water applied was not sufficient to obtain maximum yields.

		IRRIGATED CROP *Include preplant and supplemental or semi irrigation*						NON-IRRIGATED CROP		
					ESTIMATED QUANTITY OF WATER APPLIED PER ACRE AVERAGE					
	None	IRRIGATED ACRES HARVESTED	AVERAGE YIELD PER IRRIGATED ACRES HARVESTED		ACRE-FEET PER ACRE	OR	INCHES PER ACRE	NON-IRRIGATED ACRES HARVESTED	AVERAGE YIELD PER NON-IRRIGATED ACRES HARVESTED	
1. Corn for grain or seed *(Excluding popcorn and sweetcorn.)*	☐	050	051	Bu.	052 .__	or	053	054	055	Bu.
2. Corn for silage or greenchop *(Excluding popcorn and sweetcorn.)*	☐	060	061	Tons	062 .__	or	063	064	065	Tons
3. Sorghum for grain or seed	☐	070	071	Bu.	072 .__	or	073	074	075	Bu.
4. Wheat for grain or seed	☐	080	081	Bu.	082 .__	or	083	084	085	Bu.
5. Barley for grain or seed	☐	090	091	Bu.	092 .__	or	093	094	095	Bu.
6. Soybeans for beans	☐	100	101	Bu.	102 .__	or	103	104	105	Bu.
7. Beans, dry edible	☐	110	111	Cwt.	112 .__	or	113	114	115	Cwt.
8. Rice	☐	120	121	Cwt.	122 .__	or	123			
9. Other small grains (oats, rye, etc.)	☐	130			132 .__	or	133	134		
10. Alfalfa and alfalfa mixtures *(dry hay, greenchop and silage)*	☐	140	141 .__	Tons, dry	142 .__	or	143	144	145 .__	Tons, dry
11. All other hay, including small grain, other tame and wild hay *(dry hay, greenchop and silage)*	☐	150	151 .__	Tons, dry	152 .__	or	153	154	155 .__	Tons, dry
12. Peanuts	☐	550	551	Lbs.	552 .__	or	553	554	555	Lbs.
13. Cotton	☐	160	161	Lbs. lint	162 .__	or	163	164	165	Lbs. lint
14. Sugarbeets for sugar	☐	170	171	Tons	172 .__	or	173	174	175	Tons
15. Tobacco, all types	☐	180 .__	181	Lbs.	182 .__	or	183	184 .__	185	Lbs.
16. Potatoes *(Exclude sweetpotatoes)*	☐	190 .__	191	Cwt.	192 .__	or	193	194 .__	195	Cwt.
17. All land from which vegetables and melons were harvested	☐	200 .__			202 .__	or	203	204 .__		
a. Sweet corn	☐	850 .__	851	Cwt.	852 .__	or	853	854 .__	975	Cwt.
b. Tomatoes	☐	860 .__	861	Cwt.	862 .__	or	863	864 .__	985	Cwt.
c. Lettuce and romaine	☐	870 .__	871	Cwt.	872 .__	or	873	874 .__	995	Cwt.
18. All berries *(bearing and nonbearing)*	☐	560 .__			562 .__	or	563	564 .__		
19. Land in bearing and nonbearing fruit orchards, citrus or other groves, vineyards, and nut trees	☐	210 .__			212 .__	or	213	214 .__		
20. All other crops - *Specify*	☐	220			222 .__	or	223	224		
21. Pastureland, all types	☐	230			232 .__	or	233	234		

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SECTION 9 PRIMARY METHOD OF WATER DISTRIBUTION, APPLICATION OF AGRICULTURAL CHEMICALS IN IRRIGATION WATER, and WATER SOURCE FOR CROPS IRRIGATED IN 2003 ON "THIS OPERATION"

PRESSURE and GRAVITY IRRIGATION SYSTEMS I.D. CODES for Column 1 below. SEE INSTRUCTION SHEET FOR LARGER PRINT OF CODES.

PRESSURE

01 = Hand Move System
02 = Solid or Permanent Set System
03 = Side Roll or Wheel Line System
04 = Big Gun System
05 = Linear Move System (PSI less than 15)
06 = Linear Move System (PSI 15 to 29)
07 = Linear Move System (PSI equal to or greater than 30 and less than 60)
08 = Linear Move System (PSI equal to or greater than 60)
09 = Center Pivot System (PSI less than 15)
10 = Center Pivot System (PSI 15 to 29)
11 = Center Pivot System (PSI equal to or greater than 30 and less than 60)
12 = Center Pivot System (PSI equal to or greater than 60)
13 = Low-Flow Irrigation (drip, trickle, or micro sprinkler systems)
14 = Other Pressure System (Specify type _____)

GRAVITY

15 = Siphon-Tube System (from unlined ditches)
16 = Siphon-Tube System (from lined ditches)
17 = Portal - or Ditch-Gate System (from unlined ditches)
18 = Portal - or Ditch-Gate System (from lined ditches)
19 = Poly-Pipe or Lay Flat Tubing System
20 = Gated-Pipe System (not poly-pipe)
21 = Improved Gated-Pipe System (surge-flow or cablegation systems but not poly-pipe)
22 = Subirrigation System
23 = Open Discharge from a well or pump
24 = Other Gravity System (Specify type _____)

