
Appendix C.

Statistical Methodology

THE SCREENING PHASE AND THE MAIL LIST MODEL

The 1997 Census of Agriculture featured a pre-census screening phase that surveyed selected records, by mail or telephone, for presence or absence of agricultural activity. Records selected for screening had a low probability of qualifying as farms. All records responding to the screener and reporting no agricultural activity were removed from the census mail list. Eliminating nonfarm records from the mail list reduced respondent burden and data collection costs.

The screening phase included nearly 500,000 records. Records were selected for screening using one of the following criteria:

- 1) Records on selected agriculture specialty lists that had no other list source,
- 2) Records identified by a mail list model as having a low probability of being a farm.

A mail list model predicted the probability that an addressee on the 1997 preliminary census mail list operated a farm. The model defined groups based on combinations of characteristics such as source(s) of the mail list record, expected value of agricultural production, and geographic location. Farm proportions were estimated for these groups by calculating the proportion of 1992 census respondent records that were farms which exhibited the characteristics defined by the group. This proportion, also called the in-scope rate, provided an estimate of the probability that an addressee in the group operated a farm.

Each address record on the 1997 preliminary census mail list was assigned to a model group by matching record characteristics to model group characteristics. Records belonging to the groups with the highest farm probability were those more likely to be farms. Records with a farm probability of approximately 30 percent or less were selected for screening, along with records included on selected agriculture specialty lists as noted above.

Before screening, the preliminary census mail list consisted of 3,314,790 records. There were 478,298 records selected for screening. Of these, 125,570 records were determined to be nonfarms as a result of the screening phase and were removed. These records were removed from the final census mail list. The remaining 3,189,220 records received census report forms.

CENSUS SAMPLE DESIGN

All name and address records on the final census mail list were designated to receive a 1997 Census of Agriculture report form. Two different types of census report forms, sample and nonsample, were used to collect data. Sections 1 through 20 and 28 through 32 of the sample form were identical to sections on the nonsample census form. Sample form sections 21 through 27 contained additional questions on usage of fertilizers and chemicals, farm production expenditures, value of machinery and equipment, value of land and buildings, farm-related income, and hired workers. There were 11 regional versions of the nonsample form and 13 regional versions of the sample form with listings of crops varying by region. These different forms were used to reduce the response burden of the census, while providing reliable information on a large number of data items.

The sample form was mailed to all mail list records in Alaska, Hawaii, and Rhode Island and to a sample of records in other States selected from the final mail list. Mail list records were selected into the sample with certainty if they (1) were expected to have large total value of agricultural products sold or large acreage, (2) were multi-unit operations (i.e., separate farms producing under one company organization), (3) were in a county with less than 100 farms in 1992, or (4) had other special characteristics. Farms with special characteristics were abnormal farms, such as institutional farms, experimental and research farms, and Indian reservations. Mail list records in counties containing 100 to 199 farms in 1992 were systematically sampled at a rate of 1 in 2; records in counties containing 200 to 299 farms in 1992 were systematically sampled at a rate of 1 in 4; and records in counties containing 300 or more farms in 1992 were systematically sampled at a rate of 1 in 6. The remaining mail list records not chosen to receive the sample form received the nonsample census form. This differential sampling scheme was used to provide reliable data for the sample sections of the report form for all counties.

EDITING DATA AND IMPUTATION FOR ITEM NONRESPONSE

The census of agriculture complex edit and imputation system is an automated computerized system that performed the following functions:

- Ensured reasonable relationships between/among data items, values for various sizes of farms, combinations of commodities, and economic interactions.
- Ensured necessary consistencies were present (there were more than 70 distinct consistency requirements).
- Ensured climatic, geographic, legal, and physical constraints were met.

The system performed these and similar functions for more than 900 data key codes for sample records and approximately 850 data key codes for nonsample records.

For the 1997 Census of Agriculture, as in previous censuses, all reported data were keyed and then edited by computer. The edits were used to determine whether the reports met the minimum criteria to be counted as farms in the census. The complex edit and imputation system provided the basis for deciding to accept, impute (supply), delete, or alter the reported value for each data record item.

Whenever possible, edit imputations, deletions, and changes were based on component or related data on the respondent's report form. For some items, such as operator characteristics, data for that record from the previous census were used when available. Values for other missing or unacceptable reported data items were calculated based on reported quantities and known fixed price parameters.

When these and similar methods were not available and values had to be supplied, the imputation process used information reported for another farm operation in a geographically adjacent area with characteristics similar to those of the farm operation with incomplete data. For example, a farm operation that reported acres of corn harvested, but did not report quantity of corn harvested, was assigned the same bushels of corn per acre harvested as that of the last nearby farm with similar characteristics that reported acceptable yields during that particular execution of the computer edit. The imputation for missing items in each section of the report form was conducted separately; thus, assigned values for one operation could come from more than one respondent.

Prior to the imputation operation, a set of default values and relationships was assigned to the possible imputation variables. The relationships and values varied depending on the item being imputed. For example, different default values were assigned for several Standard Industrial Classifications and total value of sales categories when imputing hired farm labor expenses. These values and item relationships for the possible imputation variables were stored in the computer in a series of matrices.

Each execution of the computer edit consisted of records from only one State sorted by reported State and county. For a given execution of the edit, the stored entries in the various matrices were retained in memory only until a succeeding record having acceptable characteristics for the same sections of the report form was processed by the

computer. Then the acceptable responses of the succeeding operation replaced those previously stored. When a record processed through the edit had unreported or unacceptable data, the record was assigned the last acceptable ratio or response from an operation with a similar set of characteristics. Once each execution of the computer edit for a State was completed, the possible imputation variables were reset to the default values and relationships for subsequent executions. An edit run usually consisted of 10,000 or more records.

After the initial computer edit, all keyed reports not meeting the census farm definition were reviewed to ensure that the data had been keyed correctly. Edit referrals were generated for 17 percent of the reports included as farms; they were reviewed for keying accuracy and to ensure that the computer edit actions were correct. If the results of the computer edit were not acceptable, corrections were made and the record re-edited.

CENSUS ESTIMATION

The 1997 Census of Agriculture used two types of statistical estimation procedures to account for whole farm nonresponse and sample data collection. The procedures were necessary because some farm operators did not respond to the census despite numerous attempts to contact them, and estimates for certain data items were based on a sample of farm operators rather than a full enumeration.

Whole Farm Nonresponse Estimation

Whole farm nonresponse to the census occurred when a response was never received for a record. If the record was a large farm, as defined by value of production or acreage, or a unique farm operation, intensive telephone or personal followup was conducted during census processing to obtain a response. If these attempts failed, either the NASS survey database, the census historic database, or other more current sources were used to impute data for the record.

During mail list development, the State Statistical Offices (SSOs), in an effort to reduce respondent burden, identified records that participated in multiple NASS surveys and/or situations where there were special reporting relationships between an enumerator and a respondent. These records were referred to as tagged records. The SSOs had full responsibility for the data collection for these records, including imputation of data for the record if a response was not obtainable.

Whole farm nonresponse that occurred within the remaining universe of records was accounted for by a statistical weighting procedure. The weights of the responding farms were adjusted to account for farms that did not respond. The information needed for this process was obtained from the 1997 Nonresponse Survey. The SSOs conducted the nonresponse survey using computer-assisted telephone interviewing (Blaise-CATI) or personal enumeration when telephone contact was not possible. Alaska and Rhode

Island were not eligible for the survey because all nonrespondents were subject to extensive followup. In these cases, data were collected by telephone or other methods. The nonresponse survey collected information from a sample of census nonrespondents to determine farm status and estimate the proportion of farms in the nonresponse universe. The information was then used to estimate the number of nonresponding farm operations by State and county.

The 1997 Nonresponse Survey consisted of a stratified systematic sample of the nonresponse records within each State. The sample was selected near the end of the census follow-up operations. Five strata were defined to be homogeneous on probability of farm status and were based on screener status, total value produced, and list source(s) of the mail list record.

Based on survey results, estimates of the proportion of census nonrespondents operating farms were made for each stratum in the State. The estimates were applied to the total number of census nonrespondents in that stratum, providing a State estimate of the number of census nonrespondents that operated farms. The number of census nonrespondents that operated farms was then derived for each county by stratum. This estimation procedure assumed that the distribution of farms in a stratum by county was the same for census nonrespondents as for census respondents.

Within each stratum in a county, a noninteger nonresponse weight was calculated and assigned to each eligible respondent farm record. Census respondent farms that were designated as large farms or tagged records or as farms that exhibited "rare" commodities were ineligible to represent nonrespondent farms and were excluded from the nonresponse weighting procedure. These records were assigned nonresponse weights of 1.0.

The noninteger nonresponse weight is the ratio of the sum of the estimated number of nonrespondent farms from the nonresponse survey and the number of eligible census respondent farms, divided by the number of eligible census respondent farms. Stratum controls were established to ensure that this weight never exceeded 2.0. For the published tabulations of the complete count items, the noninteger nonresponse weight was randomly rounded to an integer weight of either 1 or 2 for each record. For the sample count items, the noninteger nonresponse weight was used in the calculation of the final sample weight.

Table A quantifies the effect of the nonresponse estimation procedure on selected census data items. The percentages in this table are percents of the census values contributed by nonresponse estimation. These indicate the potential for bias in published figures resulting from nonresponse to the census. The estimates provided in this table do not reflect the effect of item nonresponse to individual census data items. The effect of this item nonresponse is discussed in the "Census Nonsampling Error" section.

