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Service



# Agricultural Chemical Usage 2005 Field Crops Summary

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## Overview

The agricultural chemical use estimates in this report refer to on-farm use of commercial fertilizers and pesticides on targeted field crops for the 2005 crop year. Field crops include corn, upland cotton, oats, fall potatoes, and soybeans. Farm and ranch operators were enumerated late in the growing season after the farm operator had indicated that planned applications were completed. The chemical use data were not summarized for geographical areas other than by those States published in this report.

The data were compiled from 2 surveys, the Agricultural Resources Management Survey (ARMS) and Conservation Effects Assessment Project (CEAP). Data collection occurred primarily during the months of September to December of 2005. An example of the survey instrument used in data collection is included in the back of this publication.

This report excludes pesticides used for seed treatments and postharvest applications to the commodity. Spot treatments, which account for a very small percentage of total applications, are mentioned only in the "Active Ingredients and Publication Status" tables.

The table below shows the number of States included in the survey, the number of summarized reports from the States, and the percent of the Program States' acres planted to that commodity compared with the U.S. total. Producers of corn, fall potatoes, and upland cotton were last surveyed in 2003, and soybeans growers were recently surveyed in 2004 and can be used as a comparison to this year's data. Oats were last included in the 1998 Fall Area Survey and summarized by geographical region, not by State.

**Agricultural Chemical Use Survey Coverage, 2005 and 2003**

Crop	2005			2003		
	States in Survey	Reports Summarized	U.S. Acreage Included in Survey	States in Survey	Reports Summarized	U.S. Acreage Included in Survey
	-- Number --		Percent	-- Number --		Percent
Corn	19	3,300	93	18	3,013	92
Fall Potatoes	8	761	87	10	872	80
Oats <sup>1,2</sup>	15	1,592	82	48	278	100
Upland Cotton	9	1,866	89	12	1,751	90
Soybeans <sup>3</sup>	17	1,220	89	11	3,163	81

<sup>1</sup> 2005 is the first time NASS set State level estimates for Oats.

<sup>2</sup> Oats survey coverage from the 1998 Fall Area Survey.

<sup>3</sup> Soybean survey coverage from the Agricultural Chemical Usage 2004 Field Crops Summary.

## Highlights

**Corn:** Nitrogen was applied to 96 percent of the 2005 corn planted acreage in the 19 Program States: Colorado, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, New York, North Carolina, North Dakota, Ohio, Pennsylvania, South Dakota, Texas, and Wisconsin. Corn growers applied an average of 138 pounds of **nitrogen** per acre per crop year. **Phosphate** was applied to 81 percent of the corn acreage in the Program States at an average rate of 58 pounds per acre per crop year. **Potash**, applied at 84 pounds per acre per crop year, was applied to 65 percent of the acreage planted to corn. For the first time, **sulfur** use was included in the survey and 13 percent of the acres planted received an application at an average rate of 12 pounds per acre per crop year.

Herbicides were applied to 97 percent of the corn planted acreage in 2005 in the Program States. **Atrazine** continues to be the most widely applied herbicide with 66 percent of the planted acreage being treated. It was applied at an average rate of 1.133 pounds per acre per crop year. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) was applied to 31 percent of planted acres, up from 19 percent in 2003, at an average rate of 0.963 pounds per acre per crop year. In terms of area applied, that was followed closely by **S-Metolachlor** and **Acetochlor**, at 23 percent of the planted corn acreage treated in the Program States.

In 2005, 23 percent of the corn planted acreage was treated with insecticides in the Program States. **Tefluthrin, Cyfluthrin, and Tebupirimphos** were the most widely applied insecticides, at 7, 7, and 6 percent, respectively, to the acres planted to corn in the States surveyed. Chlorpyrifos was only applied to 2 percent of the acres, but total applied is more than 3 times greater than next highest at 2.0 million pounds.

**Fall Potatoes:** Eight fall producing States were included in the 2005 survey: Colorado, Idaho, Maine, Michigan, Minnesota, North Dakota, Washington, and Wisconsin. **Nitrogen** averaged 4.1 applications per field with a total of 180.3 million pounds applied to 99 percent of the fall potato acreage. **Phosphate** was applied to 98 percent of the fall potato acres, with a total of 132.5 millions pounds applied. A total of 145.4 million pounds of **Potash** were applied to 92 percent of the planted acreage. **Sulfur** recorded 41.3 million pounds applied to 72 percent of the acres planted.

The total pounds of all pesticides were down for fall potatoes in 2005 compared to 2003. Herbicides were applied to 92 percent of the fall potato acreage in 2005 in the 8 Program States. **Metribuzin** was the most widely applied herbicide, applied to 74 percent of the planted acreage treated, at a rate of 0.441 pounds per acre per crop year. The next three most widely applied herbicides applied to fall potatoes, **Pendimethalin, Rimsulfuron, EPTC**, were applied to 31, 27, and 24 percent of the acres planted, respectively.

Of the insecticides covering 79 percent of the 2005 fall potato planted acreage, the three most commonly applied were **Imidacloprid, Cyfluthrin, and Esfenvalerate** and, 38, 29, and 27 percent, respectively.

Fungicide treatments were applied to 90 percent of the fall potato acreage in the Program States. **Mancozeb** was used most commonly, as it was applied to 61 percent of the planted acres at a rate of 4.215 pounds per acre per crop year, followed by **Chlorothalonil, Azoxystrobin, and Mefenoxam**, applied to 55, 37, and 25 percent of the fall potato acreage in the States surveyed, respectively.

## Highlights (continued)

Usage of Other Chemicals varied widely among the States surveyed. Percent of acreage treated ranged from 2 percent in Michigan to 70 percent in Washington. Overall, 40 percent of the acres planted to fall potatoes, down 7 percentage points from 2003, received an application of an Other Chemical. Only 0.129 million pounds of **Diquat dibromide** were applied, but was spread over 30 percent of the planted acreage. However, 35.4 and 20.8 million pounds of **Sulfuric acid** and **Metam-sodium**, respectively, were applied to 12 and 16 percent of the fall potato acreage, respectively.

**Oats:** Fifteen States were included in the 2005 survey: California, Idaho, Illinois, Iowa, Kansas, Michigan, Minnesota, Montana, Nebraska, New York, North Dakota, Pennsylvania, South Dakota, Texas, and Wisconsin. This compares to 1998 when oats were last surveyed in which an area survey was conducted drawing possible samples from any of the 48 states. **Nitrogen** recorded 107.4 million pounds applied to 56 percent of the oats acreage in these States. Approximately 50 million pounds each of **Phosphate** and **Potash** were applied to 40 and 28 percent, respectively, of the oats acreage in the States surveyed. For the first time, **sulfur** usage data were collected and 3.2 million pounds were applied to 9 percent of the acres planted.

Herbicides were applied to 31 percent of the oat acreage in 2005 with **2,4-D dimethylamine salt** being the most widely applied herbicide on 9 percent of the planted acreage for a total of 147 thousand pounds. It was followed by **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) and **2,4-D, 2-EHE** (formerly recorded as Acetic Acid), at 117 and 79 thousand pounds, respectively, to 5 percent of the planted acreage.

**Lambda-cyhalothrin** was the only insecticide with enough reports to publish usage data. It was applied to less than one half of one percent of the 2005 oats planted acreage, at an average application rate of 0.027 pounds per acre per crop year.

**Upland Cotton:** Nine cotton producing States were included in the 2005 survey: Alabama, Arkansas, California, Georgia, Louisiana, Mississippi, North Carolina, Tennessee, and Texas. **Nitrogen** applications averaged 90 pounds per acre per crop year adding up to 978.0 million pounds being applied to 88 percent these States' planted acres. A total of 370.9 millions pounds of **phosphate** was applied to 65 percent of the upland cotton planted acres in the Program States. **Potash** was applied to 55 percent of the planted acreage totaling 498.9 million pounds in the States surveyed. **Sulfur** was applied on 38 percent of the acres planted for a total of 69.4 million pounds.

Herbicides were applied to 95 percent of the upland cotton acreage in 2005 in the 9 Program States. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) was the most widely applied herbicide, applied to 71 percent of the planted acreage at a rate of 1.592 pounds per acre per crop year for a total of 14.1 million pounds. The next most commonly applied herbicide on a per acre basis, **Trifluralin**, at 32 percent, was also the second most used, in total pounds, at 3.5 million pounds. That was followed by **Diuron** being applied to 27 percent of the planted acreage for upland cotton.

## Highlights (continued)

Insecticides were applied to 71 percent of the 2005 upland cotton planted acreage. The 3 most commonly applied insecticides reported in the States surveyed were **Acephate**, **Aldicarb**, and **Dicrotophos** which were applied to 27, 19, and 19 percent of the planted acreage, respectively. However, **Malathion** was the most applied, in terms of total pounds, at 7.3 million pounds, but was applied to just 15 percent of the planted acreage.

Fungicide treatments were applied to 3 percent of the upland cotton acreage in the Program States. **PCNB** was applied most heavily at 87 thousand pounds to the planted acres, followed by **Mefenoxam** and **Azoxystrobin** at 19 and 12 thousand pounds, respectively, for the upland cotton planted acreage in the States surveyed.

Usage of Other Chemicals, primarily desiccants, varied among the States surveyed. Overall, 72 percent of the acres planted to upland cotton in the Program States received an application of an Other Chemical. **Ethephon** was used most commonly as 8.2 million pounds were applied to 58 percent of the planted acres, followed by **Mepiquat chloride** and **Tribufos** being applied to 33 and 26 percent of the upland cotton acreage in the States surveyed, respectively.

**Soybeans:** This year, soybeans were included in this report to capture farmers' reactions to Asian Soybean Rust. However, data were only available from the CEAP survey for 17 states (Arkansas, Indiana, Illinois, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Carolina, Ohio, South Dakota, Tennessee, and Virginia), because soybeans were not selected as a target crop for ARMS.