Crops irrigated on "THIS OPERATION" in 2003	Primary Method of Water Distribution Enter Irrigation System I.D. code from Table above.				Chemigation using Irrigation System		Water Source (Column totals may exceed acres of crop when more than one water source was used.)		
							How many of the crop acres were irrigated using -		
List only crops irrigated -	COLUMN 1 Enter code		Percent of irrigated crop using System I.D.		Commercial Fertilizer ACRES	Pesticide Application ACRES	On-farm Surface water	Well water	Water from off-farm suppliers 1/
1. Corn for grain or seed *(Excluding popcorn and sweetcorn.)*	250	ID	251	%	252	253	254	255	256
2. Corn for silage or greenchop *(Excluding popcorn and sweetcorn.)*	260	ID	261	%	262	263	264	265	266
3. Sorghum for grain or seed	270	ID	271	%	272	273	274	275	276
4. Wheat for grain or seed	280	ID	281	%	282	283	284	285	286
5. Barley for grain or seed	290	ID	291	%	292	293	294	295	296
6. Soybeans for beans	300	ID	301	%	302	303	304	305	306
7. Beans, dry edible	310	ID	311	%	312	313	314	315	316
8. Rice	320	ID	321	%	322	323	324	325	326
9. Other small grains (oats, rye, etc.)	330	ID	331	%	332	333	334	335	336
10. Alfalfa and alfalfa mixtures *(dry hay, greenchop and silage)*	340	ID	341	%	342	343	344	345	346
11. All other hay, including small grain, other tame and wild hay *(dry hay, greenchop and silage)*	350	ID	351	%	352	353	354	355	356
12. Peanuts	580	ID	581	%	582	583	584	585	586
13. Cotton	360	ID	361	%	362	363	364	365	366
14. Sugarbeets for sugar	370	ID	371	%	372	373	374	375	376
15. Tobacco, all types	380	ID	381	%	382 .__	383 .__	384 .__	385 .__	386 .__
16. Potatoes *(Exclude sweetpotatoes)*	390	ID	391	%	392 .__	393 .__	394 .__	395 .__	396 .__
17. All land from which vegetables and melons were harvested	400	ID	401	%	402 .__	403 .__	404 .__	405 .__	406 .__
a. Sweet corn	900	ID	901	%	902 .__	903 .__	904 .__	905 .__	906 .__
b. Tomatoes	910	ID	911	%	912 .__	913 .__	914 .__	915 .__	916 .__
c. Lettuce and romaine	920	ID	921	%	922 .__	923 .__	924 .__	925 .__	926 .__
18. All berries *(bearing and nonbearing)*	590	ID	591	%	592 .__	593 .__	594 .__	595 .__	596 .__
19. Land in bearing and nonbearing fruit orchards, citrus or other groves, vineyards, and nut trees	410	ID	411	%	412 .__	413 .__	414 .__	415 .__	416 .__
20. All other crops - *Specify* ↓	420	ID	421	%	422	423	424	425	426
21. Pastureland, all types	430	ID	431	%	432	433	434	435	436

1/ *Off-farm water supplies may include water purchased from the U.S. Bureau of Reclamation; a state, county, or local district; mutual, private, cooperative, or neighborhood ditches; commercial or municipal water systems.*

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SECTION 10 NUMBER OF IRRIGATION WELLS ON "THIS OPERATION" IN 2003, WELL DEPTH, and PUMPING CAPACITY

1. Did "THIS OPERATION" irrigate with water from wells in 2003?

760 1 ☐ **Yes -** *Continue* 2 ☐ **No -** *Go to section 11*

2. Wells used in 2003 → NUMBER OF WELLS USED: 460

	Well #	Depth of well FEET	Depth to water at start of irrigation season FEET	Depth to bowls or impellers FEET	Pump capacity *(Discharge from well)* GPM	Operating pressure at well head PSI	Size of engine *(For all motors - including electric)* HP	Total hours operated *(for the season)*
a. For the first 3 primary wells pumped in 2003, report the following information -	1 →	461	462	463	464	676	761	762
	2 →	465	466	467	468	677	763	764
	3 →	469	470	471	472	678	765	766
		Average depth of well FEET	**Average depth to water at start of irrigation season** FEET	**Average depth to bowls or impellers** FEET	**Average pump capacity (Discharge from well)** GPM	**Average operating pressure at well head** PSI	**Average size of engine** *(For all motors - including electric)* HP	**Total hours operated** *(for the season)*
b. Of all other wells pumped in 2003, report the average for all **other** wells →		481	482	483	484	681	767	768

3. How many pumping stations *(wells from item 2 above with associated piping systems)* used backflow prevention devices *(check valves)* in 2003? → None ☐ NUMBER: 770

a. In 2003, how many **acres** were irrigated with these wells *(item 3 above)*? → ☐ ACRES: 771

4. How many wells *(from item 2 above)* had flow meters or other flow measurement devices? → ☐ NUMBER OF WELLS METERED: 683

a. In 2003, how many **acres** were irrigated with these systems *(item 4 above)*? → ☐ ACRES: 772

5. Has the average depth to water for the wells supplying this operation changed in the last five years?

773 1 ☐ **Yes -** *Continue* 2 ☐ **No -** *Go to item 6*

a. If yes, check one below.

