

Ag Report

In cooperation with

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Volume 00-09

Released: June 13, 2000

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Special Chemical Use Report

The data for this report were obtained from the 1999 Agricultural Resources Management Survey (ARMS). Data for corn, upland cotton, peanuts, fall potatoes, soybeans, sunflowers, and winter wheat were collected during the months of August through December of 1999. Large screening samples were drawn from the NASS List Sampling Frame. This extensive sampling frame covers all types of farms and accounts for approximately 82% of all land in farms in the U.S. The screening samples were selected in such a way as to insure that all farms on the list had a possibility of being selected. Farms

that were more likely to be producers of crops of interest were more likely to be in the screening sample. The sampled farms were screened to determine the presence of all the crops of interest. From this subpopulation of operations identified as producing the crop of interest, a subsample of farms was selected in such a way as to insure that each identified producer had an opportunity to be selected. In general, larger farms were more likely to be selected than smaller farms. Once a farm producing a particular crop of interest was selected, one field containing this crop was randomly selected from all the fields on the farm producing that crop. The operator of the sampled field was personally interviewed to obtain information on chemical applications made to the selected field.

The chemical applications data, reported by product name or trade name, are reviewed within State and across States for reasonableness and consistency. This review compares reported data with manufacturers' recommendations and with data from other farm operators using the same product. Following this review, product information is converted to an active ingredient level. The chemical usage estimates in this publication consist of survey estimates of those active ingredients.

U.S. Agricultural Chemical Use Survey Coverage, 1998 and 1999

Crop	1998			1999		
	States Surveyed	Reports Summarized	US Acreage Included	States Surveyed	Reports Summarized	US Acreage Included
	Number		Percent	Number		Percent
Corn	16	2,461	89	15	2,325	88
Cotton, Upland	10	1,502	92	10	1,607	91
Peanuts	--	--	--	4	617	81
Potatoes, Fall	2	287	8	11	1,322	92
Soybeans	16	2,466	91	17	2,525	92
Sunflowers	--	--	--	3	463	82
Wheat, Winter	19	1,804	87	1	177	1

Upland Cotton: Herbicide Applications, Mississippi, 1999¹

Agricultural Chemical	Area Applied	Applications	Rate Per Application	Rate Per Crop Year	Total Applied
	Percent	Number	Pounds Per Acre		1,000 lbs
Bromoxnil	22	1.5	0.37	0.58	153
Clethodim	7	1.0	0.11	0.11	9
Clomazone	6	1.0	0.42	0.42	30
Cyanazine	53	1.2	0.70	0.84	542
Diuron	49	1.0	0.40	0.43	253
Fluazifop-P-Butyl	2	1.0	0.11	0.11	3
Fluometuron	74	1.4	0.54	0.76	673
Glyphosate	36	1.3	0.61	0.84	364
Lactofen	3	1.0	0.09	0.09	3
MSMA	44	1.4	0.86	1.20	635
Metolachlor	13	1.0	0.88	0.88	136
Norflurazon	13	2.3	0.80	1.87	297
Pendimethalin	28	1.0	0.77	0.81	272
Prometryn	22	1.2	0.51	0.64	171
Pyriithobac-Sodium	46	1.4	0.03	0.05	25
Trifluralin	29	1.0	0.68	0.68	239

¹ Planted acres in 1999 for Mississippi were 1.20 million acres.

Upland Cotton: Insecticide Applications, Mississippi, 1999¹

Agricultural Chemical	Area Applied	Applications	Rate Per Application	Rate Per Crop Year	Total Applied
	Percent	Number	Pounds Per Acre		1,000 lbs
Acephate	51	1.7	0.42	0.72	445
Aldicarb	40	1.3	0.54	0.70	338
Carbofuran	21	1.0	0.26	0.26	65
Cyfluthrin	18	1.6	0.03	0.06	12
Cypermethrin	12	1.0	0.06	0.06	10
Dicrotophos	34	1.3	0.29	0.40	163
Disulfoton	3	1.1	0.77	0.85	26
Esfenvalerate	8	1.0	0.03	0.03	3
Imidacloprid	2	1.1	0.02	0.03	1
Lambda-Cyhalothrin	14	1.3	0.03	0.04	6
Malathion	86	7.1	0.69	4.94	5,103
Methyl Parathion	9	1.7	0.37	0.63	67
Oxamyl	12	1.2	0.20	0.25	36
Phorate	8	1.0	0.68	0.68	65
Profenofos	15	1.5	0.60	0.93	169
Spinosad	13	1.3	0.06	0.09	14
Zeta-Cypermethrin	16	1.3	0.04	0.05	10

¹ Planted acres in 1999 for Mississippi were 1.20 million acres.