Asian Soybean Rust is a fungus, therefore, we focused on farmers' use of fungicides. For 2005, farm operations reported 6 active ingredients applied to 2 percent of the planted soybean acreage, versus 4 active ingredients reported on 1 percent of the planted acreage in 2004. In the Agricultural Chemical Usage 2004 Field Crops Summary, **Azoxystrobin** was the only publishable fungicide at the Program State level. All 6 of the active ingredients reported for 2005 are recommended for Asian Soybean Rust.

Herbicides were applied to 98 percent of the Program State acreage though 1 active ingredient clearly dominated. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) was used on 88 percent of all the acres treated. The average application rate of 1.101 pounds was applied per acre per crop year for a total of 63.0 million pounds applied. No other herbicide was applied to more than 4 percent of the total planted acres.

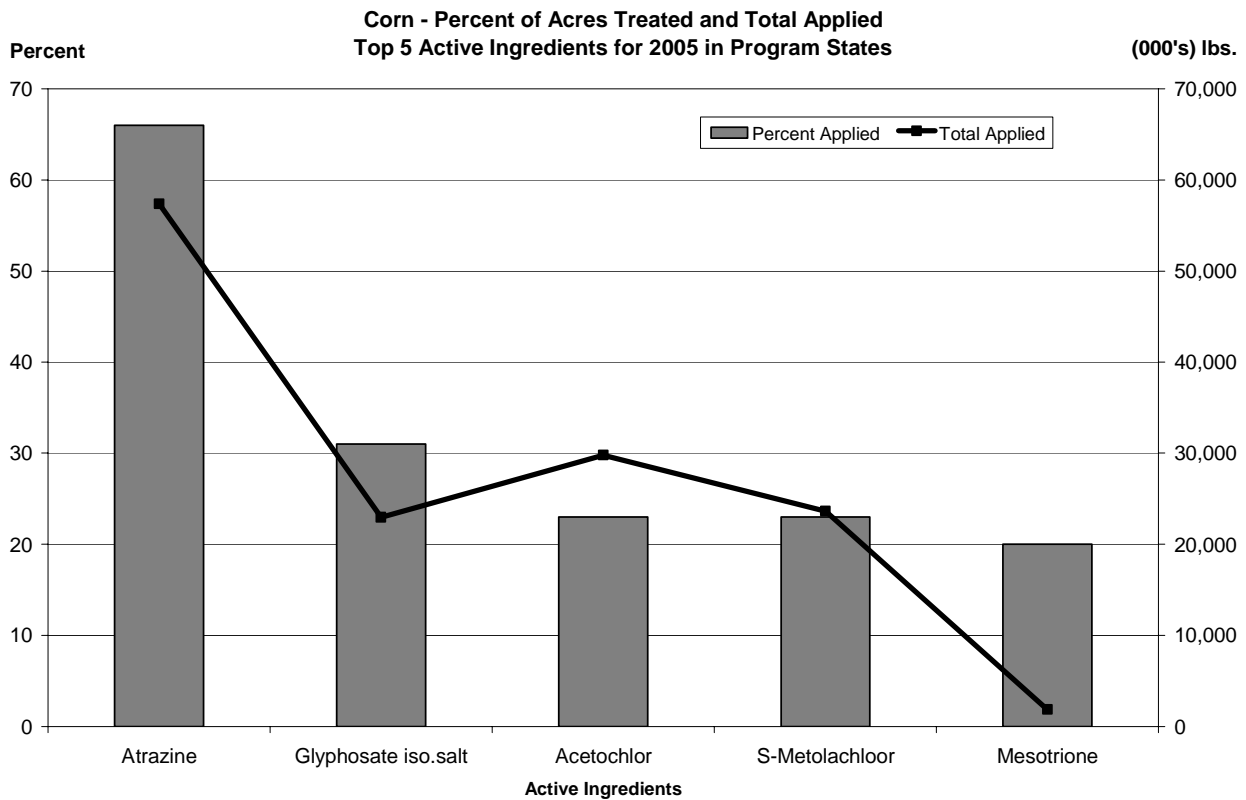
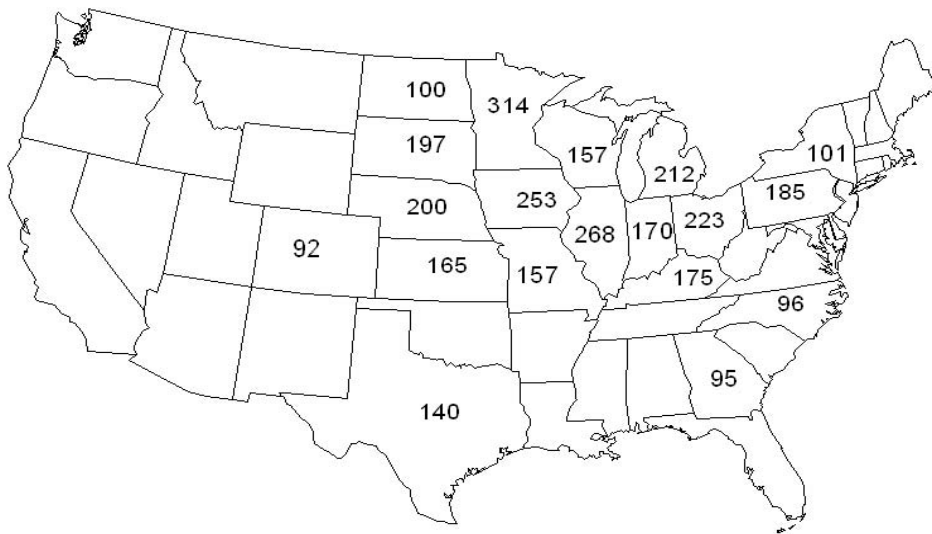
Insecticides were used on 14 percent of the Program State acres, but individual active ingredients only covered a maximum of 6 percent of soybean Program State acreage.

### Highlights (continued)

Program States Surveyed for 2005 Field Crops					
	Corn	Fall Potatoes	Oats	Upland Cotton	Soybeans
Alabama				+	
Arkansas				+	+
California			+	+	
Colorado	+	+			
Georgia	+			+	
Idaho		+	+		
Illinois	+		+		+
Indiana	+				+
Iowa	+		+		+
Kansas	+		+		+
Kentucky	+				+
Louisiana				+	+
Maine		+			
Michigan	+	+	+		+
Minnesota	+	+	+		+
Mississippi				+	+
Missouri	+				+
Montana			+		
Nebraska	+		+		+
New York	+		+		
North Carolina	+			+	+
North Dakota	+	+	+		
Ohio	+				+
Pennsylvania	+		+		
South Dakota	+		+		+
Tennessee				+	+
Texas	+		+	+	
Virginia					+
Washington		+			
Wisconsin	+	+	+		



## Corn: Number of Usable Reports 2005



**Corn: Fertilizer Use by State, 2005**  
**Percent of Acres Treated and Total Applied**

State	Planted Acreage	Percent of Acres Treated and Total Applied							
		Nitrogen		Phosphate		Potash		Sulfur	
	<i>1,000 Acres</i>	<i>Percent</i>	<i>Mil. lbs.</i>	<i>Percent</i>	<i>Mil. lbs.</i>	<i>Percent</i>	<i>Mil. lbs.</i>	<i>Percent</i>	<i>Mil. lbs.</i>
CO	1,100	89	126.2	63	24.4	21	4.2	33	3.3
GA	270	98	38.7	86	16.1	87	24.5	53	2.5
IL	12,100	98	1,728.3	84	780.4	84	1,160.5	4	14.9
IN	5,900	100	869.3	93	420.2	88	648.2	14	8.1
IA	12,800	92	1,653.2	70	579.0	71	762.3	5	4.5
KS	3,650	97	482.1	81	112.7	26	34.9	17	5.3
KY <sup>1</sup>	1,250	98	210.5	78	75.5	77	86.9		
MI	2,250	97	277.8	88	89.6	81	148.4	21	3.7
MN	7,300	94	953.9	86	378.1	77	400.3	9	8.2
MO	3,100	99	489.5	79	149.5	78	180.1	19	10.0
NE	8,500	99	1,162.5	75	237.3	22	38.8	30	35.0
NY <sup>1</sup>	990	94	62.2	88	33.2	79	34.9		
NC	750	97	90.5	74	25.5	86	53.1	18	1.1
ND	1,410	99	169.3	94	58.8	38	13.3	8	0.9
OH	3,450	99	551.7	87	224.9	76	264.5	12	3.2
PA	1,350	88	108.4	64	40.7	58	37.4	6	3.0
SD	4,450	95	477.7	79	154.2	37	41.9	13	5.5
TX	2,050	94	282.0	81	73.9	28	10.6	29	6.9
WI	3,800	93	380.9	84	118.8	84	191.7	22	9.1
Total	76,470	96	10,114.7	81	3,592.8	65	4,136.5	13	125.9

<sup>1</sup> Insufficient reports to publish data for one or more of the fertilizer primary nutrients.

**Corn: Fertilizer Primary Nutrient Applications,  
Program States and Total, 2005**

Primary Nutrient	Planted Acreage	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>1,000 Acres</i>	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>Mil. lbs</i>
Colorado	1,100					
Nitrogen		89	1.9	67	129	126.2
Phosphate		63	1.1	33	35	24.4
Potash		21	1.6	12	19	4.2
Sulfur		33	1.3	7	9	3.3
Georgia	270					
Nitrogen		98	2.0	74	147	38.7
Phosphate		86	1.3	54	70	16.1
Potash		87	1.1	98	104	24.5
Sulfur		53	1.1	15	18	2.5
Illinois	12,100					
Nitrogen		98	1.8	83	146	1,728.3
Phosphate		84	1.0	73	76	780.4
Potash		84	1.0	111	114	1,160.5
Sulfur		4	1.0	31	31	14.9
Indiana	5,900					
Nitrogen		100	2.2	67	147	869.3
Phosphate		93	1.4	56	77	420.2
Potash		88	1.1	111	124	648.2
Sulfur		14	1.0	10	10	8.1
Iowa	12,800					
Nitrogen		92	1.4	98	141	1,653.2
Phosphate		70	1.1	60	64	579.0
Potash		71	1.0	80	84	762.3
Sulfur		5	1.0	7	7	4.5
Kansas	3,650					
Nitrogen		97	1.6	87	136	482.1
Phosphate		81	1.1	35	38	112.7
Potash		26	1.0	37	37	34.9
Sulfur		17	1.0	9	9	5.3
Kentucky	1,250					
Nitrogen		98	1.6	107	171	210.5
Phosphate		78	1.1	73	77	75.5
Potash		77	1.0	89	90	86.9
Sulfur <sup>1</sup>						
Michigan	2,250					
Nitrogen		97	2.3	55	128	277.8
Phosphate		88	1.2	39	45	89.6
Potash		81	1.2	69	82	148.4
Sulfur		21	1.0	7	8	3.7

See footnote(s) at end of table.