487 1 ☐ **Increased depth** 2 ☐ **Decreased depth**

6. How many of the wells used in 2003 are free flowing (artesian wells)? → None ☐ NUMBER: 486

7. Wells not used in 2003, but capable of being used *(**Exclude** abandoned wells.)* → ☐ NUMBER OF WELLS NOT USED: 485

062083

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SECTION 11 PUMPS, OTHER THAN WELL PUMPS, USED FOR IRRIGATION ON "THIS OPERATION" IN 2003

Report for all pumps, other then well pumps, on "THIS OPERATION" whether they are in use or not.

	None	Number of pumps	Vertical lift AVG. FEET	Discharge capacity AVG. GPM	Discharge operating pressure AVG. PSI
1. Tailwater pits	☐	490	774	491	687
2. Ponds, lakes, reservoirs, rivers, canals, etc.	☐	492	775	493	688
3. Relifting or boosting water within system	☐	494	776	777	778

SECTION 12 ENERGY USE ON "THIS OPERATION" IN 2003 FOR PUMPING IRRIGATION WATER

Report for all fuel and power used in 2003 for irrigation pumping on **"THIS OPERATION"**.
Include in the cost figures any additional charges such as the "fuel adjustment charge" or any other type of additional charge which is based on the amount of power or fuel purchased. Include landlord's share.

	None	Number of wells or pumps powered by type of energy used	Total cost of energy used Dollars	Acres irrigated by water source: Water from wells 1/	Acres irrigated by water source: Surface water 2/
1. Electricity	☐	495	496 $ .00	497	781
2. Natural gas	☐	498	499 $ .00	500	782
3. LP gas, propane, or butane	☐	501	502 $ .00	503	783
4. Diesel fuel	☐	504	505 $ .00	506	784
5. Gasoline and gasohol	☐	507	508 $ .00	509	785
6. Solar and other renewable	☐	779		780	786

*1/ **Include** only acres for wells reported in section 10, item 2.*
*2/ **Include** only acres for pumps reported in section 11.*

SECTION 13 IRRIGATION MAINTENANCE and REPAIR COSTS FOR IRRIGATION EQUIPMENT and FACILITIES ON "THIS OPERATION" IN 2003

Report all expenses in 2003 for keeping irrigation equipment and facilities in working order. **Include** expenses for tune-ups, oil changes, and repairs to pumps, motors, pipes, canals, sprinkler systems, ditch and canal cleanout, etc.
*(**Exclude** construction or improvement costs reported in section 7.)*

	None	DOLLARS
1. Amount spent for maintenance and repairs of irrigation equipment and facilities in 2003 including maintenance of on-farm ditches *(**Include** payments made by landlord's - Give estimate if actual figures are unavailable.)*	☐	510 $ .00

SECTION 14 LABOR COSTS FOR IRRIGATION ACTIVITIES ON "THIS OPERATION" IN 2003

*(**Include** gross cash payments to employees, including family members, before deductions for social security, taxes, insurance premiums, etc. and payments for contract labor.*
***Exclude** customwork.)*

	None	DOLLARS
1. Cash wages paid for -		
a. Hired irrigation labor	☐	787 $ .00
b. Contract irrigation labor	☐	788 $ .00

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062091

SECTION 15 IRRIGATION PRACTICES IN 2003

1. How did you decide when to schedule water use in 2003? *Mark (X) all that apply.*

527
- 1 ☐ Condition of crop *(observation)*
- 2 ☐ Feel of the soil
- 3 ☐ Use of soil moisture sensing devices such as moisture blocks or tensiometers
- 4 ☐ Use of plant moisture sensing devices such as pressure *(chamber)* bombs or infrared (IR) thermometer
- 5 ☐ Use of irrigation scheduling service (Including commercial and government)
- 6 ☐ Reports on daily crop-water evapo-transpiration (ET) use *(Internet, newspapers, radio, TV, fax and email)*
- 7 ☐ Water delivered by irrigation organization in turn (no choice by water user)
- 8 ☐ Personal calendar schedule
- 9 ☐ Computer simulation models *(not from a commercial service)*
- 10 ☐ When neighbors begin to irrigate
- 11 ☐ Other - *Specify* →

2. Did you have to discontinue irrigation during 2003 long enough to affect crop yields?

669
1 ☐ **Yes -** *Continue* 2 ☐ **No -** *Go to section 16*

a. Mark (X) all that apply.