Sample Estimation

Sample data estimation determined the population totals that would have resulted from a complete census for the items in sections 21 through 27 of the sample form. The estimates were obtained from a weighting procedure that assigned a weight to each respondent record containing sample items. For any given county, a sample item total was estimated by multiplying the data items for each farm in the county by the corresponding sample weight and summing over all sample records.

Each respondent sample farm was assigned a sample weight for use in producing estimates for all sample items. For example, if the weight given to a sample farm had the value 6, all sample data items reported by that farm were multiplied by 6.

The noninteger sample weight is calculated for each respondent sample farm by multiplying the noninteger nonrespondent weight by the sampling factor. For published tabulations of the sample count items, the noninteger sample weight was randomly rounded to an integer weight for each record. For certainty farms, the sampling factor equals 1 so the sample weight is just equal to the nonresponse weight. Sampling factor calculation for non-certainty farms is described below.

Within a county, the weighting procedure for non-certainty farms was performed in three steps using three variables. The first variable contained eight 1997 total value of agricultural production (TVP) groups. The second and third variables, Standard Industrial Classification (SIC) code and farm acreage, contained two groups. The three sets of groups were:

TVP	SIC	Acres
\$1 to \$999	01, 08 All crops	1 to 69
\$1,000 to \$2,499	02 All livestock	70 or more
\$2,500 to \$4,999		
\$5,000 to \$9,999		
\$10,000 to \$24,999		
\$25,000 to \$49,999		
\$50,000 to \$99,999		
\$100,000 or more		

The first step in the estimation procedure classified the sample records into 32 mutually exclusive initial strata formed by the three variable groups. The total and sample farm counts were expanded to account for nonresponse. Each cell containing sample farm records was assigned an initial sample factor equal to the ratio of the total farm count to the sample farm count. This factor was approximately equal to the inverse of the probability of selecting a farm for the census sample.

The second step in the estimation procedure combined, when necessary, the 32 initial strata to increase the reliability of the weighting procedure. Any stratum that contained less than 10 sample farms or had a factor greater than twice the mail sample rate was collapsed with another stratum. The mail sample rate was either 2, 4, or 6,

depending on whether the county had a 1 in 2, 1 in 4, or 1 in 6 sample selection rate. The collapsing occurred within the 32 initial strata according to a specified collapsing pattern. After the collapsing process was completed, new total farm counts and sample farm counts were computed from each final strata and used to calculate final sample factors.

The final step calculated the noninteger sample weight as the product of the final sampling factor and the noninteger nonresponse weight. As described previously, the noninteger sample weight for each record is randomly rounded to an integer weight which is used in published tabulations. For example, if the final weight for a farm was 7.2, then the record would be rounded to either 7 or 8.

CENSUS SAMPLING ERROR

The sample for the 1997 Census of Agriculture was only one of a large number of possible samples of the same size that could have been selected using the same sample design. In this context, "sample" refers to the sample for both the nonresponse survey and the selection of farms to receive sample forms.

The standard error, or sampling error, of a survey estimate is a measure of the variation among the estimates from all possible samples. It is a measure of precision - that is, how well an estimate from a particular sample approximates the true population parameter. The percent relative standard error of an estimate is defined as the standard error of the estimate divided by the value of the estimate, then multiplied by 100. The true population parameter can be defined or conceptualized several different ways. One way is to think of the true population parameter as the average result of all possible samples (selected using a given sample design). A second way is to think of the true population parameter as the figure obtained from carrying out a complete enumeration of the population.

If all possible samples were selected, each of the samples surveyed under essentially the same conditions, and an estimate and its standard error calculated from each sample, then:

1. 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 true population parameter.
2. Approximately 95 percent of the intervals from 1.96 standard errors below the estimate to 1.96 standard errors above the estimate would include the true population parameter.

The following example illustrates the computations necessary to produce a confidence statement for an estimate. Assume that the estimate of number of farms for a State is 94,382 and the relative standard error of the estimate is 0.1 percent (0.001). Multiplying 94,382 by 0.001 yields 94, the standard error; therefore, a 90-percent confidence interval is 94,227 to 94,537 (i.e., 94,382 plus or minus 1.65 x 94).

If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 90 percent of these intervals would contain the true population parameter. Similarly, a 95-percent confidence interval is 94,198 to 94,566 (i.e., 94,382 plus or minus 1.96 x 94).

Census items were classified as either complete count or sample count items. All farm operators were asked the complete count items. Examples of complete count items were: land in farms, harvested cropland, livestock inventory and sales, crop acreage, quantities harvested and crop sales, land use, irrigation, government loans and payments, conservation acreage, type of organization, and operator characteristics.

Only a sample of farm operators were asked the sample count items. These items appeared only in sections 21 through 27 of the sample form. Sample count items were included under the following section headings: commercial fertilizers, chemicals, production expenses, farm machinery and equipment, value of land and buildings, farm-related income, and hired workers.

Variability in the estimates of complete count items was due only to the nonresponse survey estimation procedure. With regard to the estimates of sample count items, variability was due to both the nonresponse survey estimation procedure and the census sample selection and estimation procedure. Therefore, variability in the sample count item estimates tends to be larger than the variability in the complete count item estimates. Percent relative standard error is a common measure of variability.

Table B provides the generalized reliability estimates of the estimated number of farms in a county that reported complete count and sample count items. The top half of the table shows the percent relative standard errors for estimated number of farms in a county that reported a complete count item, and the bottom half relates to sample count items. These reliability estimates are derived from regression equations. Separate regression equations were used to produce each section of table B. Each regression equation was fit with the estimated number of farms in a county reporting an item as the independent variable and the relative variance of that estimate as the dependent variable for the appropriate counties in the State. To illustrate the use of this table, assume that the estimate of the number of farms reporting hogs and pigs for a particular county, as given in county table 15, is 89. Since hogs and pigs is a complete count data item, refer to the first part of table B and use the estimated percent relative standard error of the estimate from the row with farm count equal to or just less than the estimated number of farms, 89. For this example, the percent relative standard error of the estimate comes from the row for 75 farms reporting. For sample count items, follow the same procedure using the second part of table B. For counties with fewer than 100 farms in the 1992 Census of Agriculture, variability in sample count

item estimates came only from nonresponse survey estimation procedures. The estimated relative standard error for a sample count item in these counties may be obtained using the first part of table B.

Use caution when referring to the "Sample Count Item" section of table B to make inferences on counties. Some counties may have been sampled at the rate of 1 in 2 or 1 in 4, but the reliability estimates shown were computed using only data from counties sampled at the rate of 1 in 6. Therefore, the reliability estimates shown would likely be overstated (or conservative) if the county was actually sampled at a higher rate.

Table C presents the percent relative standard error of selected State data items for all farms, and table D presents the percent relative standard error of selected State data items for all farms with sales of \$10,000 or more.

Table E presents the standard error for percent change in State totals from 1992 to 1997. The general purpose of the percent change estimate is to provide a relative measure of the difference in a characteristic between censuses. The relative change for a given characteristic is defined as the ratio of the difference of the 1997 and the 1992 estimate for that characteristic to the 1992 estimate. This ratio is multiplied by 100 to obtain the percent change. The standard error of a percent change estimate is the standard error of the ratio multiplied by 100.

Table F presents the percent relative standard error for State and county totals for selected data items. The percent relative standard error of the estimate for the same item differs among counties in the State. Reasons for this are differences among counties in the (1) total number of farms, (2) number of large farms included with certainty, (3) size classifications of the farms sampled, (4) amount of nonresponse, (5) general agricultural characteristics, and (6) specific characteristic being measured.

The farm counts and related estimates displayed in tables A through F relate to unadjusted census totals. These totals are the same as the "Census total" displayed in the first column of table G (which will be discussed later in this appendix).

For most of the tables in this appendix, and also many of the tables throughout the publication, there is a footnote that reads "Data are based on a sample of farms." The table entries that this footnote relate to are estimates of totals. To illustrate, suppose that the entry "other farm-related income" is shown with this footnote and has some number of farms given. This number given would represent an estimated total number of farms with "other farm-related income," based on the farms that were in the sample. This number should not be interpreted as the number of farms in the sample that have "other farm-related income."

CENSUS NONSAMPLING ERROR

The accuracy of the census counts is affected jointly by sampling errors (described in the previous section) and nonsampling errors. Extensive efforts were made to compile a complete and accurate mail list for the census, to

design an understandable report form with instructions, and to minimize processing errors through the use of quality control measures. Nonsampling errors arise from many sources, including respondent or enumerator error or incorrect data keying, editing, or imputing for missing data. These nonsampling errors are further discussed in this section. Nonsampling error due to mail list incompleteness and duplication as well as misclassification of records on the mail list is called coverage error. The section titled "Coverage Evaluation" discusses the evaluation studies conducted to measure the extent of this error in the census.

Respondent and Enumerator Error

Incorrect or incomplete responses to the census report form or to the questions posed by an enumerator can introduce error into the census data. To reduce reporting error, detailed instructions for completing the report form were provided to each respondent. Questions were phrased as clearly as possible based on previous tests of the report form. In addition, each respondent's answers were checked for completeness and consistency by the complex edit and imputation system.

Item Nonresponse

As information flowed from data collection to tabulation, various types of item nonresponses were identified on the census report forms. Nonresponse to particular questions on the census report form that logically should have been present created a type of nonsampling error in both complete count and sample count data. In this case, information from a similar farm was used to impute for these missing data items. The resulting data may have been biased if the characteristics of the nonreporting respondents were different from those of reporting respondents for those items.