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**Corn: Fertilizer Primary Nutrient Applications,  
Program States and Total, 2005 (continued)**

Primary Nutrient	Planted Acreage	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>1,000 Acres</i>	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>Mil. lbs</i>
Minnesota	7,300					
Nitrogen		94	1.7	81	139	953.9
Phosphate		86	1.2	49	60	378.1
Potash		77	1.1	68	71	400.3
Sulfur		9	1.0	12	13	8.2
Missouri	3,100					
Nitrogen		99	1.4	113	160	489.5
Phosphate		79	1.1	56	61	149.5
Potash		78	1.0	72	75	180.1
Sulfur		19	1.2	14	17	10.0
Nebraska	8,500					
Nitrogen		99	2.2	63	138	1,162.5
Phosphate		75	1.2	32	37	237.3
Potash		22	1.3	15	20	38.8
Sulfur		30	1.5	9	14	35.0
New York	990					
Nitrogen		94	1.5	46	67	62.2
Phosphate		88	1.1	34	38	33.2
Potash		79	1.1	41	45	34.9
Sulfur <sup>1</sup>						
North Carolina	750					
Nitrogen		97	2.1	59	124	90.5
Phosphate		74	1.2	39	46	25.5
Potash		86	1.1	72	83	53.1
Sulfur		18	1.0	8	8	1.1
North Dakota	1,410					
Nitrogen		99	1.9	65	121	169.3
Phosphate		94	1.1	40	45	58.8
Potash		38	1.0	24	25	13.3
Sulfur		8	1.0	8	8	0.9
Ohio	3,450					
Nitrogen		99	2.1	76	161	551.7
Phosphate		87	1.2	63	75	224.9
Potash		76	1.1	89	101	264.5
Sulfur		12	1.0	8	8	3.2
Pennsylvania	1,350					
Nitrogen		88	1.5	62	92	108.4
Phosphate		64	1.1	44	47	40.7
Potash		58	1.1	44	48	37.4
Sulfur		6	1.1	33	37	3.0

See footnote(s) at end of table.

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**Corn: Fertilizer Primary Nutrient Applications,  
Program States and Total, 2005 (continued)**

Primary Nutrient	Planted Acreage	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>1,000 Acres</i>	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>Mil. lbs</i>
South Dakota	4,450					
Nitrogen		95	1.4	79	113	477.7
Phosphate		79	1.1	40	44	154.2
Potash		37	1.0	26	26	41.9
Sulfur		13	1.0	9	9	5.5
Texas	2,050					
Nitrogen		94	1.9	79	147	282.0
Phosphate		81	1.1	41	44	73.9
Potash		28	1.1	17	18	10.6
Sulfur		29	1.2	10	12	6.9
Wisconsin	3,800					
Nitrogen		93	2.0	53	107	380.9
Phosphate		84	1.1	34	37	118.8
Potash		84	1.1	52	60	191.7
Sulfur		22	1.4	8	11	9.1
Total	76,470					
Nitrogen		96	1.8	77	138	10,114.7
Phosphate		81	1.1	51	58	3,592.8
Potash		65	1.1	78	84	4,136.5
Sulfur		13	1.2	10	12	125.9

<sup>1</sup> Insufficient reports to publish fertilizer data.

**Corn : Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States									
	ALL	CO	GA	IL	IN	IA	KS	KY	MI	MN
Herbicides										
2,4-D	*			*						*
2,4-D, 2-EHE	P	P		P	P	P	P	*	P	*
2,4-D, BEE	P			*	*	*	*	*	*	
2,4-D, dieth sal	P									
2,4-D, dimeth. salt	P	P	*	*	*	*	P	P	P	*
2,4-D, isoprop. salt	P	*					P			
2,4-DP, 2-BEE	*								*	
Acetochlor	P	*		P	P	P	P	P	P	P
Alachlor	P	*	*	*	*		P	*	*	*
Ametryn	P									
Atrazine	P	P	P	P	P	P	P	P	P	P
Bentazon	*								*	
Bromoxynil	P			P	*	*	*			*
Bromoxynil heptanoat	P			*	*		*		*	
Bromoxynil octanoate	P			*	*		*		*	
Butoxyethyl triclopy	*								*	
Carfentrazone-ethyl	P		*	*			*			*
Chlorimuron-ethyl	*						*			
Chlorsulfuron	*						*			
Clethodim	*			*						*
Clopyralid	P		*	P	P	P	*	*	P	P
Cloransulam-methyl	*								*	*
Cyanazine	P			*						
Dicamba	P	*		P	*	*	*	*	P	*
Dicamba, Digly Salt	P	P		P	*	*	*	*	P	P
Dicamba, Dimet. salt	P	P		*	P	*	P		*	*
Dicamba, Pot. salt	P	*		P	*	P			*	P
Dicamba, Sodium salt	P	P		P	P	P	P	P	P	P
Diflufenzopyr-sodium	P	P		P	P	P	P	P	P	P
Dimethenamid	P	*		*	*	*	*	*	*	*
Dimethenamid-P	P			P	*	P	*	*	P	P
Diuron	*									
EPTC	*									*
Flucarbazone-sodium	*					*				
Flufenacet	P			P	P	P	*	*	*	*
Flumetsulam	P		*	P	P	P	*	*	P	P
Flumiclorac-pentyl	*									
Flumioxazin	*							*		
Fluroxypyr	*									
Fomesafen	*									*
Foramsulfuron	P	*		P	P		*	*	*	*
Glufosinate-ammonium	P	*		P	*	P	*			P
Glyphosate	P	*		*	*	*		*		P
Glyphosate amm. salt	P		*							
Glyphosate iso. salt	P	P	P	P	P	P	P	P	P	P
Halosulfuron	P			*	*	*				

See footnote(s) at end of table.

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**Corn : Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States									
	ALL	CO	GA	IL	IN	IA	KS	KY	MI	MN
Herbicides (continued)										
Imazamox	*									
Imazapyr	P	*		P	P	*	*	P		
Imazethapyr	P	*		P	P	*	*	P		
Iodosulfuron-Met-Sod	P			*	*		*	*		
Isoxaflutole	P	*		P	P	P	P	P		
Linuron	P							*		
MCPA, 2-ethylhexyl	*				*					
MCPA, sodium salt	P			*	*				*	
Mesotrione	P	P		P	P	P	P	P	P	P
Metolachlor	P			P	*		P	*	P	P
Metribuzin	P			*	*	*			*	
Metsulfuron-methyl	*						*			
Nicosulfuron	P	P	P	P	P	P	P	P	P	P
Oxyfluorfen	*									
Paraquat	P	*	*	*	*			P		
Pendimethalin	P	*	P		*		*	*	P	P
Primisulfuron	P			P	P	*	P	*	P	*
Propachlor	*									
Prosulfuron	P			P	P	*	P	*		
Pyraflufen-ethyl	*		*							
Quinclorac	*						*			
Quizalofop-ethyl	*						*			
Rimsulfuron	P	P	*	P	P	P	P	P	P	P
S-Metolachlor	P	*	*	P	P	P	P	P	P	P
Simazine	P		*	P	P		*	P	P	
Sulfosate	P	*	*		*		*	*	*	*
Thifensulfuron	P	*		*	*	*		*	*	*
Tribenuron-methyl	*				*			*		
Triclopyr	*									
Trifluralin	P	*		*		*		*	*	
Vernolate	P					*				P
Insecticides										
Acephate	*									
Azadirachtin	*	*								
Azinphos-methyl	*									
Benzoic acid	*									
Bifenthrin	P			*	*	*	*	*	P	*
Carbaryl	*			*					*	
Carbofuran	P	*		*		*	*	*		
Chlorethoxyfos	*				*					
Chlorpyrifos	P		*	P	P	*			P	P
Cyfluthrin	P	P		P	P	P	*		*	P
Diazinon	*			*						
Dimethoate	P	*								
Esfenvalerate	P	*		*						

See footnote(s) at end of table.

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**Corn : Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States									
	ALL	CO	GA	IL	IN	IA	KS	KY	MI	MN
Insecticides (continued)										
Fipronil	P	*			*	*	*		*	*
Gamma-cyhalothrin	*									
Imidacloprid	*									*
Lambda-cyhalothrin	P	*		P	*			P		*
Methyl parathion	P	*		*			P			
Permethrin	P			P	*		*	*	*	
Petroleum distillate	*									
Phorate	*		*							
Propargite	P	P								
Tebupirimphos	P	P		P	P	P	*		*	P
Tefluthrin	P	*	*	P	P	P			*	P
Terbufos	P	*	P	*		*				*
Thiamethoxam	*									
Zeta-cypermethrin	P			*	*	*	*	*		
Fungicides										
Azoxystrobin	*			*	*				*	
Chlorothalonil	*				*					
Propiconazole	*								*	
Other Chemicals										
Garlic oil	*				*					

See footnote(s) at end of table.