670
- 1 ☐ Shortage of surface water *(water from reservoirs, lakes, streams, water supply organizations, etc.)*
- 2 ☐ Shortage of ground water *(lowering water level of wells or depletion of ground water)*
- 3 ☐ Irrigation equipment failure
- 4 ☐ Energy price increases or energy shortage
- 5 ☐ Poor water quality
- 6 ☐ Loss of water rights not due to voluntary transfers
- 7 ☐ Cost of purchased water
- 8 ☐ Other - *Specify* →

SECTION 16 OTHER USES OF IRRIGATION WATER ON "THIS OPERATION" IN 2003

1. Report irrigation used for any of the following purposes -

	None	ACRES IRRIGATED
a. Prevent freeze damage →	☐	440
b. Crop cooling to delay early budding, blooming, or to reduce heat stress *(cool crop canopy)* →	☐	441
c. Leaching to remove salts from the soil *(salinity control)* →	☐	442
d. Disposal of liquid livestock waste →	☐	488
e. To provide wildlife or waterfowl habitat →	☐	439
f. Other - *Specify* →	☐	443

062109

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SECTION 17 WATER MANAGEMENT PRACTICES FOR OPERATORS USING GRAVITY IRRIGATION SYSTEMS

1. Did you use gravity irrigation systems to irrigate any land in 2003 *(acres reported in section 4, item 1)***?**

671 1 ☐ **Yes -** *Continue* 2 ☐ **No -** *Go to section 18*

2. On how many acres did you use the following techniques?

	None	NUMBER OF ACRES
a. Irrigation water captured for further use (tailwater pits) →	☐	672
b. Water restricted from running off by diking end of field →	☐	789
c. Surge flow or cablegation technique →	☐	673
d. Shortening of furrow length →	☐	684
e. Limited irrigation set time or number of irrigations, to reduce water applied →	☐	685
f. Alternate row irrigation →	☐	686
g. Water-soluble polyacrylamide (PAM) →	☐	699
h. Mulch or other types of row covers →	☐	790
i. Gravity system with laser leveling →	☐	791
j. Special furrowing techniques, such as wide-spaced bed furrowing, compacted furrowing, or furrow diking *Specify technique used* →	☐	674

SECTION 18 IMPROVEMENTS TO IRRIGATION SYSTEMS THAT REDUCE ENERGY and/or CONSERVE WATER

Consider as an improvement changes in equipment or management practices.
For example - retrofitting a sprinkler system for low pressure operation or adopting irrigation scheduling as a management practice.

1. Have you implemented improvements to your irrigation system on existing irrigated acres since 1998?

693 1 ☐ **Yes -** *Continue* 2 ☐ **No -** *Go to item 3*

2. What were the results of these improvements *on a per acre basis? - Mark (X) all that apply.*

694
- 1 ☐ Improved crop yield or quality
- 2 ☐ Reduced energy costs
- 3 ☐ Reduced water applied
- 4 ☐ Reduced labor costs
- 5 ☐ Reduced fertilizer or pesticide losses
- 6 ☐ Reduced soil erosion
- 7 ☐ Reduced tailwater
- 8 ☐ None of the above

3. What are barriers to implementing improvements that might reduce energy and/or conserve water in your irrigation system? - *Mark (X) all that apply.*

695
- 1 ☐ Investigating improvements not a priority at this time
- 2 ☐ Risk of reduced yield or poorer quality crop yields from not meeting water needs
- 3 ☐ Physical field/crop conditions limit system improvements
- 4 ☐ Improvement(s) will reduce costs, but not enough to cover installation costs
- 5 ☐ Can not finance improvements
- 6 ☐ Landlord(s) will not share cost of improvements
- 7 ☐ Uncertainty about future availability of water
- 8 ☐ Will not be farming this operation long enough to justify new improvements
- 9 ☐ Other - *Specify*

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062117

SECTION 19 SOURCES OF IRRIGATION INFORMATION

1. **What are the sources of information that you rely on for guidance in reducing irrigation costs or to conserve water used for irrigation?** - *Mark (X) all that apply, then go to section 21.*

696
- 1 ☐ Extension agents or university specialists
- 2 ☐ Private irrigation specialists or crop consultants hired by owner or operator
- 3 ☐ Irrigation equipment dealers
- 4 ☐ Local irrigation district employees or others hired by the water supplier
- 5 ☐ Government specialists from the Natural Resources Conservation Service, Local Conservation District, Bureau of Reclamation or other Federal and State agencies
- 6 ☐ Media reports or information in the press
- 7 ☐ Neighboring farmers
- 8 ☐ Electronic information services (World Wide Web, DTN, Internet links to private or public data sources, etc.)
- 9 ☐ Other - *Specify*

SECTION 20 IRRIGATED LAND IN 2002 - DO NOT answer this section if you irrigated ANY land in 2003, go to section 21

1. **Was any land irrigated on "THIS OPERATION" in 2002?**

528 1 ☐ **Yes** - *Continue* 2 ☐ **No** - *Go to section 21*

2. **Reasons for not irrigating in 2003** - *Mark (X) all that apply.*

529
- 1 ☐ Sufficient soil moisture - no irrigation needed
- 2 ☐ Shortage of surface water (water from reservoirs, lakes, streams, water supply organizations, etc.)
- 3 ☐ Shortage of ground water (lowering water level of wells or depletion of ground water)
- 4 ☐ Irrigation uneconomical due to high fuel and power costs and/or low commodity prices
- 5 ☐ Abandoned irrigation because of land degradation (soil erosion, soil salinity, etc.)
- 6 ☐ Loss of water rights (not due to voluntary transfers)
- 7 ☐ Sold or leased water rights or annual water allocation
- 8 ☐ Converted to non-agricultural use
- 9 ☐ Converted to an agricultural enterprise not requiring irrigation
- 10 ☐ Available surface water too salty due to drought conditions
- 11 ☐ Other - *Specify*