Processing Error

All phases of processing for each census report form were potential sources for the introduction of nonsampling error. An automated check-in recorded that the report had been returned and excluded from further followup mailings. Approximately one-third of the mail returns were reviewed to resolve questions dealing with multiple reports, respondent remarks, or no reported data. The remaining mail returns (about two-thirds) were batched and sent directly to data keying, along with some of the reviewed cases containing farm data. Keyed records were transmitted, formatted, and run through the complex edit and imputation system. About one-fifth of all forms edited were clerically reviewed for inconsistencies, omissions, or questionable values. While reviewing these forms, the edit review staff determined if the action taken by the computer edit and imputation system was correct. Edited records were tabulated to the county level. Each county was reviewed and, when necessary, individual records were corrected prior to publication.

Developing accurate processing methods is complicated by the complex structure of agriculture. Among the complexities are the many places to be included, the variety of arrangements under which farms are operated, the continuing changes in the relationship of operators to the farm operated, the expiration of leases and the initiation or renewal of leases, the problem of obtaining a complete list of agriculture operations, the difficulty of contacting and identifying some types of contractor/contractee relationships, the operator's absence from the farm during the data collection period, and the operator's opinion that part or all of the operation does not qualify and should not be included in the census. During data collection and processing of the census, all operations underwent a number of quality control checks to ensure as accurate an application as possible.

COVERAGE EVALUATION

Coverage Overview

The primary objectives of the census of agriculture are to accurately count U.S. farms, measure commodity production and sales, and measure demographic characteristics of farm operators. Since 1945, an evaluation of census coverage has been conducted for each census of agriculture to provide estimates of the completeness of census farm counts. These results help to identify problems and focus improvements for future censuses.

According to coverage evaluation results, the past five censuses of agriculture included an average of 92 percent of U.S. farms and 98 percent of agriculture production. Complete enumeration of agricultural operations satisfying the farm definition of \$1,000 or more in agricultural sales is complicated by the variety of arrangements under which farms are operated, the multiplicity of names used for an operation, the number of operations in which an operator participates, and the difficulty in classifying those operations just around the \$1,000 sales range. In 1997, extensive efforts were made to compile as complete and accurate a mail list as possible, while reducing the duplication and number of nonfarm operations on the list.

The 1997 coverage evaluation program was designed to measure four components of error in the census farm counts. These components include:

1. Undercount due to farms Not on the Mail List (NML)
2. Overcount due to farms Duplicated or enumerated more than once (DUP)
3. Undercount due to farms Incorrectly Classified as nonfarms (ICU)
4. Overcount due to nonfarms Incorrectly Classified as farms (ICO).

The first component, mail list undercount, is by far the largest component of coverage error. Duplication, though occurring far less frequently, can involve larger farms and have a larger impact on acreage and sales estimates. The

last two components involve the misclassification of either farms or nonfarms. Misclassification can arise from errors in either reporting or processing the data.

Table G - Coverage Estimates - illustrates the effect of coverage adjustments on census farm counts by demographic characteristics, land in farms, and total value of sales. The coverage total is defined as the net difference between undercounted and overcounted farms. The adjusted census total is the sum of the census total and the net coverage total. The relative standard error is shown for the final census coverage adjusted number. This number will be similar to the relative standard error for the census number, except when the coverage total is negative or close to zero. The coverage adjustment percentage shows the coverage total as a percentage of total census adjusted farms for that characteristic.

The 1997 Census of Agriculture is the first census to include all four components of coverage error in table G. Previous publications only included the coverage error component due to farms not on the mail list (NML). Because of this, caution should be taken when comparing coverage estimates from table G with previous years. In addition, the coverage total is a negative number for some characteristics. This means that the number of farms overcounted for this characteristic was greater than the number of farms undercounted.

Area Frame Surveys to Measure Mail List Undercoverage

Names and addresses collected in the 1997 June Agricultural Survey and 1997 Fall Area Survey were used to estimate the undercount due to farms not on the census mail list (NML). These names were matched to the census mail list, and those that did not match were contacted by telephone or person. The enumerator verified whether the operation had reported in the census, and if not, a census of agriculture report form was completed.

The percentage of farms missed in the census varies considerably by State. In general, farms not on the mail list tended to be small in acreage, production, and sales of agricultural products. Farm operations could be missed for various reasons, including the possibility that the operation started after the mail list was developed, the operation may be so small as not to appear in any agriculture-related source lists, or the operation may have been falsely classified as a nonfarm prior to mailout.

Classification Error Survey to Measure Three Types of Coverage Error

The remaining three types of coverage error were measured by the Classification Error Survey. This survey was used to estimate the number of farms counted more than once (DUP), the number of farms misclassified as nonfarms (ICU), and the number of nonfarms misclassified as farms (ICO). A sample of census of agriculture respondents was selected for reinterview to determine their farm/nonfarm status and collect information to identify

potential duplication. The farm classification from this interview was compared with the classification on the census of agriculture report form. Any differences between these two classifications were reconciled to determine the true farm status. Each operation was reviewed for duplication by matching the additional information received from the reinterview (landlords, tenants, other names, etc.) to the list of census respondents. Potential duplication was reviewed and discrepancies reconciled.

In general, the classification error rate is higher for small farms close to the \$1,000 agricultural sales requirement. This rate is also higher for farms with small acreage (less than 49 acres), higher for tenant farms than for full- or part-owner farms, and higher for farms where farming is not the operator's principal occupation.

Coverage Estimation

The adjusted census total, T, is estimated as the census farm count, C, plus undercount and minus overcount adjustments. Undercount includes 1) farms not on the mail

list (NML) and 2) farms incorrectly classified as nonfarms (ICU). Overcount includes 3) nonfarms incorrectly classified as farms (ICO) and 4) farms duplicated in the census (DUP). Altogether, the adjusted census total is:

$$T = C + (NML + ICU) - (ICO + DUP).$$

In some States, estimates of misclassification of farms owned by operators having rare demographic characteristics were based on particularly small sample sizes. Where such small sample sizes occurred, a form of small area estimation was used in which data from similar States contributed to that State's estimates. In these cases, the coverage totals are weighted totals of the direct State estimate and the direct estimate from the region. Direct estimates were used to the largest extent possible, based on the amount of survey cases available for the particular item being estimated.

Table A. Percent of State Totals Contributed by Whole Farm Nonresponse Estimation: 1997

Item	Percent of total	Item	Percent of total
Farms	11.6	Corn for grain or seed .....	.1
Land in farms	8.0	Wheat for grain	8.0
Estimated market value of land and buildings ¹	8.4	Livestock and poultry inventory:	
Market value of agricultural products sold	3.4	Cattle and calves	4.6
Harvested cropland	5.8	Hogs and pigs	7.0
		Layers 20 weeks old and older	1.0

¹Data are based on a sample of farms.

Table B. Reliability Estimates for Number of Farms in a County Reporting a Complete Count Item or Sample Count Item: 1997

Farms	Relative standard error of estimate (percent)	Farms	Relative standard error of estimate (percent)
COMPLETE COUNT ITEM		SAMPLE COUNT ITEM	
Number of farms reporting:		Number of farms reporting:	
25	6.0	25	35.8
50	4.1	50	24.7
75	3.2	75	19.6
100	2.6	100	16.5
150	1.9	150	12.7
200	1.4	200	10.3
300 .....	.5	300	7.0
500 .....	.4	500	2.0
750 .....	.3	750	1.7
1,000	(X)	1,000	(X)
1,500	(X)	1,500	(X)
2,000	(X)	2,000	(X)