Upland Cotton: Fungicide Applications, Mississippi, 1999¹

Agricultural Chemical	Area Applied	Applications	Rate Per Application	Rate Per Crop Year	Total Applied
	Percent	Number	Pounds Per Acre		1,000 lbs
Etridiazole	6	1.0	0.10	0.10	7
Mefenoxam	2	1.0	0.03	0.03	1
Metalaxyl	7	2.0	0.08	0.16	13
PCNB	14	1.5	0.61	0.95	157

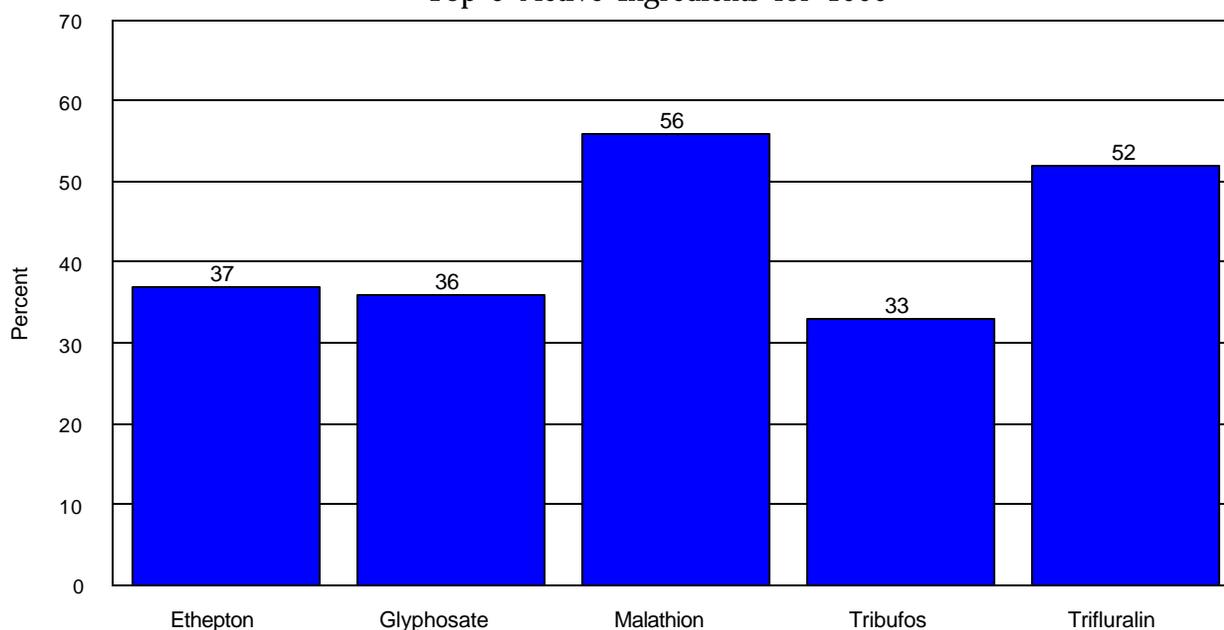
¹ Planted acres in 1999 for Mississippi were 1.20 million acres.

Upland Cotton: Other Chemicals Applications, Mississippi, 1999¹

Agricultural Chemical	Area Applied	Applications	Rate Per Application	Rate Per Crop Year	Total Applied
	Percent	Number	Pounds Per Acre		1,000 lbs
Bacillus Cereus ²	15	1.5			
Cyclanilide	10	1.0	0.09	0.09	11
Dimethipin	2	1.0	0.31	0.31	9
Ethephon	47	1.0	0.92	0.99	559
Mepiquat Chloride	34	1.3	0.02	0.03	12
Monocarbamide Dihyd.	6	1.0	2.67	2.67	184
Paraquat	12	1.3	0.26	0.35	50
Sodium chlorate	8	1.0	3.49	3.53	324
Thidiazuron	78	1.0	0.09	0.09	85
Tribufos	78	1.0	0.76	0.78	733

¹ Planted acres in 1999 for Mississippi were 1.20 million acres.