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**Corn : Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States									
	MO	NE	NY	NC	ND	OH	PA	SD	TX	WI
Herbicides										
2,4-D		*								*
2,4-D, 2-EHE	P	P		*	*	P	P	*	P	*
2,4-D, BEE		*		*		P	*			
2,4-D, dieth sal	*		*	*			*			
2,4-D, dimeth. salt	*	P	*	P		P	P	*	P	*
2,4-D, isoprop. salt								*	*	
2,4-DP, 2-BEE						*				
Acetochlor	P	P		*	*	P	P	P	*	P
Alachlor	P	P	P	P		*	*		*	*
Ametryn				P						
Atrazine	P	P	P	P	P	P	P	P	P	P
Bentazon			*		*					
Bromoxynil	*	*						*		*
Bromoxynil heptanoat								*		*
Bromoxynil octanoate								*		*
Butoxyethyl triclopy										
Carfentrazone-ethyl	*	P			*		*			*
Chlorimuron-ethyl										
Chlorsulfuron						*				
Clethodim										
Clopyralid	P	P			*	P	*	*	*	P
Cloransulam-methyl										
Cyanazine		*				*		*		
Dicamba		*	*		*	*	*	*	*	*
Dicamba, Digly Salt	*	P	*		P	*	*	P	*	*
Dicamba, Dimet. salt		*	P	*	P	*	P	*	P	*
Dicamba, Pot. salt	*	*					*	*		*
Dicamba, Sodium salt	*	*	*		P	P	P	P	P	P
Diflufenzopyr-sodium		*			P	P	P	P	P	P
Dimethenamid	*	*	*				*		*	*
Dimethenamid-P	*	P	*	*		P	*	*	P	*
Diuron									*	
EPTC										
Flucarbazone-sodium										
Flufenacet		P				P	*	*		P
Flumetsulam	P	P	*		*	P	*	*	*	P
Flumiclorac-pentyl				*						
Flumioxazin		*		*						
Fluroxypyr									*	
Fomesafen										
Foramsulfuron		*			P	*		*		
Glufosinate-ammonium	*	P			*	*	*	P		P
Glyphosate		*	*	*	*	P	*	P	*	*
Glyphosate amm. salt					*		*			
Glyphosate iso. salt	P	P	P	P	P	P	P	P	P	P
Halosulfuron	*	*	P						*	*

See footnote(s) at end of table.

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**Corn : Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States									
	MO	NE	NY	NC	ND	OH	PA	SD	TX	WI
Herbicides (continued)										
Imazamox							*			
Imazapyr		*		*		*		*		*
Imazethapyr		*		*		*		*	*	*
Iodosulfuron-Met-Sod										
Isoxaflutole	P	P			*	P	P	P	P	
Linuron	*			P						
MCPA, 2-ethylhexyl										
MCPA, sodium salt	*					P	*	*		
Mesotrione	P	P	P		*	P	P	P	*	P
Metolachlor	P	*		*		*	P			
Metribuzin						*				*
Metsulfuron-methyl						*				
Nicosulfuron	P	P	P	P	P	P	P	P	P	P
Oxyfluorfen				*						
Paraquat	*			P		*	P		*	
Pendimethalin		*	P	*		*	P	*	P	P
Primisulfuron	*	*		*		*	*	*	*	*
Propachlor							*	*		
Prosulfuron	*	*		*					*	
Pyraflufen-ethyl				*						
Quinclorac										
Quizalofop-ethyl										
Rimsulfuron	P	P	P	P	P	*	P	P	P	P
S-Metolachlor	P	P	P	P		P	P	P	P	P
Simazine	P			*		P	P			*
Sulfosate		*		*	*	*	*	*	*	*
Thifensulfuron	*	*	*	*		*	*			
Tribenuron-methyl				*						
Triclopyr								*		
Trifluralin		*					*	*	*	
Vernolate								*		
Insecticides										
Acephate				*						
Azadirachtin										
Azinphos-methyl		*								
Benzoic acid									*	
Bifenthrin	*	*	*	*		*		*	P	*
Carbaryl										
Carbofuran										
Chlorethoxyfos										
Chlorpyrifos	*	*	P	P		P	P	P	*	*
Cyfluthrin	*	P				*	P	*	P	P
Diazinon										
Dimethoate									*	
Esfenvalerate	*	*							*	

See footnote(s) at end of table.

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**Corn : Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States									
	MO	NE	NY	NC	ND	OH	PA	SD	TX	WI
Insecticides (continued)										
Fipronil		P	*				*	*	*	*
Gamma-cyhalothrin	*						*			
Imidacloprid							*			
Lambda-cyhalothrin	*	*	*		*	*	P		*	*
Methyl parathion		*								
Permethrin	*	*				*	*		*	*
Petroleum distillate			*			*				
Phorate				*				*		
Propargite									P	
Tebupirimphos	*	P				*	*	*	P	P
Tefluthrin		P	P		*	*	P	P	*	P
Terbufos	*	*		P				*	P	
Thiamethoxam									*	
Zeta-cypermethrin	P	*			*	*	*	*	*	
Fungicides										
Azoxystrobin										
Chlorothalonil										
Propiconazole										
Other Chemicals										
Garlic oil						*				

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Corn: Planted Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Planted Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>1,000 Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CO	1,100	90	1,494	24	252				
GA	270	91	495	14	25				
IL <sup>1</sup>	12,100	99	30,967	52	1,426				
IN <sup>1</sup>	5,900	97	14,136	41	722				
IA	12,800	96	24,726	11	187				
KS	3,650	87	7,436	11	89				
KY	1,250	100	3,187	18	26				
MI <sup>1</sup>	2,250	99	5,145	14	153				
MN	7,300	100	10,361	12	214				
MO	3,100	96	7,707	11	41				
NE	8,500	98	18,416	20	456				
NY	990	96	2,325	21	146				
NC	750	98	1,669	17	130				
ND <sup>1</sup>	1,410	99	1,094						
OH <sup>1</sup>	3,450	99	9,322	9	215				
PA	1,350	97	3,346	21	154				
SD	4,450	100	6,036	12	239				
TX	2,050	94	3,344	24	236				
WI	3,800	97	6,369	22	134				
Total <sup>1</sup>	76,470	97	157,575	23	4,849	*	93		

\* Applied on less than one percent of acres.

<sup>1</sup> Insufficient reports to publish data for one or more pesticide classes.

**Corn: Agricultural Chemical Applications,  
Program States, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, 2-EHE	3	1.1	0.450	0.474	1,160
2,4-D, BEE	*	1.0	0.339	0.339	126
2,4-D, dieth sal	*	1.0	0.451	0.451	25
2,4-D, dimeth. salt	3	1.0	0.352	0.360	799
2,4-D, isoprop. salt	1	1.3	0.068	0.087	38
Acetochlor	23	1.0	1.645	1.661	29,802
Alachlor	1	1.0	1.747	1.765	1,562
Ametryn	*	1.0	0.857	0.857	18
Atrazine	66	1.1	1.028	1.133	57,390
Bromoxynil	1	1.0	0.243	0.243	199
Bromoxynil heptanoat	*	1.0	0.250	0.260	56
Bromoxynil octanoate	*	1.0	0.251	0.257	85
Carfentrazone-ethyl	*	1.0	0.013	0.013	5
Clopyralid	5	1.0	0.110	0.110	449
Cyanazine	*	1.0	1.337	1.337	389
Dicamba	1	1.0	0.137	0.142	154
Dicamba, Digly Salt	2	1.0	0.198	0.203	377
Dicamba, Dimet. salt	3	1.1	0.146	0.156	302
Dicamba, Pot. salt	2	1.0	0.354	0.354	557
Dicamba, Sodium salt	4	1.0	0.103	0.105	349
Diflufenzopyr-sodium	4	1.0	0.040	0.041	123
Dimethenamid	1	1.0	1.144	1.144	685
Dimethenamid-P	4	1.0	0.741	0.747	2,372
Flufenacet	3	1.0	0.378	0.378	725
Flumetsulam	6	1.0	0.045	0.045	200
Foramsulfuron	2	1.0	0.026	0.026	32
Glufosinate-ammonium	5	1.0	0.370	0.377	1,388
Glyphosate	2	1.2	0.632	0.737	957
Glyphosate amm. salt	*	1.7	0.042	0.071	2
Glyphosate iso. salt	31	1.3	0.727	0.963	22,967
Halosulfuron	1	1.0	0.036	0.036	22
Imazapyr	1	1.0	0.013	0.014	14
Imazethapyr	1	1.0	0.038	0.039	43
Iodosulfuron-Met-Sod	*	1.0	0.002	0.002	( <sup>2</sup> )
Isoxaflutole	6	1.0	0.051	0.053	233
Linuron	*	1.0	0.803	0.803	110
MCPA, sodium salt	1	1.0	0.666	0.666	258
Mesotrione	20	1.0	0.116	0.119	1,853
Metolachlor	2	1.0	1.578	1.578	1,933
Metribuzin	*	1.0	0.088	0.088	30
Nicosulfuron	10	1.0	0.021	0.021	163
Paraquat	1	1.0	0.570	0.575	394
Pendimethalin	2	1.0	0.846	0.854	1,309
Primisulfuron	2	1.0	0.024	0.024	38
Prosulfuron	1	1.0	0.009	0.009	8
Rimsulfuron	8	1.0	0.017	0.017	108
S-Metolachlor	23	1.0	1.323	1.354	23,652

See footnote(s) at end of table.

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**Corn: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides (continued)					
Simazine	3	1.0	1.076	1.076	2,424
Sulfosate	1	1.1	1.065	1.162	537
Thifensulfuron	*	1.1	0.052	0.056	21
Trifluralin	1	1.0	0.754	0.754	379
Vernolate	*	1.0	1.907	1.907	334
Insecticides					
Bifenthrin	2	1.0	0.055	0.057	72
Carbofuran	*	1.0	0.593	0.593	113
Chlorpyrifos	2	1.0	1.112	1.112	2,047
Cyfluthrin	7	1.0	0.007	0.007	38
Dimethoate	*	2.3	0.437	1.012	68
Esfenvalerate	*	1.0	0.041	0.041	8
Fipronil	1	1.0	0.113	0.117	88
Lambda-cyhalothrin	1	1.1	0.023	0.026	25
Methyl parathion	*	1.1	0.283	0.323	82
Permethrin	1	1.0	0.107	0.109	116
Propargite	*	1.0	1.764	1.776	289
Tebupirimphos	6	1.0	0.115	0.115	573
Tefluthrin	7	1.0	0.118	0.118	637
Terbufos	*	1.0	0.870	0.872	331
Zeta-cypermethrin	*	1.3	0.022	0.029	11

\* Area applied is less than 0.5 percent.