Table C. Reliability Estimates of State Totals for All Farms: 1997

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)
FARMS AND LAND IN FARMS			FARM PRODUCTION EXPENSES¹		
Farms number ..	5 828	.7	Total farm production expenses farms ..	5 806	.8
Land in farms acres ..	1 262 155	.6	..... \$1,000 ..	371 207	.7
Average size of farm acres ..	217	.9	Average per farm dollars ..	63 935	1.1
MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD			NET CASH RETURN FROM AGRICULTURAL SALES FOR THE FARM UNIT (SEE TEXT)¹		
Total sales (see text) farms ..	5 828	.7	All farms number ..	5 806	.8
..... \$1,000 ..	476 343	.3	..... \$1,000 ..	87 572	2.2
Average per farm dollars ..	81 734	.8	Average per farm dollars ..	15 083	2.4
Farms by value of sales:			Farms with net gains ² number ..	2 968	2.0
Less than \$1,000 (see text) farms ..	766	1.5	..... \$1,000 ..	107 949	1.6
..... \$1,000 ..	216	2.1	Average net gain dollars ..	36 371	2.5
\$1,000 to \$2,499 farms ..	738	1.5	Farms with net losses number ..	2 838	2.1
..... \$1,000 ..	1 225	1.6	..... \$1,000 ..	20 377	3.5
\$2,500 to \$4,999 farms ..	655	1.5	Average net loss dollars ..	7 180	4.1
..... \$1,000 ..	2 331	1.6	GOVERNMENT PAYMENTS AND OTHER FARM-RELATED INCOME		
\$5,000 to \$9,999 farms ..	704	1.5	Government payments farms ..	916	.8
..... \$1,000 ..	4 997	1.5	..... \$1,000 ..	2 916	1.4
\$10,000 to \$19,999 farms ..	575	1.6	Other farm-related income ¹ farms ..	2 076	3.2
..... \$1,000 ..	8 140	1.6	..... \$1,000 ..	11 430	3.9
\$20,000 to \$24,999 farms ..	144	2.8	Customwork and other agricultural services farms ..	454	8.7
..... \$1,000 ..	3 133	2.8	..... \$1,000 ..	2 641	8.4
\$25,000 to \$39,999 farms ..	201	2.6	Gross cash rent or share payments farms ..	364	9.9
..... \$1,000 ..	6 241	2.6	..... \$1,000 ..	1 036	14.8
\$40,000 to \$49,999 farms ..	143	2.9	Forest products, excluding Christmas trees and maple products farms ..	798	5.8
..... \$1,000 ..	6 385	2.9	..... \$1,000 ..	4 135	7.6
\$50,000 to \$99,999 farms ..	569	1.8	Other farm-related income sources farms ..	977	4.7
..... \$1,000 ..	41 802	1.9	..... \$1,000 ..	3 618	3.7
\$100,000 to \$249,999 farms ..	881	.8	COMMODITY CREDIT CORPORATION LOANS		
..... \$1,000 ..	140 158	.6	Total farms ..	19	1.7
\$250,000 to \$499,999 farms ..	309	—	..... \$1,000 ..	135	.6
..... \$1,000 ..	104 357	—			
\$500,000 or more farms ..	143	—			
..... \$1,000 ..	157 359	—			
Sales by commodity or commodity group:					
Crops, including nursery and greenhouse crops farms ..	3 302	.8			
..... \$1,000 ..	59 592	.7			
Grains farms ..	86	2.6			
..... \$1,000 ..	975	4.6			
Corn for grain farms ..	43	3.1			
..... \$1,000 ..	609	4.2			
Wheat farms ..	11	6.7			
..... \$1,000 ..	91	3.5			
Soybeans farms ..	14	6.6			
..... \$1,000 ..	148	6.2			
Sorghum for grain farms ..	—	—			
..... \$1,000 ..	—	—			
Barley farms ..	1	—			
..... \$1,000 ..	(D)	(D)			
Oats farms ..	11	9.0			
..... \$1,000 ..	(D)	(D)			
Other grains farms ..	20	6.5			
..... \$1,000 ..	100	12.7			
Cotton and cottonseed farms ..	—	—			
..... \$1,000 ..	—	—			
Tobacco farms ..	—	—			
..... \$1,000 ..	—	—			
Hay, silage, and field seeds farms ..	1 649	1.0			
..... \$1,000 ..	14 085	1.1			
Vegetables, sweet corn, and melons farms ..	333	1.8			
..... \$1,000 ..	6 549	1.6			
Fruits, nuts, and berries farms ..	248	2.1			
..... \$1,000 ..	10 287	1.2			
Nursery and greenhouse crops farms ..	665	1.3			
..... \$1,000 ..	18 588	1.1			
Other crops farms ..	1 270	1.1			
..... \$1,000 ..	9 108	1.6			
Livestock, poultry, and their products farms ..	3 656	.8			
..... \$1,000 ..	416 752	.3			
Poultry and poultry products farms ..	303	1.9			
..... \$1,000 ..	5 699	1.1			
Dairy products farms ..	1 823	.9			
..... \$1,000 ..	352 556	.3			
Cattle and calves farms ..	2 958	.8			
..... \$1,000 ..	35 859	.6			
Hogs and pigs farms ..	140	2.7			
..... \$1,000 ..	543	3.6			
Sheep, lambs, and wool farms ..	419	1.8			
..... \$1,000 ..	1 003	2.7			
Other livestock and livestock products (see text) farms ..	408	1.7			
..... \$1,000 ..	21 092	.5			
Value of agricultural products sold directly to individuals for human consumption (see text) farms ..	983	1.2			
..... \$1,000 ..	6 302	1.5			

See footnotes at end of table.

Table C. Reliability Estimates of State Totals for All Farms: 1997—Con.

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)
FARMS BY SIZE			FARMS BY NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM—Con.		
1 to 9 acres	farms.. 354	1.8	Animal aquaculture and other animal production (1125, 1129)	farms.. 392	1.8
	acres.. 1 450	2.1		acres.. 38 077	2.3
10 to 49 acres	farms.. 1 103	1.3	LIVESTOCK		
	acres.. 27 881	1.3	Cattle and calves inventory		
50 to 69 acres	farms.. 397	1.8		farms.. 3 203	.8
	acres.. 22 922	1.8		number.. 308 267	.4
70 to 99 acres	farms.. 470	1.7	Beef cows	farms.. 1 057	1.2
	acres.. 39 278	1.7		number.. 12 340	1.7
100 to 139 acres	farms.. 581	1.5	Milk cows	farms.. 1 940	.8
	acres.. 67 267	1.5		number.. 162 868	.4
			Cattle and calves sold	farms.. 2 958	.8
140 to 179 acres	farms.. 477	1.6		number.. 142 041	.5
	acres.. 75 098	1.6		\$1,000.. 35 859	.6
180 to 219 acres	farms.. 439	1.7	Hogs and pigs inventory	farms.. 238	2.1
	acres.. 87 280	1.7		number.. 2 900	3.7
220 to 259 acres	farms.. 337	1.8	Hogs and pigs sold	farms.. 140	2.7
	acres.. 80 586	1.8		number.. 4 992	3.5
260 to 499 acres	farms.. 1 086	1.0		\$1,000.. 543	3.6
	acres.. 383 400	1.0	Sheep and lambs of all ages inventory	farms.. 451	1.7
500 to 999 acres	farms.. 469	.9		number.. 14 511	2.6
	acres.. 300 684	.9	Sheep and lambs sold	farms.. 377	1.8
				number.. 12 194	3.1
1,000 to 1,999 acres	farms.. 100	—	Horses and ponies inventory	farms.. 1 233	1.1
	acres.. 130 871	—		number.. 8 870	1.6
2,000 acres or more	farms.. 15	—	Horses and ponies sold	farms.. 206	2.3
	acres.. 45 438	—		number.. 1 622	2.1
FARMS BY NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM			POULTRY		
Oilseed and grain farming (1111)	farms.. 66	3.9	Layers and pullets 13 weeks old and older inventory (see text)	farms.. 513	1.5
	acres.. 20 509	4.1		number.. 256 074	.1
Vegetable and melon farming (1112)	farms.. 159	2.5	Layers 20 weeks old and older	farms.. 502	1.5
	acres.. 15 064	3.1		number.. 254 695	.1
Fruit and tree nut farming (1113)	farms.. 154	2.7	Broilers and other meat-type chickens sold	farms.. 57	4.2
	acres.. 19 186	2.9		number.. 49 535	7.2
Greenhouse, nursery, and floriculture production (1114)	farms.. 481	1.6	SELECTED CROPS HARVESTED		
	acres.. 36 200	2.2	Corn for silage or green chop	farms.. 1 168	.7
Other crop farming (1119)	farms.. 1 568	1.1		acres.. 95 713	.4
	acres.. 239 881	1.3		tons, green.. 1 702 672	.3
Beef cattle ranching and farming (112111)	farms.. 858	1.3	Potatoes, excluding sweetpotatoes	farms.. 65	3.7
	acres.. 144 604	1.5		acres.. 232	2.0
Cattle feedlots (112112)	farms.. 62	4.3		cwt.. 60 525	1.4
	acres.. 10 895	3.8	Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)	farms.. 3 782	.8
Dairy cattle and milk production (11212)	farms.. 1 767	.9		acres.. 385 562	.6
	acres.. 708 392	.6		tons, dry.. 703 077	.6
Hog and pig farming (1122)	farms.. 42	4.8	Vegetables harvested for sale (see text)	farms.. 333	1.8
	acres.. 2 410	6.9		acres.. 2 893	1.8
Poultry and egg production (1123)	farms.. 59	3.9	Land in orchards	farms.. 228	2.2
	acres.. 7 201	6.3		acres.. 4 311	2.0
Sheep and goat farming (1124)	farms.. 220	2.5			
	acres.. 19 736	3.7			

¹Data are based on a sample of farms.

²Farms with total production expenses equal to market value of agricultural products sold are included as farms with gains.

Table D. Reliability Estimates of State Totals for Farms With Sales of \$10,000 or More: 1997—Con.