3. **Do you consider your discontinuance of irrigation to be permanent?**

530 1 ☐ **Yes** 2 ☐ **No**

SECTION 21 VALUE OF SALES

1. What was the total value of sales for both crops and livestock produced and sold from **"THIS OPERATION"** in 2003? *Check only one below.*

980 1 ☐ **$0 - $24,999** 2 ☐ **$25,000 - $49,999** 3 ☐ **$50,000 - $99,999** 4 ☐ **$100,000 - $249,999**
5 ☐ **$250,000 - $499,999** 6 ☐ **$500,000 - $999,999** 7 ☐ **$1,000,000 and over**

	PERCENT
2. What percent of total farm sales were from irrigated crop sales? →	981
3. What percent of total farm sales were from livestock sales? →	982

SECTION 22 PERSON COMPLETING THIS FORM - *Please print*

Name	Date	Telephone with Area Code

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The time required to complete this information collection is estimated to average 30 to 60 minutes per response.

Do You Need Help? Do not hesitate to contact the National Agricultural Statistics Service if you need more help. Please use our Toll Free number 1-888-424-7828. **We Thank You Very Much for the prompt return of your completed survey.**

Would you like to receive a summary of the results of this survey in the mail? → 099 1 ☐ **Yes** 2 ☐ **No**
Results will also be available on the Internet at http://www.usda.gov/nass/, in the fall of 2004.

OFFICE USE	Respondent			Response Code			Enum.	Eval.		
	1-Op/Ptnr/Mgr 2-Spouse	3-Acct/Bkpr 4-Other	930	2-Tele 3-Int 7-TR	8-IR 9-Inac	931	933	011	013	015

062125

FORM 03-A62 (10-28-03)

INSTRUCTION SHEET
2003 FARM AND RANCH IRRIGATION SURVEY

Completing the 2003 Farm and Ranch Irrigation report form

Please use a blue or black ballpoint pen.

Instructions by Section

Section 1 - Acreage in 2003

Report land owned, rented, or used by the respondent, spouse, partnership, corporation, or organization identified on the questionnaire. **Include** all land, regardless of location or use, Conservation Reserve Program (CRP) and Wetlands Reserve Program (WRP) land cropland, pastureland, rangeland, woodland, idle land, house lots, etc. **Exclude** land used under grazing permit. All responses should be rounded to whole acres. If you have an operation that is less than one acre, report it as a whole acre.

Item 1 - All land owned - land owned by the operation. Be sure to include all separate fields, and tracts of cropland, pastureland, woodland, wasteland, idle land, farmsteads, etc.

Item 2 - All land rented or leased from others - includes land worked by the respondent on shares, used rent free, in exchange for services, for taxes, etc. even if used for part of the year. Includes federal, state, and railroad land that is not BLM permit land. Do not include land used on a per head basis under a grazing permit. Include all land rented or leased from others regardless of location.

Item 3 - All land rented or leased to others - include land rented or leased to others for cash or for a share of the crops, whether the person whose name appears on the label owned the land himself/herself or rented the land and subleased it to others.

Item 4 - Total acres in this operation - should equal items 1 + 2 - 3. All answers to this questionnaire should refer only to the acres included as **this operation**. It is important to get this number correct as it is used in editing to establish consistency throughout the questionnaire. The acreage of **this operation** should equal Section 2, item 5 (column 1).

Section 2 - Land used in 2003

Distribute all acres in **this operation** in column 1 and all irrigated land in **this operation** in column 2, items 1 through 4. If the same land had more than one use in 2003, report that land only once in the first use listed that applies.

In addition to fully irrigated land, report as irrigated any land to which partial, supplemental, or semi-irrigation was applied. Also include any acreage which received only preplant irrigation (watered before planting). Hayland, pastureland or rangeland should be reported as irrigated if spring flood water was spread by canals, ditches, spreader dikes, pipes, or other water works.

Conservation Reserve Program (CRP) land should be reported where it best fits into a use for that year. If you were allowed to cut CRP land for hay, then this land should be considered cropland harvested. If it was pastured, it is cropland used for pasture. Except for emergency uses, almost all CRP should be reported in item 1c as other cropland.

Item 1a - Cropland harvested - Land from which hay was cut and land in groves and orchards should be reported as cropland harvested. If you did not double crop then item code 029 should equal the sum of acres across crops harvested, while item code 030 should equal irrigated cropland acres.

If you did double crop, all or part of your crop acreage, the sum of acres for crops harvested and irrigated crops harvested will exceed item codes 029 and 030, respectively.

For winter wheat, report the 2003 acres harvested.

Item 1b - Cropland used only for pasture or grazing - include rotation pasture and grazing land that could have been used for crops without additional improvements. **Exclude** land used under a grazing permit.