<sup>1</sup> Planted acreage in 2005 for the 19 Program States was 76.5 million acres.

States included are CO, GA, IL, IN, IA, KS, KY, MI, MN, MO, NE, NY, NC, ND, OH, PA, SD, TX, and WI.

<sup>2</sup> Total applied is less than 500 lbs.

**Corn: Agricultural Chemical Applications,  
Colorado, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	6	1.1	0.228	0.240	15
2,4-D, dimeth. salt	3	1.0	0.160	0.160	4
Atrazine	33	1.1	0.760	0.817	295
Dicamba, Digly Salt	7	1.0	0.176	0.176	14
Dicamba, Dimet. salt	12	1.0	0.053	0.053	7
Dicamba, Sodium salt	6	1.2	0.110	0.128	9
Diflufenzopyr-sodium	6	1.0	0.045	0.045	3
Glyphosate iso. salt	64	1.5	0.729	1.104	782
Mesotrione	8	1.0	0.113	0.113	9
Nicosulfuron	6	1.0	0.024	0.024	1
Rimsulfuron	6	1.0	0.019	0.019	1
<b>Insecticides</b>					
Cyfluthrin	6	1.0	0.012	0.012	1
Propargite	7	1.0	1.581	1.600	131
Tebupirimphos	5	1.0	0.136	0.136	7

<sup>1</sup> Planted acreage in 2005 for Colorado was 1.1 million acres.

**Corn: Agricultural Chemical Applications,  
Georgia, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Atrazine	68	1.2	1.341	1.560	288
Glyphosate iso. salt	56	1.4	0.778	1.058	160
Nicosulfuron	14	1.0	0.029	0.029	1
Pendimethalin	3	1.0	0.814	0.814	7
<b>Insecticides</b>					
Terbufos	3	1.0	0.740	0.740	7

<sup>1</sup> Planted acreage in 2005 for Georgia was 270,000 acres.

**Corn: Agricultural Chemical Applications,  
Illinois, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	4	1.2	0.439	0.510	253
Acetochlor	30	1.0	1.845	1.845	6,635
Atrazine	87	1.1	1.153	1.304	13,729
Bromoxynil	3	1.0	0.236	0.236	72
Clopyralid	7	1.0	0.117	0.117	101
Dicamba	4	1.0	0.150	0.150	72
Dicamba, Digly Salt	3	1.0	0.202	0.202	71
Dicamba, Pot. salt	4	1.0	0.384	0.384	180
Dicamba, Sodium salt	9	1.0	0.105	0.105	116
Diflufenzopyr-sodium	7	1.0	0.039	0.039	33
Dimethenamid-P	7	1.0	0.689	0.712	614
Flufenacet	4	1.0	0.428	0.428	213
Flumetsulam	7	1.0	0.058	0.058	52
Foramsulfuron	3	1.0	0.031	0.031	10
Glufosinate-ammonium	3	1.1	0.305	0.345	139
Glyphosate iso. salt	11	1.2	0.734	0.875	1,176
Imazapyr	1	1.0	0.013	0.013	2
Imazethapyr	1	1.0	0.038	0.038	6
Isoxaflutole	9	1.0	0.060	0.060	67
Mesotrione	24	1.1	0.108	0.114	329
Metolachlor	2	1.0	1.566	1.566	340
Nicosulfuron	12	1.0	0.020	0.020	29
Primisulfuron	4	1.0	0.024	0.024	13
Prosulfuron	2	1.0	0.009	0.009	2
Rimsulfuron	10	1.1	0.028	0.031	36
S-Metolachlor	30	1.0	1.327	1.381	5,005
Simazine	6	1.0	1.051	1.051	736
<b>Insecticides</b>					
Chlorpyrifos	3	1.0	1.260	1.260	496
Cyfluthrin	20	1.0	0.006	0.006	14
Lambda-cyhalothrin	3	1.0	0.020	0.020	7
Permethrin	4	1.0	0.114	0.114	56
Tebupirimphos	20	1.0	0.115	0.115	280
Tefluthrin	23	1.0	0.125	0.125	349

<sup>1</sup> Planted acreage in 2005 for Illinois was 12.1 million acres.



**Corn: Agricultural Chemical Applications,  
Indiana, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	4	1.0	0.428	0.428	110
Acetochlor	23	1.0	1.823	1.823	2,470
Atrazine	80	1.1	1.094	1.194	5,670
Clopyralid	1	1.0	0.136	0.136	11
Dicamba, Dimet. salt	3	1.0	0.121	0.121	23
Dicamba, Sodium salt	4	1.0	0.106	0.106	26
Diflufenzopyr-sodium	4	1.0	0.042	0.042	10
Flufenacet	6	1.0	0.463	0.463	153
Flumetsulam	3	1.0	0.044	0.044	8
Foramsulfuron	4	1.0	0.028	0.028	6
Glyphosate iso. salt	14	1.1	0.867	0.964	772
Imazapyr	5	1.0	0.014	0.014	4
Imazethapyr	5	1.0	0.042	0.042	13
Isoxaflutole	10	1.0	0.049	0.049	30
Mesotrione	31	1.1	0.128	0.145	265
Nicosulfuron	8	1.0	0.020	0.020	9
Primisulfuron	5	1.0	0.027	0.027	8
Prosulfuron	5	1.0	0.009	0.009	3
Rimsulfuron	5	1.0	0.017	0.017	5
S-Metolachlor	38	1.1	1.234	1.341	3,001
Simazine	9	1.0	1.236	1.236	638
<b>Insecticides</b>					
Chlorpyrifos	6	1.0	1.336	1.336	510
Cyfluthrin	8	1.0	0.006	0.006	3
Tebupirimphos	8	1.0	0.113	0.113	51
Tefluthrin	20	1.0	0.107	0.107	126

<sup>1</sup> Planted acreage in 2005 for Indiana was 5.9 million acres.

**Corn: Agricultural Chemical Applications,  
Iowa, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	2	1.0	0.564	0.564	113
Acetochlor	32	1.0	1.661	1.662	6,706
Atrazine	61	1.1	0.955	1.055	8,276
Clopyralid	7	1.0	0.128	0.128	112
Dicamba, Pot. salt	3	1.0	0.391	0.391	146
Dicamba, Sodium salt	1	1.0	0.122	0.122	18
Diflufenzopyr-sodium	1	1.0	0.049	0.049	7
Dimethenamid-P	6	1.0	0.746	0.746	602
Flufenacet	3	1.0	0.338	0.338	130
Flumetsulam	7	1.0	0.046	0.046	40
Glufosinate-ammonium	13	1.0	0.398	0.398	639
Glyphosate iso. salt	21	1.1	0.745	0.836	2,230
Isoxaflutole	6	1.0	0.054	0.054	41
Mesotrione	32	1.0	0.108	0.108	443
Nicosulfuron	14	1.0	0.022	0.022	39
Rimsulfuron	13	1.0	0.011	0.011	18
S-Metolachlor	22	1.0	1.520	1.530	4,335
<b>Insecticides</b>					
Cyfluthrin	6	1.0	0.006	0.006	4
Tebupirimphos	6	1.0	0.115	0.115	89
Tefluthrin	2	1.0	0.107	0.107	30

<sup>1</sup> Planted acreage in 2005 for Iowa was 12.8 million acres.

**Corn: Agricultural Chemical Applications,  
Kansas, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, 2-EHE	8	1.1	0.258	0.288	84
2,4-D, dimeth. salt	15	1.1	0.236	0.252	141
2,4-D, isoprop. salt	8	1.0	0.069	0.069	21
Acetochlor	10	1.0	1.388	1.388	491
Alachlor	2	1.0	2.163	2.163	163
Atrazine	59	1.3	1.027	1.290	2,767
Dicamba, Dimet. salt	15	1.2	0.103	0.121	68
Dicamba, Sodium salt	3	1.0	0.082	0.082	9
Diflufenzopyr-sodium	3	1.0	0.033	0.033	4
Glyphosate iso. salt	59	1.6	0.713	1.117	2,409
Isoxaflutole	6	1.5	0.027	0.041	9
Mesotrione	6	1.0	0.102	0.102	23
Metolachlor	6	1.0	1.432	1.432	302
Nicosulfuron	4	1.0	0.021	0.021	3
Primisulfuron	3	1.0	0.030	0.030	3
Prosulfuron	3	1.0	0.010	0.010	1
Rimsulfuron	4	1.0	0.012	0.012	2
S-Metolachlor	17	1.0	1.175	1.231	762
Insecticides					
Methyl parathion	2	1.1	0.405	0.456	40

<sup>1</sup> Planted acreage in 2005 for Kansas was 3.7 million acres.

**Corn: Agricultural Chemical Applications,  
Kentucky, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, dimeth. salt	6	1.0	0.452	0.452	32
Acetochlor	14	1.0	1.375	1.375	237
Atrazine	83	1.3	1.219	1.542	1,593
Dicamba, Sodium salt	9	1.3	0.071	0.090	10
Diflufenzopyr-sodium	9	1.3	0.028	0.036	4
Glyphosate iso. salt	49	1.1	0.875	0.992	606
Imazapyr	13	1.2	0.012	0.014	2
Imazethapyr	13	1.2	0.036	0.043	7
Isoxaflutole	6	1.0	0.038	0.038	3
Mesotrione	16	1.1	0.126	0.133	26
Nicosulfuron	19	1.0	0.023	0.023	6
Paraquat	14	1.0	0.401	0.401	68
Rimsulfuron	15	1.0	0.011	0.011	2
S-Metolachlor	19	1.0	1.299	1.299	306
Simazine	12	1.0	0.889	0.889	129
Insecticides					
Lambda-cyhalothrin	8	1.0	0.022	0.022	2

<sup>1</sup> Planted acreage in 2005 for Kentucky was 1.3 million acres.