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)
LAND IN FARMS ACCORDING TO USE			FARMS BY TYPE OF ORGANIZATION		
Total cropland farms	2 766	.8	Individual or family (sole proprietorship) farms	2 334	.9
Harvested cropland acres	528 429	.6	Partnership farms	661 122	.8
Harvested cropland farms	2 651	.8	Partnership acres	396	1.2
Cropland: acres	412 664	.5	Other—cooperative, estate or trust, institutional, etc. farms	168 299	.9
Pasture or grazing only farms	1 682	.9	Corporation:		
Pasture or grazing only acres	103 013	.9	Family held farms	191	1.7
Total woodland farms	2 275	.8	Family held acres	98 190	1.1
Pastureland and rangeland other than cropland and woodland pastured farms	311 265	.7	More than 10 stockholders farms	3	13.5
Pastureland and rangeland other than cropland and woodland pastured acres	877	1.0	10 or less stockholders farms	188	1.7
Land in house lots, ponds, roads, wasteland, etc. farms	62 408	.9	Other than family held farms	16	6.0
Land in house lots, ponds, roads, wasteland, etc. acres	1 894	.8	More than 10 stockholders farms	11 392	4.1
Irrigated land farms	48 919	1.1	10 or less stockholders farms	16	6.0
Harvested cropland irrigated acres	212	2.0	Other—cooperative, estate or trust, institutional, etc. farms	28	4.1
Pasture and other land irrigated farms	2 058	2.7	Other—cooperative, estate or trust, institutional, etc. acres	12 018	2.3
Pasture and other land irrigated acres	211	2.0			
Pasture and other land irrigated farms	2 004	2.6	HIRED FARM LABOR¹		
Pasture and other land irrigated acres	5	12.8	Hired workers by days worked:		
Land under Conservation Reserve or Wetlands Reserve Programs farms	85	2.6	150 days or more farms	1 106	3.3
Land under Conservation Reserve or Wetlands Reserve Programs acres	6 433	3.5	Less than 150 days farms	2 950	2.3
			Less than 150 days workers	1 419	3.3
			Less than 150 days workers	4 621	3.4
VALUE OF LAND AND BUILDINGS¹			INJURIES AND DEATHS		
Estimated market value of land and buildings farms	2 911	.9	Farm-related injuries:		
Average per farm \$1,000	1 265 667	1.5	Operator and family members farms	64	2.8
Average per acre dollars	434 788	1.7	Hired workers farms	77	3.0
Average per acre dollars	1 362	2.4	Hired workers number	92	1.7
			Hired workers number	124	1.9
VALUE OF MACHINERY AND EQUIPMENT¹			FARMS BY SIZE		
Estimated market value of all machinery and equipment farms	2 911	.9	1 to 9 acres	99	2.8
Average per farm \$1,000	219 455	1.6	10 to 49 acres	237	2.1
Average per farm dollars	75 388	1.8	50 to 69 acres	119	3.1
			70 to 99 acres	142	2.7
AGRICULTURAL CHEMICALS¹			FARMS BY NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM		
Commercial fertilizer farms	1 817	2.8	Oilseed and grain farming (1111)	36	5.0
Acres on which used acres	238 073	1.9	Vegetable and melon farming (112)	89	3.0
			Fruit and tree nut farming (113)	69	3.6
TENURE OF OPERATOR			LIVESTOCK		
All operators farms	2 965	.8	Cattle and calves inventory farms	2 181	.8
Full owners farms	951 021	.6	Beef cows farms	292 276	.4
Part owners farms	1 145	1.0	Milk cows farms	399	1.5
Tenants farms	267 994	1.0	Milk cows number	6 415	2.3
			Milk cows farms	1 820	.8
			Milk cows number	162 516	.4
OWNED AND RENTED LAND			OPERATOR CHARACTERISTICS		
Land owned farms	2 667	.8	Operators by place of residence:		
Owned land in farms farms	680 315	.6	On farm operated	2 512	.8
Owned land in farms acres	2 664	.8	Not on farm operated	297	1.7
Land rented or leased from others farms	1 823	.8	Not reported	156	1.8
Rented or leased land in farms farms	290 344	.7	Operators by principal occupation:		
Rented or leased land in farms acres	5 834	.8	Farming	2 457	.8
Land rented or leased to others farms	1 820	.8	Other	508	1.4
Landlords	288 493	.7	Operators by days worked off farm:		
Landlords acres	235	1.9	Any	874	1.1
Landlords acres	19 638	2.7	200 days or more	367	1.7
			Operators by sex:		
			Male	2 690	.8
			Female	275	1.8
			Average age of operator years	51.3	1.1

See footnotes at end of table.

Table D. **Reliability Estimates of State Totals for Farms With Sales of \$10,000 or More: 1997—Con.**

[For meaning of abbreviations and symbols, see introductory text]

Item	Total	Relative standard error of estimate (percent)	Item	Total	Relative standard error of estimate (percent)
POULTRY			SELECTED CROPS HARVESTED—Con.		
Layers and pullets 13 weeks old and older inventory (see text)	202	1.9			
farms..					
number..	248 435	.1	Potatoes, excluding sweetpotatoes	41	4.4
Layers 20 weeks old and older	198	1.9	farms..	214	1.8
farms..			acres..	57 691	1.3
number..	247 699	.1	cwt..		
Broilers and other meat-type chickens sold	22	5.5	Hay—alfalfa, other tame, small grain, wild, grass		
farms..			farms..	2 276	.8
number..	(D)	(D)	acres..	336 054	.6
			tons, dry..	639 895	.6
SELECTED CROPS HARVESTED			Vegetables harvested for sale (see text)	224	1.9
Corn for silage or green chop	1 095	.7	farms..	2 716	1.8
farms..			acres..	98	2.9
acres..	94 455	.4	Land in orchards	3 777	2.0
tons, green..	1 684 087	.3	farms..		
			acres..		

¹Data are based on a sample of farms.

²Farms with total production expenses equal to market value of agricultural products sold are included as farms with gains.

Table E. Reliability Estimates of Percent Change in State Totals: 1992 to 1997

[For meaning of abbreviations and symbols, see introductory text]

Item	All farms		Farms with sales of \$10,000 or more	
	Percent change from 1992 to 1997	Standard error of estimate	Percent change from 1992 to 1997	Standard error of estimate
Farms	7.2	1.2	-9	1.0
Land in farms	-1.3	.8	-3.2	.7
Average size of farm	-7.7	1.3	-2.1	1.2
Estimated market value of land and buildings ¹ :				
Average per farm	1.6	2.6	6.3	2.4
Average per acre	13.3	3.6	8.3	3.2
Estimated market value of all machinery and equipment ¹ :				
Average per farm	-3.7	2.4	-3.9	2.3
Farms by size:				
1 to 9 acres	21.2	3.5	8.8	4.6
10 to 49 acres	36.7	2.9	36.2	4.6
50 to 179 acres	13.8	1.6	16.8	2.2
180 to 499 acres	-8.7	1.0	-12.7	1.0
500 to 999 acres	-9.8	1.0	-7.8	.9
1,000 to 1,999 acres	37.0	-	41.2	-
2,000 acres or more	15.4	-	16.7	-
Total cropland	-3	1.1	-4.4	1.0
Harvested cropland	-6.3	.7	-5.4	.7
Irrigated land	-2.8	1.1	-5.4	1.0
Market value of agricultural products sold	14.7	.5	14.6	.5
Average per farm	7.0	1.3	15.6	1.3
Crops, including nursery and greenhouse crops	67.9	1.7	69.7	1.8
Livestock, poultry, and their products	9.7	.4	9.9	.4
Farms by value of sales:				
Less than \$2,500	13.4	2.1	(X)	(X)
\$2,500 to \$4,999	18.9	2.8	(X)	(X)
\$5,000 to \$9,999	24.2	2.8	(X)	(X)
\$10,000 to \$24,999	54.0	3.4	54.0	3.3
\$25,000 to \$49,999	-1.7	2.8	-1.7	2.7
\$50,000 to \$99,999	-19.9	1.9	-19.9	1.9
\$100,000 to \$249,999	-21.0	.6	-21.0	.6
\$250,000 to \$499,999	17.5	-	17.5	-
\$500,000 or more	64.4	-	64.4	-
Total farm production expenses ¹	9.0	1.1	8.7	1.2
Average per farm	2.1	1.5	11.3	1.7
Net cash return from agricultural sales for the farm unit (see text) ¹	6.8	1.3	-2.3	1.2
Average per farm	22.0	3.6	19.3	3.0
Operators by principal occupation:				
Farming	-5.8	1.0	-7.6	1.0
Other	30.7	2.3	52.6	3.5
Operators by days worked off farm:				
Any	18.0	1.8	17.3	2.0
200 days or more	25.4	2.3	34.4	3.6
Livestock and poultry:				
Cattle and calves inventory	-10.0	1.0	-13.1	.9
Beef cows	-7	.5	-6	.5
Milk cows	4.5	2.5	6.0	3.6
Cattle and calves sold	-12.4	.9	-14.2	.9
Hogs and pigs inventory	-31.4	1.9	-27.4	2.2
Hogs and pigs sold	-22.4	3.9	6.3	6.7
Sheep and lambs inventory	-38.6	2.1	-29.3	2.9
Layers and pullets 13 weeks old and older inventory (see text)	-32.8	4.0	-16.8	6.1
Broilers and other meat-type chickens sold	-7.0	2.4	-4.3	3.7
Selected crops harvested:				
Corn for grain or seed	-15.4	3.3	-23.6	4.8
Corn for silage or green chop	1.0	2.3	11.0	3.1
Oats for grain	(D)	6.9	(D)	(D)
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)	11.8	6.9	22.2	10.3
Vegetables harvested for sale (see text)	581.7	64.9	(D)	(D)
Corn for grain or seed	-8.4	1.8	2.4	1.7
Corn for silage or green chop	8.8	2.0	10.4	2.0
Oats for grain	29.0	2.5	30.5	2.5
Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)	-17.7	.7	-17.5	.7
Vegetables harvested for sale (see text)	11.3	.5	11.6	.5
Land in orchards	25.0	.5	25.4	.5
Land in orchards	-7.1	6.0	-24.0	4.8
Land in orchards	-28.2	3.8	-41.2	3.0
Land in orchards	-52.7	2.4	-63.5	1.6
Land in orchards	-10.0	1.0	-11.0	1.0
Land in orchards	-5.6	.8	-4.5	.7
Land in orchards	-9.4	.7	-8.6	.6
Land in orchards .....	.9	2.6	23.1	3.5
Land in orchards	14.2	2.9	24.3	3.3
Land in orchards	-11.6	2.7	-6.7	3.8
Land in orchards	-11.9	2.3	-10.2	2.5

¹Data are based on a sample of farms.