Item 1c - Other cropland - include cropland used for cover crops, cropland on which all crops failed, cropland in summer fallow, idle cropland, and cropland diverted for government programs (including CRP unless used for hay or forage or pasture). Most CRP land should be reported here in item 1c, but CRP land cut for hay or forage should be in item 1a, and CRP land that was pastured should be reported in item 1b. CRP land should be reported only once.

Some crops require more than one growing year and are not harvested during the period covered by the survey. These may include crops such as sugarcane and pineapples. Land on which a crop is being grown, but which has not been harvested, (other than short rotation woody crops) is reported as other cropland, item 1c.

Item 2 - Woodland - Short rotation woody crops are to be reported as cropland harvested regardless if the trees were cut or not and should not be reported here. Do report both woodland pastured and woodland not pastured.

Item 3 - Other pastured land and rangeland - include any pastured land other than cropland and woodland pastured. Most BLM lease land goes into this category. BLM or Forest Service land used on an AUM or fee per head basis will not be included. This is where large acreage of unallocated land should go.

Item 4 - All other land - any land that does not fit into one of the above categories. This could be roads, buildings, farmsteads, wasteland etc.

Item 5 - Total acres - this should equal the sum of all land uses listed above (in items 1-4). Also, acres in **this operation** should equal acres in Section 1, item 4.

Anyone who irrigated any land in 2003 should complete the whole report form. Anyone who did not irrigate any land in 2003 should skip to Section 20. **Note**: If none of your land was irrigated in 2003, enter zero in column 2, item 5 (acres irrigated) and skip to Section 20.

Item 6 - County and state with your largest irrigated acreage - Please report the county and state with the largest amount of irrigated land for **this operation**. If you irrigate in more than one county and the amount irrigated happens to be the same, then report the county that includes your farmstead.

Section 3 - Government programs

If you received any government payment, you should answer this section for those questions that apply.

Section 4 - Method of water distribution in 2003

This section refers to the method used to spread water over the land. Report the acres of land irrigated by each of the distribution systems listed. If the same land was irrigated by more than one method, report acres irrigated by each method used.

Remember: Do not report information for the delivery system used to convey water from the source to the field. Report only information for the field distribution system.

Item 1 - Gravity irrigation - refers to free flowing application of water across a field. The water is distributed across a field using either pipes or open ditches near the head of the field from which water is released to flow down furrows or to flood the field.

a. Down rows or furrows - row crops are generally irrigated by water flowing down furrows.

b. Controlled flooding between borders or within basins - some crops such as rice or cranberries are flooded across the entire field with water contained within borders or basins within or surrounding the field.

c. Uncontrolled flooding - is often used to water pasture or rangeland. There are no furrows or borders within the field when uncontrolled flooding is used.

d. Other - include here if not reported in any of the above categories.

Item 2 - Sprinkler irrigation - sprinkler irrigation is separated into five categories: center pivot, linear move tower, mechanical move, hand move, and solid set and permanent systems. It is important to report the pressure at the nozzle, not pump pressure.

a. Center pivot - a center pivot system uses a boom half the width of the field. It is anchored at the center of the field and sweeps in a circle creating the familiar circular fields common in some irrigated areas.

b. Linear move tower systems (and other linear continuous move drive systems)

c. Solid set and permanent systems (except low-flow micro systems)

d. Mechanical move systems - these are self-propelled systems that travel in straight lines across the field.

(1) - Side roll, wheel move, or other mechanical move systems (and other discrete move systems)

(2) - Big gun or Traveler systems- these are similar to the pulsating sprinklers used in nurseries or lawns which sweep across the area being watered.

e. Hand move - any non-self-propelled system which must be moved manually.

Item 3 - Drip, trickle or low-flow micro irrigation - the water is distributed down the rows by tapes which meter out small amounts of water at low pressure near the plants' roots.

a. Surface drip (on or above ground)

b. Sub-surface drip (root zone)

c. Low-flow micro sprinklers (sprays) (apply water at low pressure and are not self-propelled or easily moved)

Item 4 - Subirrigation - this is sometimes referred to as water seepage. It is used to maintain a water table at a predetermined depth. Normally these systems are permanently in place below the rootline. Water is usually applied by using emitters.

The total of acres, by method of water distribution, should be equal to, or greater than item code 042 (total acres irrigated). Every acre reported as irrigated in Section 2 needs to be reported by method of irrigation in Section 4.

Section 5 - Acres irrigated and estimated quantity of water used by source in 2003

If you do not keep complete records of water usage, use a best estimate. One method of calculating an estimate is to multiply the hours recorded on the pump engine by the gallons per minute (g.p.m.).

Water usage for this survey will be published in acre-feet. This is the quantity of water needed to cover one acre to the depth of one foot, or 326,000 gallons. You can report whichever value is available.

The sum of acres irrigated in Section 5 must be equal to item code 042 (total acres irrigated). If you use multiple sources of water for the same acres, this sum may be larger than item code 042 (total acres irrigated).

Item 1 - Report acres irrigated by ground water, on farm surface water, or off farm surface water.