**Corn: Agricultural Chemical Applications,  
Michigan, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, 2-EHE	2	1.3	0.426	0.549	26
2,4-D, dimeth. salt	1	1.0	0.342	0.342	7
Acetochlor	28	1.0	1.832	1.832	1,148
Atrazine	71	1.1	1.117	1.225	1,952
Clopyralid	8	1.0	0.112	0.112	21
Dicamba	2	1.0	0.143	0.143	5
Dicamba, Digly Salt	7	1.0	0.226	0.226	38
Dicamba, Sodium salt	3	1.0	0.128	0.128	10
Diflufenzopyr-sodium	3	1.0	0.050	0.050	4
Dimethenamid-P	7	1.0	0.750	0.750	116
Flumetsulam	13	1.0	0.039	0.039	11
Glyphosate iso. salt	33	1.1	0.843	0.935	699
Mesotrione	11	1.0	0.155	0.155	38
Metolachlor	1	1.0	1.162	1.162	28
Nicosulfuron	12	1.0	0.018	0.018	5
Pendimethalin	8	1.0	0.928	0.928	164
Primisulfuron	2	1.0	0.024	0.024	1
Rimsulfuron	8	1.0	0.012	0.012	2
S-Metolachlor	23	1.0	1.319	1.319	676
Simazine	1	1.0	1.183	1.183	39
Insecticides					
Bifenthrin	5	1.0	0.043	0.043	5
Chlorpyrifos	4	1.0	0.926	0.926	90

<sup>1</sup> Planted acreage in 2005 for Michigan was 2.3 million acres.

**Corn: Agricultural Chemical Applications,  
Minnesota, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Acetochlor	33	1.0	1.271	1.271	3,095
Atrazine	41	1.1	0.490	0.551	1,660
Clopyralid	6	1.0	0.104	0.104	42
Dicamba, Digly Salt	3	1.0	0.277	0.277	69
Dicamba, Pot. salt	5	1.0	0.363	0.363	120
Dicamba, Sodium salt	5	1.0	0.137	0.137	45
Diflufenzopyr-sodium	5	1.0	0.054	0.054	18
Dimethenamid-P	6	1.0	0.950	0.950	388
Flumetsulam	6	1.0	0.035	0.035	14
Glufosinate-ammonium	7	1.0	0.319	0.319	163
Glyphosate	5	1.1	0.722	0.777	270
Glyphosate iso. salt	44	1.2	0.738	0.896	2,853
Mesotrione	17	1.0	0.099	0.099	125
Metolachlor	2	1.0	1.730	1.730	219
Nicosulfuron	12	1.0	0.025	0.025	22
Pendimethalin	1	1.0	0.869	0.869	73
Rimsulfuron	9	1.0	0.011	0.011	7
S-Metolachlor	8	1.0	1.164	1.164	681
Vernolate	1	1.0	2.309	2.309	213
<b>Insecticides</b>					
Chlorpyrifos	2	1.0	0.874	0.874	107
Cyfluthrin	5	1.0	0.016	0.017	7
Tebupirimphos	5	1.0	0.112	0.112	43
Tefluthrin	2	1.0	0.109	0.109	16

<sup>1</sup> Planted acreage in 2005 for Minnesota was 7.3 million acres.

**Corn: Agricultural Chemical Applications,  
Missouri, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, 2-EHE	6	1.0	0.417	0.417	72
Acetochlor	32	1.0	1.852	1.852	1,842
Alachlor	3	1.0	1.937	1.937	156
Atrazine	80	1.1	1.363	1.513	3,768
Clopyralid	5	1.0	0.103	0.103	15
Flumetsulam	6	1.0	0.107	0.107	19
Glyphosate iso. salt	14	1.2	0.759	0.903	388
Isoxaflutole	6	1.0	0.048	0.048	8
Mesotrione	20	1.0	0.092	0.092	57
Metolachlor	6	1.0	1.679	1.679	300
Nicosulfuron	16	1.0	0.020	0.020	10
Rimsulfuron	16	1.0	0.018	0.018	9
S-Metolachlor	18	1.0	1.409	1.409	781
Simazine	3	1.0	0.815	0.815	64
Insecticides					
Zeta-cypermethrin	3	1.0	0.011	0.011	1

<sup>1</sup> Planted acreage in 2005 for Missouri was 3.1 million acres.

**Corn: Agricultural Chemical Applications,  
Nebraska, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	5	1.0	0.660	0.660	278
2,4-D, dimeth. salt	2	1.0	0.537	0.537	111
Acetochlor	17	1.1	1.552	1.742	2,510
Alachlor	4	1.0	1.747	1.747	533
Atrazine	77	1.1	1.052	1.131	7,361
Carfentrazone-ethyl	2	1.0	0.013	0.013	2
Clopyralid	7	1.0	0.087	0.087	48
Dicamba, Digly Salt	4	1.0	0.184	0.184	68
Dimethenamid-P	5	1.0	0.684	0.684	264
Flufenacet	3	1.0	0.279	0.279	80
Flumetsulam	7	1.0	0.029	0.029	16
Glufosinate-ammonium	6	1.0	0.415	0.415	198
Glyphosate iso. salt	33	1.4	0.769	1.055	2,963
Isoxaflutole	7	1.0	0.040	0.040	24
Mesotrione	18	1.0	0.120	0.120	182
Nicosulfuron	4	1.0	0.020	0.020	6
Rimsulfuron	4	1.0	0.010	0.010	3
S-Metolachlor	26	1.0	1.209	1.209	2,678
<b>Insecticides</b>					
Cyfluthrin	5	1.0	0.013	0.013	5
Fipronil	3	1.0	0.117	0.117	32
Tebupirimphos	3	1.0	0.126	0.126	32
Tefluthrin	3	1.0	0.124	0.124	26

<sup>1</sup> Planted acreage in 2005 for Nebraska was 8.5 million acres.



**Corn: Agricultural Chemical Applications,  
New York, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Alachlor	6	1.0	1.695	1.695	108
Atrazine	75	1.1	1.020	1.121	832
Dicamba, Dimet. salt	5	1.0	0.228	0.228	11
Glyphosate iso. salt	31	1.0	0.833	0.855	264
Halosulfuron	7	1.0	0.020	0.020	1
Mesotrione	34	1.1	0.161	0.171	58
Nicosulfuron	11	1.0	0.018	0.018	2
Pendimethalin	17	1.0	1.054	1.054	180
Rimsulfuron	16	1.0	0.022	0.022	3
S-Metolachlor	44	1.1	1.684	1.770	778
<b>Insecticides</b>					
Chlorpyrifos	3	1.0	1.636	1.636	43
Tefluthrin	8	1.0	0.113	0.113	9

<sup>1</sup> Planted acreage in 2005 for New York was 990,000 acres.

**Corn: Agricultural Chemical Applications,  
North Carolina, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	5	1.0	0.397	0.397	16
Alachlor	12	1.1	1.597	1.750	162
Ametryn	3	1.0	0.857	0.857	18
Atrazine	67	1.1	1.143	1.207	603
Glyphosate iso. salt	53	1.3	0.701	0.899	357
Linuron	7	1.0	0.804	0.804	44
Nicosulfuron	13	1.0	0.024	0.024	2
Paraquat	8	1.1	0.614	0.668	42
Rimsulfuron	11	1.0	0.011	0.011	1
S-Metolachlor	19	1.0	1.196	1.196	166
<b>Insecticides</b>					
Chlorpyrifos	8	1.0	1.058	1.058	65
Terbufos	6	1.0	1.095	1.095	53

<sup>1</sup> Planted acreage in 2005 for North Carolina was 750,000 acres.

**Corn: Agricultural Chemical Applications,  
North Dakota, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Atrazine	20	1.0	0.332	0.332	95
Dicamba, Digly Salt	5	1.0	0.239	0.239	18
Dicamba, Dimet. salt	6	1.0	0.188	0.188	16
Dicamba, Sodium salt	18	1.0	0.108	0.108	27
Diflufenzopyr-sodium	18	1.0	0.043	0.043	11
Foramsulfuron	14	1.0	0.020	0.020	4
Glyphosate iso. salt	56	1.5	0.640	0.972	771
Nicosulfuron	18	1.0	0.022	0.022	5
Rimsulfuron	12	1.0	0.011	0.011	2

<sup>1</sup> Planted acreage in 2005 for North Dakota was 1.4 million acres.

**Corn: Agricultural Chemical Applications,  
Ohio, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, 2-EHE	8	1.0	0.392	0.392	106
2,4-D, BEE	3	1.0	0.294	0.294	28
2,4-D, dimeth. salt	4	1.0	0.324	0.324	50
Acetochlor	34	1.0	1.826	1.826	2,154
Atrazine	83	1.0	1.278	1.287	3,667
Clopyralid	3	1.0	0.121	0.121	12
Dicamba, Sodium salt	1	1.0	0.090	0.090	4
Diflufenzopyr-sodium	1	1.0	0.036	0.036	2
Dimethenamid-P	3	1.0	0.825	0.825	99
Flufenacet	3	1.0	0.386	0.386	45
Flumetsulam	3	1.0	0.042	0.042	5
Glyphosate	7	1.0	0.628	0.647	153
Glyphosate iso. salt	20	1.1	0.755	0.829	580
Isoxaflutole	10	1.0	0.071	0.071	25
MCPA, sodium salt	2	1.0	0.745	0.745	64
Mesotrione	9	1.0	0.141	0.141	43
Nicosulfuron	2	1.0	0.014	0.014	1
S-Metolachlor	32	1.0	1.233	1.233	1,373
Simazine	18	1.0	1.103	1.103	700
Insecticides					
Chlorpyrifos	3	1.0	1.466	1.466	149

<sup>1</sup> Planted acreage in 2005 for Ohio was 3.5 million acres.