² Rates and total applied are not calculated because amounts of active ingredient are not comparable between products.

Upland Cotton - Percent of Acres Treated
Top 5 Active Ingredients for 1999

Surveyed states: AL, AR, AZ, CA, GA, LA, MS, NC, TN and TX

Upland Cotton: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1999

Primary Nutrient	Planted Acreage	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	1,000 Acres	Percent	Number	Pounds Per Acre		Mil. Lbs
Alabama	565					
Nitrogen		97	1.5	55	84	46.5
Phosphate		94	1.0	64	69	36.3
Potash		95	1.1	74	84	45.3
Arizona	270					
Nitrogen		99	2.6	56	149	39.6
Phosphate		22	1.3	62	84	5.0
Potash		15	1.2	14	18	0.7
Arkansas	970					
Nitrogen		97	1.5	59	93	88.0
Phosphate		82	1.0	40	40	31.8
Potash		85	1.0	75	77	63.5
California	610					
Nitrogen		99	1.9	78	154	92.6
Phosphate		51	1.0	57	61	19.1
Potash		19	1.1	87	97	11.1
Georgia	1,470					
Nitrogen		100	1.9	45	87	127.2
Phosphate		98	1.2	46	57	81.3
Potash		100	1.2	87	109	160.3
Louisiana	615					
Nitrogen		100	1.1	74	85	52.4
Phosphate		43	1.1	48	55	14.7
Potash		45	1.0	64	68	18.9
Mississippi	1,200					
Nitrogen		100	1.6	68	111	133.3
Phosphate		36	1.0	46	50	21.2
Potash		65	1.0	108	109	85.8
North Carolina	880					
Nitrogen		96	2.0	39	78	66.3
Phosphate		89	1.0	43	47	37.0
Potash		96	1.3	81	107	90.3
Tennessee	570					
Nitrogen		100	1.2	70	90	51.2
Phosphate		99	1.0	54	54	30.2
Potash		100	1.0	88	89	50.9
Texas	6,150					
Nitrogen		71	1.2	50	64	281.8
Phosphate		45	1.0	41	41	112.8
Potash		23	1.0	18	18	26.6
Total	13,300					
Nitrogen		86	1.5	55	85	978.9
Phosphate		59	1.0	46	49	389.4
Potash		52	1.1	71	80	553.4

Soybeans: Fertilizer Use by State, 1999
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	1,000 Acres	Percent	Mil. Lbs	Percent	Mil. Lbs	Percent	Mil. Lbs
Arkansas	3,450	17	17.3	43	78.0	40	90.0
Illinois	10,600	7	16.2	14	64.1	28	304.0
Indiana	5,600	28	33.6	36	105.3	36	219.8
Iowa	10,800	7	23.5	17	103.5	22	173.7
Kansas	2,850	22	14.9	22	19.4	15	7.6
Kentucky	1,200	17	4.8	25	18.3	26	24.2
Louisiana	1,020	5	1.4	14	7.2	11	6.8
Michigan	1,950	31	9.5	45	27.7	65	109.5
Minnesota	7,000	13	18.7	13	29.5	13	54.5
Mississippi	1,950	10	4.2	15	14.1	22	23.9
Missouri	5,400	15	11.7	23	54.8	23	87.3
Nebraska	4,300	25	17.8	25	31.7	16	17.0
North Carolina	1,400	54	15.8	71	53.9	71	85.0
Ohio	4,600	21	14.4	35	81.6	47	205.6
Pennsylvania	370	37	2.8	41	7.5	43	10.0
South Dakota	4,100	47	41.3	47	88.3	19	21.3
Tennessee	1,250	34	7.1	46	25.9	48	38.4
Total	67,840	18	255.0	26	810.8	28	1,478.6

Soybeans: Pesticide, Total Acreage, Percent of Area Receiving Applications and Total Applied, States Surveyed and Total, 1999

State	Planted Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide ¹		Fungicide ²		Other Chemicals ²	
	1,000 Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
Arkansas	3,450	94	3,670	9	17				
Illinois	10,600	96	10,290	*	20				
Indiana	5,600	89	5,750						
Iowa	10,800	99	11,995						
Kansas	2,850	97	3,273	*	1				
Kentucky ²	1,200	94	1,037						
Louisiana	1,020	94	1,123	53	22				
Michigan	1,950	97	2,342						
Minnesota	7,000	97	6,203						
Mississippi	1,950	99	2,967	9	78				
Missouri	5,400	97	5,556						
Nebraska	4,300	96	4,758	1	10				
North Carolina	1,400	88	1,283	3	3				
Ohio	4,600	99	4,705	*	3				
Pennsylvania	370	99	429	11	20				
South Dakota	4,100	98	3,943						
Tennessee	1,250	98	1,405	2	19				
Total	67,840	96	70,729	2	400				

* Amount represents less than 1 percent.