Item 2 - Please report estimated quantity of water used on **this operation** by one of the following methods:

a. total acre feet

b. average acre feet per acre

c. average inch applied per acre

d. average gallons of water applied per minute (GPM) and duration in total no. of 24-day equivalents

e. average flow in cubic feet per second (CFS) and duration in total no. of 24-day equivalents

Definitions for water sources
Ground water is water from a well or wells located on this farm or a neighboring farm
On farm surface water is a water supply not controlled by a water supply organization and included water from a stream, drainage ditch, lake, pond, spring, or reservoir on or adjacent to your farm.
Off farm surface water is surface or ground water from U.S. Bureau of Reclamation, etc.

Item 3 - Report total cost of off farm water in whole dollars.

Item 4 - Supplier of off-farm water

Section 6 - Water transfers in 2003

Item 1 - If you rented or leased part or all of the 2003 water allotment for the farm operation to others for use off the farm, then record a YES for item 1 and continue with items 2a and 2b. If your response to item 1 is NO, record the NO and then go to Section 7.

Item 2 - Record your best estimate of the quantity of water (in acre-feet) transferred to others in 2003 by water source (groundwater from wells, and/or surface water from a source on the farm, and/or water you normally would have received from an off-farm source).

[Be sure to include in your estimate only water you rented or leased to others for their use elsewhere (not on your farm).]

Item 3 - Water that is transferred off-farm may be put to one or more alternative uses. To the best of your knowledge, indicate the uses of the transferred water. Be sure to check only those uses that apply. Your response may include from 1 to 3 checks (for options 1 - 3).

However, some operators may not have received information on the use of the transferred water. In this case, if the use of the transferred water is "unknown" to you, check option 4 for "Unknown use of transferred water" and then check one of the reasons why the use of the transferred water was unknown. Check only one reason: a) water was part of a pool used for several purposes, or alternatively, b) water rented or leased was arranged by the district.

Section 7 - Expenditures for irrigation facilities and equipment

Please report expenditures for irrigation facilities and equipment in the following categories in column 1:

Item 1 - purchase of new and replacement irrigation equipment

Item 2 - new well construction or upgrades to existing wells

Item 3 - construction or improvement of permanent storage and distribution systems

Item 4 - land clearing and leveling for irrigation purposes

Item 5 - computers or control panels for irrigation

Section 8 - Acres harvested and crop yields

Report the acres of each crop harvested and its corresponding average yield per acre separately for irrigated acres and for dryland (non-irrigated) acres. Report acres of each crop harvested, even where multiple crops have been harvested off the same land. In addition, for each irrigated crop harvested, report the estimated average quantity of water applied per acre for the 2003 irrigation season. Report water applied in average acre-feet per acre or in inches per acre (but not both). Acre-feet per acre should be reported to the nearest tenth of a foot (for example, 1.6 or 2.3 acre-feet per acre), while acre-inches per acre should be reported to the nearest whole inch (for example, 19 or 28 inches per acre).

The sum of irrigated acres harvested should not be less than Section 2, item 5, item code 042 (total acres irrigated). The sum of irrigated and non-irrigated acres harvested should not be smaller than Section 2, item 5, item code 041 (total acres).

Any crop grown, which is not pre-listed, should be entered under item 20 "all other crops." Be sure to write-in the type of crop being reported. Report all crops irrigated on **this operation** in 2003.

Note: These crops should also be reported in the following Section 8. For winter wheat, report the acres harvested in 2003.

Section 9 - Method of water distribution, water source, and application of agricultural chemicals

For each crop with irrigated harvested acres reported in Section 8, report the primary type of irrigation system in column 1 by selecting the appropriate irrigation system ID code from the system ID code list above. Report the percent of the crop irrigated, using this system in the second column.

Then, for each irrigated crop, report the number of acres that were subjected to chemigation, that is, the application of fertilizers or pesticides through the irrigation water. Report the acres of chemigation separately for commercial fertilizer application and for pesticide application acres.

Note: For each crop, an irrigated acre harvested may be reported here in both the fertilizer and pesticide columns. Therefore, for each crop, the sum of chemigation acres may total more than the corresponding harvested irrigated acres reported for that crop in column 1 of Section 8.

Finally, there should be consistency between crops reported in Sections 8 and 9. Any crop reported as irrigated in Section 8 should have an entry in Section 9.

Section 10 - Number of irrigation wells, well depth, and pumping capacity on "this operation."

Item 1 - Please report if **this operation** irrigated any land with water from wells at any time during 2003. If no wells were used to supply water for irrigation on this operation in 2003, then check the "No" box and go to Section 11. If water from wells were used, check "Yes" and then respond to items 2-7.

Item 2 - Wells used in 2003 - this is the total number used during the 2003 growing season. Any well not used will be reported later in item 7.

a. Report on well characteristics and use, separately, for the first 3 primary wells pumped in 2003. **Note**: The 3 primary wells should include those wells with the greatest quantity of water pumped in 2003. For each of the 3 primary wells, report the well characteristics and use even if these values are similar across wells. If less than 3 wells were pumped in 2003, then report for only those wells used.

b. If you used more than 3 wells in 2003, then for all other wells (excluding the 3 primary wells), report only the average figure for each well characteristic and use.