Table F. Reliability Estimates for the State and County Totals: 1997

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farms		Land in farms		Average size of farm		Average market value of land and buildings per farm ¹		Estimated market value of all machinery and equipment ¹			
	Total (number)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Total (acres)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)		
Vermont	5 828	.7	1 262 155	.6	217	.9	323 107	1.9	284 761	1.6		
Addison	683	.7	204 985	.6	300	.9	389 290	2.7	51 197	3.9		
Bennington	171	.7	32 374	1.9	189	2.1	324 613	9.7	7 397	4.5		
Caledonia	452	.5	94 255	1.0	209	1.1	270 979	3.8	17 944	3.5		
Chittenden	456	.7	83 355	1.1	183	1.3	443 038	10.6	19 278	8.7		
Essex	79	.8	25 497	1.9	323	2.1	303 091	4.4	4 298	2.6		
Franklin	740	.7	190 215	.7	257	1.0	327 550	3.9	46 285	2.9		
Grand Isle	107	1.2	21 036	1.9	197	2.2	474 123	4.9	9 567	2.3		
Lamoille	297	.9	48 967	1.8	165	2.0	252 205	4.8	8 289	6.3		
Orange	537	.8	98 352	1.2	183	1.4	256 446	5.7	21 158	4.9		
Orleans	569	.8	144 154	1.0	253	1.3	284 558	3.2	33 975	6.5		
Rutland	530	.9	125 770	1.1	237	1.4	295 464	4.9	21 651	3.8		
Washington	344	.8	56 290	1.2	164	1.5	306 273	6.8	12 487	5.4		
Windham	305	.6	46 818	1.3	154	1.5	337 075	6.2	16 088	8.4		
Windsor	558	.8	90 087	1.4	161	1.6	323 988	6.0	15 148	4.1		
Geographic area	Average market value of all machinery and equipment per farm ¹		Market value of agricultural products sold		Average market value of agricultural products sold per farm		Farm production expenses ¹					
	Value (dollars)	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Value (dollars)	Relative standard error of estimate (percent)	Total farm production expenses					
							Farms		Value			
							Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)		
Vermont	49 046	1.8	476 343	.3	81 734	.8	5 806	.8	371 207	.7		
Addison	75 180	4.0	112 718	.3	165 034	.8	681	1.0	90 470	1.2		
Bennington	43 509	4.9	8 084	1.4	47 277	1.6	170	2.0	6 282	4.5		
Caledonia	39 787	3.6	29 357	.6	64 949	.8	451	.9	21 627	3.4		
Chittenden	42 463	8.8	25 544	.7	56 017	1.0	454	1.1	19 668	3.2		
Essex	54 406	4.2	6 769	1.0	85 687	1.3	79	3.3	5 593	1.4		
Franklin	62 716	3.0	99 610	.3	134 608	.8	738	1.0	78 892	1.4		
Grand Isle	89 413	3.1	9 605	1.2	89 766	1.7	107	2.1	7 651	2.6		
Lamoille	27 910	6.5	15 470	1.3	52 087	1.6	297	1.6	11 451	4.2		
Orange	39 621	5.1	26 079	1.0	48 565	1.3	534	1.2	19 221	3.4		
Orleans	59 815	6.5	59 522	.5	104 607	1.0	568	1.1	45 813	1.5		
Rutland	41 083	4.0	28 357	.9	53 504	1.2	527	1.3	22 350	2.8		
Washington	36 620	5.6	15 041	.9	43 724	1.2	341	1.3	13 097	4.6		
Windham	52 921	8.5	20 366	.6	66 775	.9	304	1.4	15 685	2.1		
Windsor	27 293	4.3	19 820	.8	35 520	1.2	555	1.3	13 409	2.5		
Geographic area	Farm production expenses ¹ —Con.											
	Livestock and poultry purchased				Feed for livestock and poultry				Seeds, bulbs, plants, and trees			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Vermont	1 911	3.4	24 005	2.3	3 498	2.0	119 251	1.1	2 024	3.1	5 205	4.9
Addison	196	9.1	6 908	2.9	442	5.2	30 341	2.2	351	6.0	1 378	5.2
Bennington	53	14.3	324	15.3	95	7.9	1 658	7.2	69	10.1	143	8.6
Caledonia	154	13.3	1 483	10.6	257	7.4	7 527	6.1	108	15.3	258	2.1
Chittenden	103	19.9	721	11.1	239	8.7	5 552	3.6	155	14.6	450	3.9
Essex	27	5.4	196	5.5	41	4.3	1 787	1.6	25	3.7	86	.8
Franklin	386	6.2	6 512	2.7	555	4.2	28 174	1.8	318	7.4	851	7.8
Grand Isle	43	10.7	283	4.8	63	8.4	2 122	3.2	57	10.1	193	5.0
Lamoille	102	10.5	671	5.0	172	7.1	3 587	5.3	80	12.3	122	3.4
Orange	193	11.3	882	18.2	312	6.5	5 530	5.5	175	11.5	213	5.5
Orleans	210	11.5	3 176	5.4	391	5.1	16 718	2.9	180	12.4	380	7.5
Rutland	166	12.2	1 419	21.8	312	7.0	6 339	3.8	227	8.0	596	39.0
Washington	59	22.5	302	14.1	183	10.5	4 054	7.1	79	20.5	164	3.9
Windham	82	10.1	585	28.2	133	8.4	3 268	3.7	93	11.3	227	6.3
Windsor	137	14.6	543	19.1	303	6.3	2 594	3.6	107	14.5	145	4.3
Geographic area	Farm production expenses ¹ —Con.											
	Commercial fertilizer				Agricultural chemicals				Petroleum products			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Vermont	2 708	2.6	9 800	1.3	1 761	3.1	4 131	1.3	5 489	1.0	13 005	1.1
Addison	359	5.4	2 148	2.1	268	7.2	1 159	1.8	655	1.9	2 958	1.6
Bennington	85	6.9	145	6.9	62	9.5	126	3.8	159	2.9	262	4.4
Caledonia	209	9.1	500	5.7	87	12.6	135	3.4	403	4.0	858	4.7

See footnotes at end of table.

Table F. Reliability Estimates for the State and County Totals: 1997—Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses ¹ —Con.											
	Commercial fertilizer				Agricultural chemicals				Petroleum products			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Chittenden	145	14.4	457	3.7	129	15.0	262	12.0	418	2.3	703	3.8
Essex	43	4.0	160	1.6	24	4.4	82	1.0	77	3.4	226	1.9
Franklin	418	7.1	2 388	1.8	302	7.9	776	1.1	678	2.8	2 163	2.6
Grand Isle	49	9.9	139	9.8	51	8.0	151	4.9	103	2.8	368	2.8
Lamoille	114	9.6	326	6.7	66	14.6	112	8.5	285	1.6	470	8.0
Orange	245	8.9	499	8.1	139	12.0	138	6.1	528	1.2	750	4.6
Orleans	281	8.2	1 165	5.6	151	12.3	298	5.8	554	1.7	1 661	3.7
Rutland	267	6.6	673	5.4	224	7.8	282	7.0	488	2.9	930	4.6
Washington	115	17.0	286	9.0	63	19.9	118	6.3	317	4.0	464	5.3
Windham	144	8.3	587	4.4	98	11.9	386	5.2	293	2.2	563	2.7
Windsor	234	9.5	327	13.9	97	14.0	108	4.2	531	2.0	629	5.7
Geographic area	Farm production expenses ¹ —Con.											
	Electricity				Hired farm labor				Contract labor			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Vermont	4 242	1.6	11 665	1.4	2 485	2.6	43 304	1.0	667	6.2	2 559	4.3
Addison	528	3.6	2 644	2.3	338	5.2	10 268	2.4	96	15.2	458	6.6
Bennington	108	6.9	188	7.5	66	11.7	1 055	5.0	17	30.9	34	14.4
Caledonia	333	5.8	671	4.3	210	9.9	2 033	2.2	44	23.7	99	25.0
Chittenden	314	6.3	686	5.3	160	12.4	3 173	3.5	41	24.3	142	21.9
Essex	58	3.7	132	2.1	36	4.1	557	.9	7	9.9	32	6.8
Franklin	603	2.8	2 678	3.4	441	5.8	7 885	2.4	84	16.7	624	1.4
Grand Isle	77	8.4	334	2.0	60	7.7	1 203	2.7	9	—	37	—
Lamoille	221	5.4	383	6.7	112	10.2	1 171	1.2	29	15.6	102	2.6
Orange	389	5.0	665	5.3	182	11.0	2 053	6.3	85	18.2	197	21.5
Orleans	462	3.4	1 271	3.6	253	8.5	4 352	2.4	68	21.0	274	22.4
Rutland	372	5.4	754	5.6	184	9.8	2 477	5.2	67	21.6	130	33.1
Washington	203	10.3	460	13.2	122	10.9	1 576	5.0	54	26.6	127	17.2
Windham	206	5.6	394	4.0	107	8.3	3 297	.6	44	24.5	264	14.6
Windsor	368	6.1	406	4.8	214	11.2	2 205	1.1	22	26.5	40	11.4
Geographic area	Farm production expenses ¹ —Con.											
	Repair and maintenance				Customwork, machine hire, and rental of machinery and equipment				Interest			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Vermont	4 956	1.3	25 929	1.3	1 529	3.7	6 505	2.0	2 363	2.6	23 753	2.2
Addison	573	3.3	5 823	2.4	274	7.6	2 058	1.9	396	5.4	5 508	3.8
Bennington	128	5.9	678	9.6	21	19.4	24	8.6	48	13.0	283	5.7
Caledonia	389	3.8	1 620	4.9	104	13.8	176	7.0	215	8.2	1 520	10.6
Chittenden	399	3.4	1 358	6.5	71	20.6	226	6.1	135	15.8	1 368	17.7
Essex	68	3.4	474	1.8	24	5.0	69	4.5	36	3.7	408	2.7
Franklin	635	3.4	4 918	2.2	323	8.7	1 822	4.2	397	5.8	5 074	4.3
Grand Isle	90	6.2	571	3.5	24	10.2	85	1.9	42	12.1	480	10.3
Lamoille	250	4.3	734	5.6	98	11.8	264	7.0	107	10.4	699	10.5
Orange	463	3.3	1 466	5.0	151	13.4	350	21.0	202	9.4	1 201	8.5
Orleans	510	3.1	3 068	3.3	163	11.5	599	4.4	307	7.3	3 679	3.2
Rutland	443	3.4	1 781	3.0	116	14.6	330	10.1	172	10.4	1 333	16.7
Washington	284	5.3	1 146	13.5	42	17.1	238	16.5	117	10.2	744	9.7
Windham	274	2.7	1 035	3.6	49	12.8	128	3.5	73	12.5	732	2.5
Windsor	450	4.0	1 258	6.3	69	20.1	137	7.1	116	13.8	725	7.8
Geographic area	Farm production expenses ¹ —Con.											
	Cash rent				Property taxes paid				All other farm production expenses			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Vermont	1 566	3.4	6 224	2.2	5 395	1.0	19 328	1.7	5 184	1.2	56 541	1.0
Addison	294	6.8	1 998	4.5	623	2.0	3 005	3.7	636	2.0	13 817	1.5
Bennington	25	15.0	98	1.2	153	3.7	430	5.2	141	3.5	834	5.7
Caledonia	124	12.1	309	9.7	437	.9	1 291	4.3	397	3.8	3 148	3.7
Chittenden	77	16.3	379	7.2	416	3.1	1 717	6.1	387	5.2	2 474	3.9