**Corn: Agricultural Chemical Applications,  
Pennsylvania, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	5	1.0	0.597	0.597	40
2,4-D, dimeth. salt	6	1.2	0.623	0.731	63
Acetochlor	11	1.0	1.610	1.610	234
Atrazine	87	1.0	1.063	1.096	1,291
Dicamba, Dimet. salt	5	1.0	0.194	0.194	14
Dicamba, Sodium salt	2	1.0	0.106	0.106	2
Diflufenzopyr-sodium	2	1.0	0.042	0.042	1
Glyphosate iso. salt	28	1.1	0.766	0.832	319
Isoxaflutole	5	1.0	0.062	0.062	5
Mesotrione	26	1.0	0.136	0.136	47
Metolachlor	3	1.0	1.217	1.217	49
Nicosulfuron	13	1.0	0.020	0.020	4
Paraquat	9	1.0	0.458	0.458	54
Pendimethalin	26	1.0	0.928	0.928	324
Rimsulfuron	13	1.0	0.011	0.011	2
S-Metolachlor	48	1.0	1.220	1.220	783
Simazine	1	1.0	1.123	1.123	14
<b>Insecticides</b>					
Chlorpyrifos	9	1.0	1.018	1.018	128
Cyfluthrin	2	1.4	0.009	0.013	( <sup>2</sup> )
Lambda-cyhalothrin	2	1.0	0.014	0.014	( <sup>2</sup> )
Tefluthrin	7	1.0	0.097	0.097	9

<sup>1</sup> Planted acreage in 2005 for Pennsylvania was 1.4 million acres.

<sup>2</sup> Total applied is less than 500 lbs.

**Corn: Agricultural Chemical Applications,  
South Dakota, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Acetochlor	19	1.0	1.286	1.286	1,109
Atrazine	33	1.0	0.599	0.604	893
Dicamba, Digly Salt	2	1.0	0.220	0.220	21
Dicamba, Sodium salt	3	1.0	0.114	0.114	13
Diflufenzopyr-sodium	3	1.0	0.045	0.045	5
Glufosinate-ammonium	4	1.0	0.399	0.399	62
Glyphosate	2	1.0	0.504	0.519	54
Glyphosate iso. salt	71	1.4	0.663	0.956	3,030
Isoxaflutole	7	1.0	0.058	0.058	17
Mesotrione	11	1.0	0.101	0.101	50
Nicosulfuron	4	1.0	0.023	0.023	4
Rimsulfuron	4	1.0	0.011	0.011	2
S-Metolachlor	6	1.0	1.256	1.256	329
<b>Insecticides</b>					
Chlorpyrifos	4	1.0	0.988	0.988	163
Tefluthrin	3	1.0	0.109	0.109	13

<sup>1</sup> Planted acreage in 2005 for South Dakota was 4.5 million acres.

**Corn: Agricultural Chemical Applications,  
Texas, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	4	1.0	0.481	0.481	39
2,4-D, dimeth. salt	9	1.0	0.426	0.426	74
Atrazine	55	1.2	0.781	0.907	1,024
Dicamba, Dimet. salt	3	1.0	0.186	0.186	11
Dicamba, Sodium salt	8	1.0	0.086	0.086	14
Diflufenzopyr-sodium	8	1.0	0.034	0.034	6
Dimethenamid-P	3	1.0	0.405	0.405	28
Glyphosate iso. salt	70	1.8	0.620	1.116	1,596
Isoxaflutole	6	1.0	0.034	0.034	4
Nicosulfuron	9	1.0	0.019	0.019	4
Pendimethalin	9	1.1	0.646	0.700	132
Rimsulfuron	8	1.0	0.010	0.010	2
S-Metolachlor	10	1.0	0.962	0.962	194
<b>Insecticides</b>					
Bifenthrin	4	1.1	0.074	0.084	6
Cyfluthrin	6	1.0	0.004	0.004	1
Propargite	4	1.0	1.954	1.954	157
Tebupirimphos	6	1.0	0.083	0.083	11
Terbufos	3	1.0	0.712	0.712	40

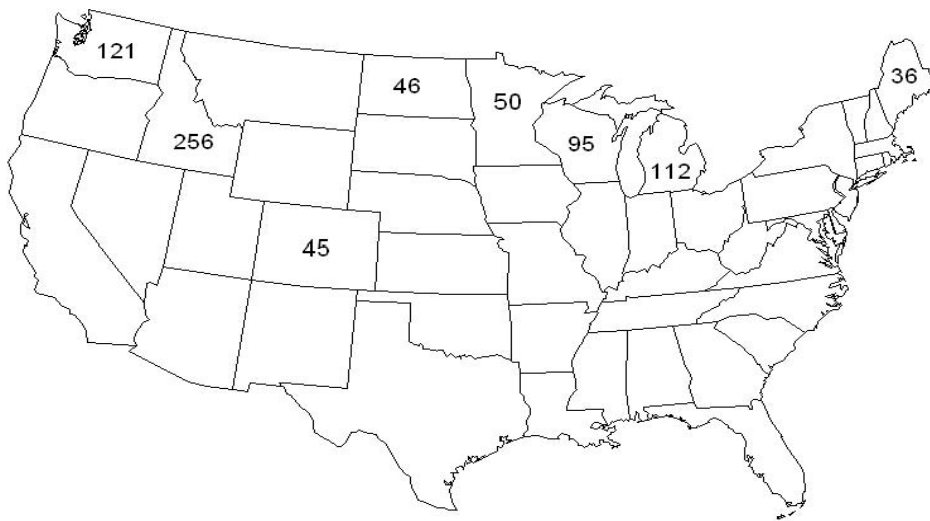
<sup>1</sup> Planted acreage in 2005 for Texas was 2.1 million acres.

**Corn: Agricultural Chemical Applications,  
Wisconsin, 2005<sup>1</sup>**

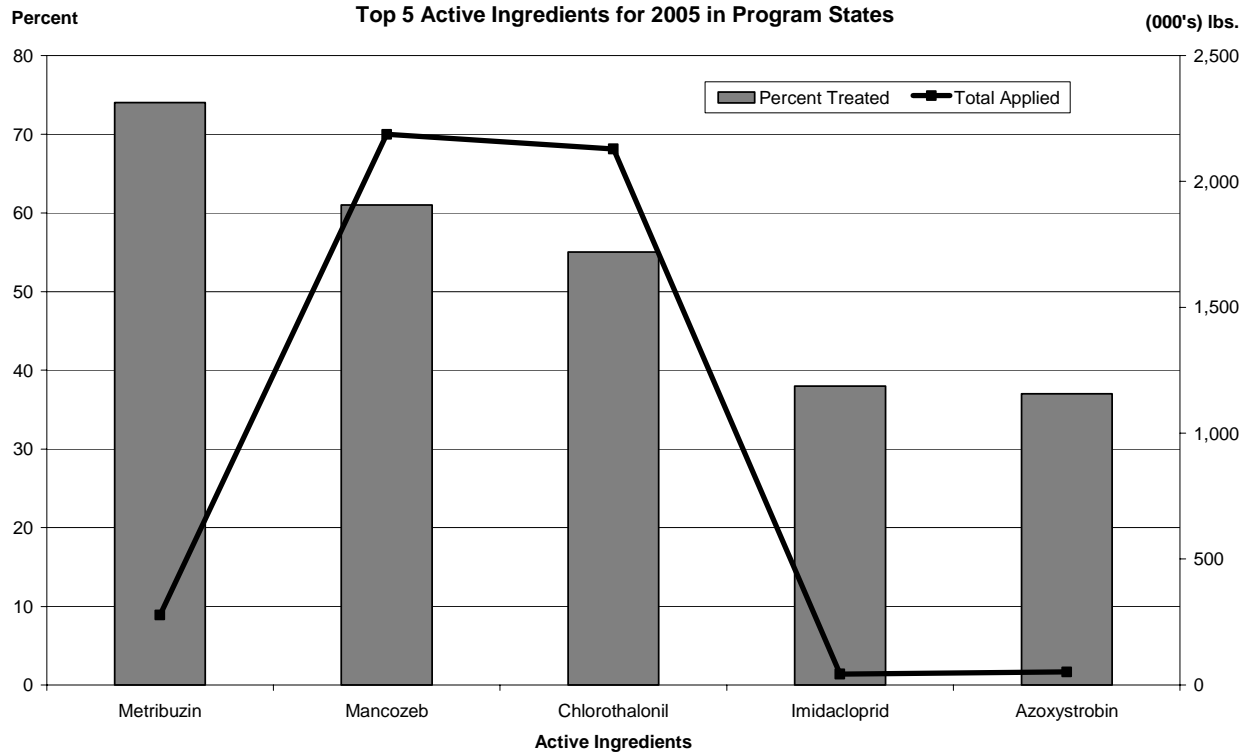
Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Acetochlor	16	1.0	1.669	1.669	1,009
Atrazine	54	1.0	0.782	0.792	1,627
Clopyralid	20	1.0	0.107	0.107	79
Dicamba, Sodium salt	3	1.0	0.093	0.093	12
Diflufenzopyr-sodium	3	1.0	0.037	0.037	5
Flufenacet	4	1.0	0.442	0.442	64
Flumetsulam	21	1.0	0.037	0.037	30
Glufosinate-ammonium	9	1.0	0.348	0.348	118
Glyphosate iso. salt	28	1.2	0.766	0.946	1,013
Mesotrione	25	1.0	0.142	0.142	133
Nicosulfuron	12	1.0	0.019	0.019	9
Pendimethalin	6	1.0	0.948	0.948	231
Rimsulfuron	7	1.0	0.012	0.012	3
S-Metolachlor	30	1.0	1.473	1.473	1,677
<b>Insecticides</b>					
Cyfluthrin	7	1.0	0.006	0.006	2
Tebupirimphos	7	1.0	0.127	0.127	36
Tefluthrin	9	1.0	0.126	0.126	41

<sup>1</sup> Planted acreage in 2005 for Wisconsin was 3.8 million acres.