Item 3 - Report the number of pumping stations for wells reported in item 2 above using backflow prevention devices (check valves) - these devices are a type of one-way valve which is installed at the well to prevent water from flowing back to the water source after the pump is shut off. Check the "none" box, if appropriate.

a. Report the number of acres irrigated in 2003 with water pumped from backflow prevention devices which should be consistent with the acres irrigated using wells reported in item 3. If "none" was checked in item 3, then check "none" for item 3a.

Item 4 - Report the number of wells from item 2 above using flow meters or flow measuring devices (include the number of wells with any kind of flow measurement device). Check the "none" box if appropriate.

a. Report the number of acres irrigated in 2003 with water from wells with flow measurement devices as reported in item 4. If "none" was checked for item 4, then check "none" for item 4a.

Item 5 - Change in depth to water - is defined as a change in the depth of water from the well-head to the water table level that has occurred over the last five years prior to the 2003 season.

Item 6 - Free flowing wells - this refers to artesian wells which are wells that do not require pumping. The water should be flowing to the surface under its own pressure. These are most commonly found in Florida and some western states. Pumps are used only to distribute the water from a holding pond or other type of basin to the field and /or to create sufficient pressure for the field-level irrigation system. Report the number of free-flowing (artesian) wells used in 2003. Otherwise, check the "none" box if appropriate.

Item 7 - Operational wells not used in 2003 - report the number of operational wells that could have been used in 2003 but were not used. If all operational wells were in use check the "none" box. This includes any well that was not used due to needed repairs. Any well which is not operational, for which you have no plans to ever use again, should be considered abandoned.

Section 11 - Pumps, other than well pumps, used for irrigation

These are pumps used for lifting surface water from rivers and streams, irrigation channels, ponds and other water holding systems. Tailwater pits hold water that has run off irrigated land for recycling. Some irrigation systems using water from wells may also have pumps in places other than their wells to provide additional lift, especially on farms with large distribution systems or irregular terrain. These pumps are often referred to as booster pumps. Do not include pumps here that were reported in Section 10, items 2a or 2b.

Vertical lift here refers to the average surface-level feet-of-lift the pumps must raise the water in order to distribute the water through the field irrigation system. Discharge capacity here refers to average pumping capacity in gallons per minute (GPM). Discharge operating pressure here refers to the average operating pressure in pounds per square inch at the point of pump discharge

Section 12 - Energy used on this operation for pumping irrigated water

For each energy source report the number of wells and/or pumps, the cost of the fuel used to power pumps (include the landlords share of pumping costs), and the number of acres irrigated. For acres irrigated by type of energy, report the acres irrigated separately for those using water from wells from those using water from a surface-water source. The sum of acres irrigated across all energy types may be less than the total acres irrigated for the operation reported in Section 2, item 5, item code 042. The difference should equal those acres irrigated using no pumps to supply water to the field.

Section 13 - Maintenance and repair costs

Report any expense incurred in maintaining the irrigation system. Be sure to include the landlord's share. For this section do not include payments made for expanding the system, increasing efficiency, or new construction.

Section 14 - Irrigation labor costs

Report labor cost for irrigation activities involving hired labor in item 1a and report contract labor expenses for irrigation activities in item 1b. Labor costs here should pertain only to the operation and maintenance of the irrigation system and facilities. Include the landlords share of irrigation labor costs. Exclude cost for custom work and contract labor for harvesting.

Section 15 - Irrigation practices

Item 1 requests information on the method or approach used to decide when to schedule water applications in 2003. Mark all that apply. If you mark the box for "other," be sure to write in an entry under "other." For item 2, sometimes farmers have to discontinue irrigation during an irrigation season, which may affect crop yield. Item 2 requests information on whether this has occurred for this operation in 2003, and the reason(s) irrigation was discontinued. Mark all that apply. If you mark the box for "other," be sure to write in the reason for discontinuing irrigation.

Section 16 - Other uses for irrigation water

Write-in the use when reporting "other."

Section 17 - Water management practices for gravity irrigation

If you reported gravity irrigation in Section 4a, you should respond to this section. For items a through j, report the number of gravity irrigated acres using the specific water management practice. Check the "none" box for those items which do not apply.

Section 18 - Improvements to irrigation systems

For this section, the questions are only for improvements to existing irrigation systems. Any changes to the system to increase its size and bring more acres under irrigation should not be included here except for those changes on acres already irrigated. Item 2 is only for the results of improvements on existing irrigated acres. For example, if a farmer installs new equipment on 200 acres of existing irrigated land, and at the same time increases his irrigation by another 100 acres, the responses should only be for the original 200 acres.

Section 19 - Sources of irrigation information

Mark all that apply. If the response is 'other', write in the source of information.

Section 20 - Irrigated land in 2002

Answer this section ONLY if you did not irrigate in 2003. Mark all that apply and write in any 'other' response.

Section 21 - Farm sales

Please select the appropriate farm sales class from the list in item 1. Report whole percent in items 2 and 3.

Section 22 - Person completing this form

Enter your name, date, and telephone number.