See footnotes at end of table.

Table F. Reliability Estimates for the State and County Totals: 1997—Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Farm production expenses ¹ —Con.											
	Cash rent				Property taxes paid				All other farm production expenses			
	Farms		Value		Farms		Value		Farms		Value	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)
Essex	21	5.0	37	3.5	76	3.4	243	2.8	71	3.4	1 104	1.2
Franklin	213	10.2	1 150	2.7	710	1.6	2 721	3.6	685	2.2	11 156	2.0
Grand Isle	36	15.9	180	4.9	106	2.1	355	7.8	99	4.0	1 151	2.8
Lamoille	54	13.2	190	16.8	282	2.3	931	5.0	268	3.3	1 690	5.5
Orange	139	11.5	318	17.6	489	2.7	1 383	5.6	481	2.8	3 576	7.3
Orleans	179	10.0	603	5.7	527	3.1	1 707	4.3	504	3.0	6 865	3.6
Rutland	161	11.8	367	6.7	460	3.9	1 806	6.9	420	4.3	3 133	4.6
Washington	87	13.8	183	18.0	326	2.5	1 109	8.2	295	5.3	2 128	6.9
Windham	64	11.6	243	9.9	273	3.2	977	9.2	290	2.0	2 999	1.4
Windsor	92	14.7	170	10.0	517	2.3	1 654	7.4	510	2.1	2 467	4.9
Geographic area	Net cash return from agricultural sales for the farm unit (see text) ¹				Total cropland				Harvested cropland			
	Farms		Value		Farms		Acres		Farms		Acres	
	Number	Relative standard error of estimate (percent)	Total (\$1,000)	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
	Vermont	5 806	.8	87 572	2.2	5 065	.7	617 263	.6	4 609	.8	465 489	.5
Addison	681	1.0	22 803	3.2	624	.8	134 908	.6	587	.9	110 894	.6
Bennington	170	2.0	990	20.9	143	1.3	12 144	1.7	133	1.5	8 552	1.9
Caledonia	451	.9	6 069	5.6	413	.7	43 209	1.1	371	.8	30 648	1.1
Chittenden	454	1.1	3 183	15.7	382	1.0	42 188	1.3	344	1.1	30 985	1.2
Essex	79	3.3	1 177	2.6	72	1.5	9 438	1.9	71	1.6	7 915	1.6
Franklin	738	1.0	16 063	4.7	650	.8	99 474	.6	606	.9	76 024	.6
Grand Isle	107	2.1	1 508	7.9	101	1.3	15 982	1.7	92	1.7	12 280	1.8
Lamoille	297	1.6	2 550	8.2	241	1.4	19 702	1.9	217	1.5	13 981	2.1
Orange	534	1.2	4 771	14.6	465	.9	41 541	1.4	418	1.1	29 886	1.4
Orleans	568	1.1	12 133	7.6	511	1.0	74 331	1.0	470	1.1	55 634	.9
Rutland	527	1.3	5 840	11.2	465	1.0	52 797	1.4	423	1.1	37 472	1.5
Washington	341	1.3	2 088	23.6	277	1.1	23 166	1.3	247	1.3	16 081	1.3
Windham	304	1.4	3 764	7.1	260	1.0	18 529	1.2	228	1.2	13 801	1.0
Windsor	555	1.3	4 634	7.5	461	1.0	29 854	1.5	402	1.2	21 336	1.6
Geographic area	Irrigated land				Livestock and poultry							
	Farms		Acres		Cattle and calves inventory				Beef cows inventory			
	Farms		Total		Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Vermont	333	1.7	2 570	2.4	3 203	.8	308 267	.4	1 057	1.2	12 340	1.7
Addison	40	5.0	299	10.5	424	1.0	67 374	.4	114	2.7	1 460	3.4
Bennington	18	6.6	50	9.3	69	2.9	4 489	2.1	43	4.1	457	6.0
Caledonia	20	5.1	208	10.4	252	1.2	20 318	.9	84	2.7	592	3.7
Chittenden	39	4.7	495	4.6	172	1.9	15 796	1.2	64	3.8	997	5.7
Essex	3	19.5	(D)	(D)	45	2.8	4 345	1.6	13	8.1	(D)	(D)
Franklin	16	8.0	200	15.1	533	.9	66 851	.5	91	3.3	878	4.8
Grand Isle	9	11.9	51	22.5	69	2.5	6 384	1.6	18	7.2	(D)	(D)
Lamoille	13	7.6	65	17.8	126	2.3	10 019	1.7	40	5.2	348	8.0
Orange	26	5.9	(D)	(D)	299	1.4	18 242	1.4	99	2.9	1 292	4.4
Orleans	22	6.5	246	2.2	365	1.3	44 280	.7	85	3.3	804	5.7
Rutland	26	6.1	113	12.2	316	1.4	21 606	1.3	116	2.9	1 796	6.3
Washington	26	5.6	90	4.5	160	1.9	10 015	1.2	80	3.1	827	3.9
Windham	38	4.1	353	2.0	110	2.2	7 140	1.1	50	4.2	363	7.4
Windsor	37	4.6	279	3.3	263	1.6	11 408	1.4	160	2.3	2 032	2.6
Geographic area	Livestock and poultry—Con.											
	Milk cows inventory				Hogs and pigs inventory				Sheep and lambs inventory			
	Farms		Total		Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Vermont	1 940	.8	162 868	.4	238	2.1	2 900	3.7	451	1.7	14 511	2.6
Addison	308	1.0	35 372	.4	18	7.1	287	15.7	44	4.9	1 544	12.4
Bennington	29	4.1	2 043	2.8	7	11.0	33	15.3	21	6.1	381	7.5
Caledonia	152	1.5	10 467	1.0	17	6.3	95	6.4	37	4.2	922	5.7
Chittenden	92	2.2	7 849	1.2	18	7.5	90	11.3	38	5.0	1 916	6.9

See footnotes at end of table.