¹ Total Applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.

² Insufficient reports to publish data for one or more of the pesticide classes, for one or more of the states surveyed.

Soybeans: Fertilizer Primary Nutrient Applications,
Selected States and US Total, 1999

Primary Nutrient	Planted Acreage	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	1,000 Acres	Percent	Number	Pounds per Acre		Mil. Lbs
Arkansas	3,450					
Nitrogen		17	1.0	27	29	17.3
Phosphate		43	1.0	51	52	78.0
Potash		40	1.0	64	66	90.0
Illinois	10,600					
Nitrogen		7	1.1	18	20	16.2
Phosphate		14	1.0	45	45	64.1
Potash		28	1.0	102	103	304.0
Indiana	5,600					
Nitrogen		28	1.0	21	21	33.6
Phosphate		36	1.0	52	53	105.3
Potash		36	1.0	107	110	219.8
Iowa	10,800					
Nitrogen		7	1.1	27	30	23.5
Phosphate		17	1.0	55	55	103.5
Potash		22	1.0	72	72	173.7
Kansas	2,850					
Nitrogen		22	1.0	22	23	14.9
Phosphate		22	1.0	30	30	19.4
Potash		15	1.0	18	18	7.6
Kentucky	1,200					
Nitrogen		17	1.0	23	23	4.8
Phosphate		25	1.0	60	61	18.3
Potash		26	1.0	78	79	24.2
Louisiana	1,020					
Nitrogen		5	1.0	25	25	1.4
Phosphate		14	1.0	52	52	7.2
Potash		11	1.0	60	60	6.8
Michigan	1,950					
Nitrogen		31	1.0	16	16	9.5
Phosphate		45	1.0	32	32	27.7
Potash		65	1.0	83	87	109.5
Minnesota	7,000					
Nitrogen		13	1.0	20	20	18.7
Phosphate		13	1.0	33	33	29.5
Potash		13	1.0	58	58	54.5
Mississippi	1,950					
Nitrogen		10	1.0	22	22	4.2
Phosphate		15	1.0	48	48	14.1
Potash		22	1.0	56	56	23.9
Missouri	5,400					
Nitrogen		15	1.0	15	15	11.7
Phosphate		23	1.0	45	45	54.8
Potash		23	1.0	70	70	87.3
Nebraska	4,300					
Nitrogen		25	1.1	15	17	17.8
Phosphate		25	1.0	29	29	31.7
Potash		16	1.0	23	24	17.0

(Cont)

Soybeans: Fertilizer Primary Nutrient Application,
Selected States and US Total, 1999—Cont.