Table F. Reliability Estimates for the State and County Totals: 1997—Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Livestock and poultry—Con.											
	Milk cows inventory				Hogs and pigs inventory				Sheep and lambs inventory			
	Farms		Total		Farms		Total		Farms		Total	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Essex	32	3.3	(D)	(D)	5	15.2	17	17.3	4	18.0	(D)	(D)
Franklin	380	1.0	39 962	.5	20	6.9	114	7.6	30	6.5	774	11.7
Grand Isle	33	3.6	(D)	(D)	5	17.5	26	20.2	3	22.3	(D)	(D)
Lamoille	74	3.0	5 747	1.7	5	17.8	15	20.8	19	7.5	816	14.3
Orange	181	1.8	8 708	1.5	31	5.9	160	14.2	54	4.3	1 847	6.8
Orleans	265	1.4	24 947	.7	26	6.2	375	3.8	24	6.7	625	10.1
Rutland	179	1.8	10 261	1.3	19	7.1	238	22.7	50	4.8	1 160	12.4
Washington	76	2.6	4 554	1.4	15	7.3	92	9.1	28	6.0	513	9.5
Windham	55	2.5	3 537	1.2	14	6.1	640	2.1	40	4.5	2 476	3.0
Windsor	84	2.8	3 688	2.0	38	4.5	718	9.7	59	4.2	1 358	4.9
Geographic area	Livestock and poultry—Con.											
	Layers 20 weeks old and older inventory					Broilers and other meat-type chickens sold						
	Farms		Total			Farms			Total			
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)
Vermont	502	1.5	254 695	.1	57	4.2	49 535	7.2				
Addison	46	4.2	(D)	(D)	2	23.9	(D)	(D)				
Bennington	18	6.4	503	7.8	2	12.9	(D)	(D)				
Caledonia	42	4.0	1 034	4.4	5	11.8	450	11.3				
Chittenden	49	4.3	(D)	(D)	8	12.5	(D)	(D)				
Essex	8	10.3	225	21.8	—	—	—	—				
Franklin	35	5.2	(D)	(D)	6	14.5	1 275	20.9				
Grand Isle	6	12.8	124	14.9	—	—	—	—				
Lamoille	24	6.6	(D)	(D)	9	11.7	542	19.0				
Orange	46	4.6	1 890	10.6	4	15.1	118	16.7				
Orleans	49	4.3	1 299	5.5	3	17.7	104	17.2				
Rutland	44	4.9	1 776	8.2	1	41.1	(D)	(D)				
Washington	33	5.5	1 007	5.5	4	11.9	800	12.2				
Windham	38	4.7	1 187	6.2	4	13.2	422	17.9				
Windsor	64	3.8	1 820	3.4	9	9.1	1 384	3.2				
Geographic area	Selected crops harvested											
	Corn for grain or seed					Corn for silage or green chop						
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, green	Relative standard error of estimate (percent)
Vermont	131	1.5	8 233	1.2	938 996	1.2	1 168	.7	95 713	.4	1 702 672	.3
Addison	37	1.4	2 612	.4	308 542	.2	260	1.1	27 326	.9	429 387	.9
Bennington	7	9.7	132	2.5	15 200	2.5	22	4.7	1 938	1.4	31 571	1.6
Caledonia	5	7.5	148	6.0	12 812	6.4	62	2.0	3 501	.7	68 248	.5
Chittenden	9	5.2	568	6.3	66 800	5.4	53	2.8	4 949	1.2	93 077	1.2
Essex	—	—	—	—	—	—	15	3.7	1 249	.7	23 023	.6
Franklin	29	2.3	2 113	.9	228 558	.9	258	1.0	23 843	.6	456 461	.5
Grand Isle	9	5.9	758	2.0	88 686	1.7	32	3.7	2 525	2.1	39 884	1.7
Lamoille	3	13.3	(D)	(D)	(D)	(D)	37	3.7	2 677	1.6	43 074	1.7
Orange	7	10.1	254	2.6	31 373	1.2	102	2.3	4 496	1.2	85 621	1.3
Orleans	3	—	137	—	9 400	—	72	2.4	8 710	.6	164 472	.4
Rutland	12	7.9	701	5.3	85 163	4.6	151	1.9	7 353	1.5	125 287	1.3
Washington	4	7.2	288	3.8	29 784	3.2	30	3.4	2 123	1.7	37 170	1.6
Windham	3	7.0	(D)	(D)	(D)	(D)	28	3.0	2 701	.7	60 515	.8
Windsor	3	17.8	162	19.8	19 560	17.1	46	3.4	2 322	1.4	44 882	1.3
Geographic area	Selected crops harvested—Con.											
	Oats for grain					Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)						
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, dry	Relative standard error of estimate (percent)
Vermont	26	4.6	351	3.4	13 659	3.8	3 782	.8	385 562	.6	703 077	.6
Addison	6	11.1	93	4.9	5 273	5.4	473	1.0	87 083	.7	152 913	.7
Bennington	1	32.8	(D)	(D)	(D)	(D)	82	2.5	6 340	2.8	12 911	2.3
Caledonia	1	25.6	(D)	(D)	(D)	(D)	315	1.0	28 095	1.3	48 477	1.3
Chittenden	—	—	—	—	—	—	259	1.4	26 973	1.4	46 939	1.2

See footnotes at end of table.

Table F. Reliability Estimates for the State and County Totals: 1997—Con.

[For meaning of abbreviations and symbols, see introductory text]

Geographic area	Selected crops harvested—Con.											
	Oats for grain						Hay—alfalfa, other tame, small grain, wild, grass silage, green chop, etc. (see text)					
	Farms		Acres		Quantity		Farms		Acres		Quantity	
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Bushels	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Tons, dry	Relative standard error of estimate (percent)
Essex	—	—	—	—	—	—	59	2.2	6 096	2.2	9 051	2.9
Franklin	6	6.8	103	2.4	2 684	3.0	552	.9	55 279	.8	128 536	.7
Grand Isle	1	—	(D)	(D)	(D)	(D)	79	2.2	9 714	2.2	17 414	2.2
Lamoille	2	23.9	(D)	(D)	(D)	(D)	157	2.1	11 216	2.3	19 217	2.1
Orange	1	—	(D)	(D)	(D)	(D)	358	1.2	28 321	1.6	46 637	1.7
Orleans	4	8.7	65	10.7	1 730	6.8	410	1.2	49 358	1.0	94 433	1.1
Rutland	—	—	—	—	—	—	358	1.3	33 477	1.7	58 393	1.5
Washington	3	17.3	44	16.5	2 418	16.7	194	1.6	14 352	1.5	24 286	1.5
Windham	1	15.1	(D)	(D)	(D)	(D)	155	1.8	10 131	1.4	17 318	1.3
Windsor	—	—	—	—	—	—	331	1.4	19 127	1.9	26 552	1.9
Geographic area	Selected crops harvested—Con.											
	Vegetables harvested for sale (see text)					Land in orchards						
	Farms		Acres			Farms			Acres			
	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)	Number	Relative standard error of estimate (percent)		
Vermont	333	1.8	2 893	1.8	228	2.2	4 311	2.0				
Addison	30	6.0	175	7.8	39	4.7	1 732	4.0				
Bennington	17	6.5	120	8.4	15	7.4	(D)	(D)				
Caledonia	24	5.4	88	9.8	11	8.9	58	12.7				
Chittenden	34	4.7	520	1.6	28	6.2	221	10.1				
Essex	3	17.3	(D)	(D)	1	44.5	(D)	(D)				
Franklin	11	6.8	139	3.0	16	9.2	63	13.2				
Grand Isle	12	9.2	63	19.8	6	12.2	150	9.6				
Lamoille	12	9.6	47	14.2	7	9.5	16	8.2				
Orange	27	6.2	331	2.6	19	7.1	91	7.9				
Orleans	17	6.8	(D)	(D)	9	10.4	65	11.7				
Rutland	45	4.7	314	8.2	15	9.2	149	15.8				
Washington	29	5.0	258	9.3	11	9.3	70	14.5				
Windham	36	4.5	482	2.2	26	5.2	1 067	1.5				
Windsor	36	4.7	298	5.7	25	6.1	292	6.7				

¹Data are based on a sample of farms.

Table G. New England Coverage Estimates: 1997

[For meaning of abbreviations and symbols, see introductory text]

Item	Census total	Coverage total ¹	Adjusted census		Coverage adjustment (percent)
			Total	Relative standard error (percent)	
Farms number..	24 571	7 008	31 579	3.8	22.2
Land in farms acres..	3 821 702	410 022	4 231 724	2.9	9.7
Average size of farm acres..	156	59	134	(X)	(X)
Farms by size of farm:					
Less than 10 acres	3 491	1 022	4 513	14.3	22.6
10 to 49 acres	6 466	3 508	9 974	9.5	35.2
50 to 179 acres	8 080	1 933	10 013	7.1	19.3
180 acres or more	6 534	545	7 079	4.7	7.7
Farms by value of sales:					
Less than \$2,500	7 539	4 642	12 181	8.2	38.1
\$2,500 to \$9,999	6 309	1 271	7 580	8.0	16.8
\$10,000 or more	10 723	1 095	11 818	4.0	9.3
Market value of agricultural products sold \$1,000..	1 988 736	16 872	2 005 608	.9	.8
Farms by type of organization:					
Individual or family	20 591	6 833	27 424	4.2	24.9
Partnership, corporation, or other	3 980	175	4 155	4.8	4.2
Farms by tenure of operator:					
Full owners	15 759	4 971	20 730	4.8	24.0
Part owners	6 961	1 693	8 654	7.0	19.6
Tenants	1 851	344	2 195	17.6	15.7
Operators by place of residence:					
On farm operated	19 638	6 375	26 013	4.2	24.5
Not on farm operated	3 488	704	4 192	7.8	16.8
Not reported	1 445	-71	1 374	20.6	-5.2
Operators by principal occupation:					
Farming	12 553	1 229	13 782	4.1	8.9
Other	12 018	5 779	17 797	6.8	32.5
Operators by sex:					
Male	20 859	5 776	26 635	4.1	21.7
Female.....	3 712	1 232	4 944	9.6	24.9
Operators by race:					
White	24 464	6 987	31 451	3.8	22.2
Black and other races	107	21	128	58.6	16.4
Operators by years on present farm:					
4 years or less	2 279	1 065	3 344	16.8	31.8
5 years or more	18 854	5 403	24 257	4.1	22.3
Not reported	3 438	540	3 978	11.3	13.6

¹ See text in Appendix C regarding coverage estimates.