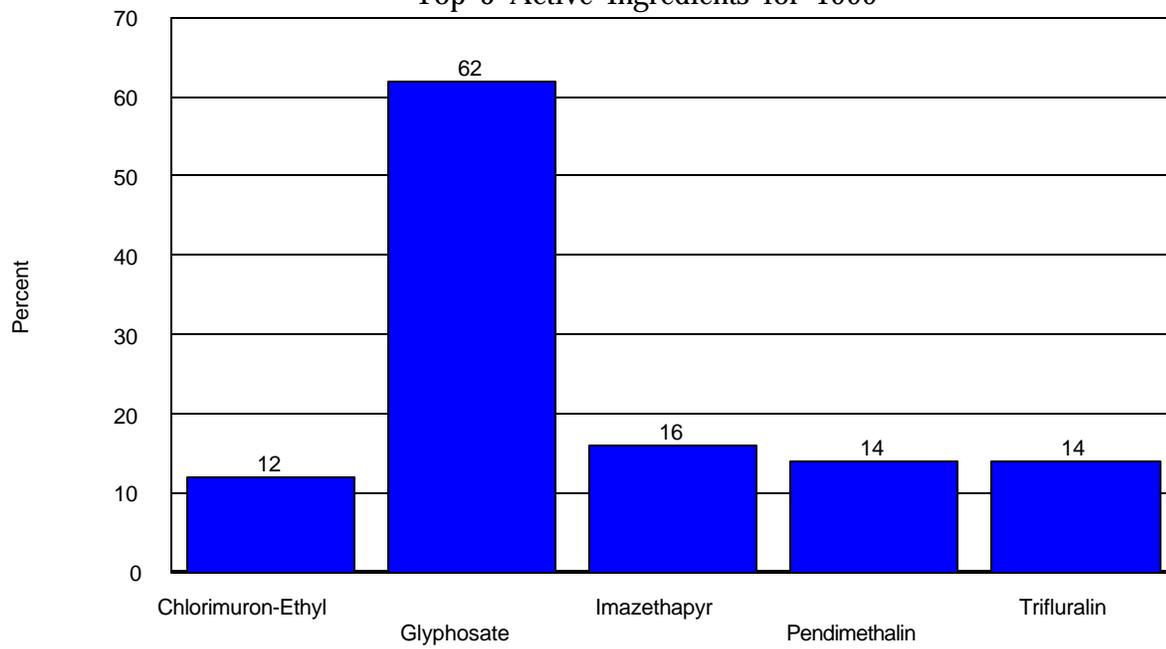
Primary Nutrient	Planted Acreage	Area Applied	Applications	Rate Per Application	Rate Per Crop Year	Total Applied
	1,000 Acres	Percent	Number	Pounds per Acre		Mil. Lbs
North Carolina	1,400					
Nitrogen		54	1.0	21	21	15.8
Phosphate		71	1.0	55	55	53.9
Potash		71	1.0	85	85	85.0
Ohio	4,600					
Nitrogen		21	1.0	15	15	14.4
Phosphate		35	1.0	50	51	81.6
Potash		47	1.0	94	94	205.6
South Dakota	4,100					
Nitrogen		47	1.0	20	21	41.3
Phosphate		47	1.0	45	45	88.3
Potash		19	1.0	27	27	21.3
Tennessee	1,250					
Nitrogen		34	1.0	17	17	7.1
Phosphate		46	1.0	45	45	25.9
Potash		48	1.0	64	64	38.4
US Total	67,840					
Nitrogen		18	1.0	20	21	255.0
Phosphate		26	1.0	46	46	810.8
Potash		28	1.0	78	78	1478.6

Soybeans: Agricultural Chemical Applications, Mississippi, 1999¹

Agricultural Chemical	Area Applied	Applications	Rate Per Application	Rate Per Crop Year	Total Applied
	Percent	Number	Pounds Per Acre		1,000 lbs
Herbicides					
2, 4-D	7	1.0	0.45	0.45	59
Acifluoren	16	1.2	0.24	0.29	88
Bentazon	7	1.0	0.61	0.61	86
Chlorimuron-Ethyl	24	1.0	0.02	0.02	7
Clethodim	6	1.0	0.18	0.18	22
Clomazone	5	1.0	0.79	0.79	77
Cloransulam-Methyl	9	1.0	0.01	0.01	3
Fluazifop-P-Butyl	4	1.2	0.12	0.16	11
Flumetsulam	17	1.0	0.03	0.04	12
Fomesafen	9	1.0	0.25	0.25	43
Glyphosate	55	1.7	0.70	1.24	1,321
Imazaquin	23	1.1	0.08	0.09	39
Metolachlor	15	1.0	1.34	1.34	380
Metribuzin	17	1.0	0.33	0.34	110
Paraquat	8	1.0	0.31	0.31	47
Pendimethalin	13	1.2	0.70	0.87	215
Quizalofop-Ethyl	7	1.0	0.04	0.04	6
Sethoxydim	5	1.0	0.26	0.26	28
Trifluralin	22	1.0	0.90	0.90	381
Insecticides					
Methyl Parathion	2	1.4	0.47	0.66	30
Thiodicarb	2	1.0	0.52	0.52	18

¹ Planted acres in 1999 for Mississippi were 1.95 million acres.

Soybeans - Percent of Acres Treated Top 5 Active Ingredients for 1999



Surveyed states: AR, IL, IN, IA, KS, KY, LA, MI, MN, MS, MO, NE, NC, OH, PA, SD and TN

To see the report from which this data was taken go to either of these two links:

- usda.mannlib.cornell.edu/reports/nassr/other/pcu-bb/agch0500.pdf
- usda.mannlib.cornell.edu/reports/nassr/other/pcu-bb/agch0500.txt