## Fall Potatoes: Number of Usable Reports 2005



Fall Potatoes - Percent of Acres Treated and Total Applied  
Top 5 Active Ingredients for 2005 in Program States



**Fall Potatoes: Fertilizer Use by State, 2005**  
**Percent of Acres Treated and Total Applied**

State	Planted Acreage	Percent of Acres Treated and Total Applied							
		Nitrogen		Phosphate		Potash		Sulfur	
	<i>1,000 Acres</i>	<i>Percent</i>	<i>Mil. lbs.</i>	<i>Percent</i>	<i>Mil. lbs.</i>	<i>Percent</i>	<i>Mil. lbs.</i>	<i>Percent</i>	<i>Mil. lbs.</i>
CO	58	92	9.4	86	7.9	64	3.2	89	2.6
ID	325	100	72.9	99	56.9	92	40.0	82	21.7
ME <sup>1</sup>	58	100	10.2	100	10.1	100	11.9		
MI	44	99	9.2	94	4.9	100	10.2	58	1.4
MN	46	100	8.2	100	5.0	81	7.7	55	0.7
ND	92	100	14.7	100	8.4	96	13.7	54	1.3
WA	154	100	37.8	98	30.2	92	38.2	89	9.5
WI	68	100	17.9	99	9.1	99	20.5	72	4.1
Total	845	99	180.3	98	132.5	92	145.4	72	41.3

<sup>1</sup> Insufficient reports to publish data for one or more of the fertilizer primary nutrients.



**Fall Potatoes: Fertilizer Primary Nutrient Applications,  
Program States and Total, 2005**

Primary Nutrient	Planted Acreage	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>1,000 Acres</i>	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>Mil. lbs</i>
Colorado	58					
Nitrogen		92	4.4	40	177	9.4
Phosphate		86	2.7	59	157	7.9
Potash		64	2.2	39	85	3.2
Sulfur		89	3.4	15	51	2.6
Idaho	325					
Nitrogen		100	4.8	47	225	72.9
Phosphate		99	2.0	88	178	56.9
Potash		92	1.8	73	134	40.0
Sulfur		82	2.0	41	81	21.7
Maine	58					
Nitrogen		100	1.2	142	176	10.2
Phosphate		100	1.0	169	174	10.1
Potash		100	1.2	167	204	11.9
Sulfur <sup>1</sup>						
Michigan	44					
Nitrogen		99	3.2	65	211	9.2
Phosphate		94	1.5	77	119	4.9
Potash		100	1.8	126	232	10.2
Sulfur		58	1.4	37	54	1.4
Minnesota	46					
Nitrogen		100	3.2	55	178	8.2
Phosphate		100	1.0	105	110	5.0
Potash		81	1.2	179	208	7.7
Sulfur		55	1.7	17	29	0.7
North Dakota	92					
Nitrogen		100	4.6	35	159	14.7
Phosphate		100	1.5	61	91	8.4
Potash		96	1.2	125	154	13.7
Sulfur		54	1.2	22	26	1.3
Washington	154					
Nitrogen		100	2.8	86	245	37.8
Phosphate		98	1.9	108	201	30.2
Potash		92	1.6	166	269	38.2
Sulfur		89	1.7	42	70	9.5
Wisconsin	68					
Nitrogen		100	6.4	41	264	17.9
Phosphate		99	2.1	64	135	9.1
Potash		99	4.0	76	303	20.5
Sulfur		72	3.6	23	83	4.1

See footnote(s) at end of table.

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**Fall Potatoes: Fertilizer Primary Nutrient Applications,  
Program States and Total, 2005 (continued)**

Primary Nutrient	Planted Acreage	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>1,000 Acres</i>	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>Mil. lbs</i>
Total	845					
Nitrogen		99	4.1	52	215	180.3
Phosphate		98	1.8	88	160	132.5
Potash		92	1.9	101	188	145.4
Sulfur		72	2.1	33	68	41.3

<sup>1</sup> Insufficient reports to publish fertilizer data.

**Fall Potatoes : Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States								
	ALL	CO	ID	ME	MI	MN	ND	WA	WI
Herbicides									
2,4-D, 2-EHE	P						*	*	*
2,4-D, dieth sal	*				*				
2,4-D, dimeth. salt	P						*	*	*
Bentazon	*								*
Carfentrazone-ethyl	*		*					*	
Clethodim	P		*		*	*	*	*	*
Dimethenamid-P	P	*	P			*			
EPTC	P	*	P		*			P	
Fluroxypyr	*		*						
Glufosinate-ammonium	P		*	*		*	*	P	*
Glyphosate	*	*							
Glyphosate iso. salt	P	*	P		*	*	*	P	P
Halosulfuron	*								*
Imazamox	*								*
Linuron	P			P	P	P			P
Metolachlor	P					*	*		*
Metribuzin	P	P	P	P	P	P	P	P	P
Pendimethalin	P	P	P		*	*	P	P	P
Quizalofop-P-ethyl	*								*
Rimsulfuron	P		P	*	P	*	P	P	P
S-Metolachlor	P	P	P		P	P		P	P
Sethoxydim	P				*	*	*		P
Sulfentrazone	*						*		
Trifluralin	P		P					P	
Insecticides									
Acetamiprid	*							*	*
Aldicarb	P		P					P	
Azadirachtin	*				*				
Azinphos-methyl	P				*				*
Bifenthrin	*								*
Bt subsp tenebrionis	*				*				
Bt subsp. kurstaki	*	*			*				
Carbaryl	P		*		P			*	*
Carbofuran	P		P				*	*	
Cryolite	*				*				
Cyfluthrin	P	*	P	P	P	*	P	P	P
Cypermethrin	*		*						
Diazinon	P		P			*		*	
Dimethoate	P		*		*	*	P	P	P
Endosulfan	P	*	P	*	P			*	P
Esfenvalerate	P	P	P	*	P	P	*	P	P
Ethoprop	P		P			*		P	*
Imidacloprid	P	*	P	P	P	P	*	P	P
Indoxacarb	*		*					*	
Lambda-cyhalothrin	*				*				*

See footnote(s) at end of table.

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**Fall Potatoes : Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States								
	ALL	CO	ID	ME	MI	MN	ND	WA	WI
Insecticides (continued)									
Malathion	*				*	*			
Methamidophos	P		P	P	*	*		P	*
Methomyl	P							P	
Novaluron	P							*	*
Oxamyl	P	*	P	*	*			P	*
Permethrin	P	P	*		P	*		P	P
Phorate	P		P		*			*	
Phosmet	P		*		P			*	P
Propargite	P		*					*	
Pymetrozine	P		P	*				*	
Pyrethrins	*				*			*	*
Rotenone	*				*				
Spinosad	P	*			*	*		*	*
Spiromesifen	P							*	
Thiamethoxam	P	P	P	*	P	P	P	P	P
Zeta-cypermethrin	*				*				
Fungicides									
Azoxystrobin	P	P	P	P	P	P	P	P	P
Boscalid	P		P			*	*	P	P
Captan	*				*				
Chlorothalonil	P	P	P	P	P	P	P	P	P
Coniothyrium minitans	*								*
Copper amm. complex	*							*	
Copper chloride hyd.	*							*	
Copper hydroxide	P	*	P	*	P	*		P	P
Copper resinate	*								*
Copper sulfate	P	*			*			*	
Cymoxanil	P		P	*	*	P	P	P	P
Dicloran	*							*	
Dimethomorph	P		*					*	
Famoxadone	P		P		*	*	P	P	P
Fenamidone	P							P	
Fluazinam	P	*	P	*				P	
Flutolanil	P		P			*	*	*	*
Iprodione	P		*					*	
Mancozeb	P	P	P	P	P	P	P	P	P
Maneb	P		*					*	*
Mefenoxam	P	*	P	P	*	P	P	P	P
Metiram	P	*	P	*	*	P		P	
PCNB	P		P		*			P	*
Phosphorous acid	P		P						
Propamocarb hydroch.	P							P	
Pyraclostrobin	P		P	*	*	*	*	P	P
Rhamnolipid	*		*						
Sulfur	P							P	

See footnote(s) at end of table.

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**Fall Potatoes : Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States								
	ALL	CO	ID	ME	MI	MN	ND	WA	WI
Fungicides (continued)									
Trichoderma harz.	*				*				
Trifloxystrobin	*							*	
Triphenyltin hydrox.	P	*	*	P	P	P	P	*	P
Zoxamide	P		P		*	P	*	P	*
Other Chemicals									
Chloropicrin	*		*					*	
Cytokinins	*		*						
Dichloropropene	P		P					P	
Diquat dibromide	P	P	P	P	P	P	P	P	P
Endothall	*							*	*
GABA	*							*	
Gibberellic acid	*		*						
Harpin protein	*								*
Indolebutyric acid	*		*						
L-Glutamic acid	*							*	
Maleic hydrazide	P		P	P	*			P	*
Metaldehyde	*		*						
Metam-potassium	P		*					*	
Metam-sodium	P		P					P	*
Paraquat	P		*	*	*			P	*
Pyrimethanil	P					*	*		*
Sulfuric Acid	P	P	P						

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Fall Potatoes: Planted Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Planted Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>1,000 Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CO	58	78	101	57	10	78	87	34	9,678
ID	325	90	694	65	331	81	813	49	37,732
ME	58	100	35	91	18	100	607	12	46
MI	44	98	68	97	20	98	391	2	55
MN	46	97	33	97	10	98	578	8	7
ND	92	89	57	76	11	96	854	7	15
WA	154	96	328	97	517	99	1,394	70	17,171
WI	68	99	78	97	62	99	810	49	3,327
Total	845	92	1,394	79	979	90	5,534	40	68,031

**Fall Potatoes: Agricultural Chemical Applications,  
Program States, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	1	2.7	0.058	0.154	1
2,4-D, dimeth. salt	1	1.4	0.059	0.081	1
Clethodim	3	1.0	0.129	0.135	3
Dimethenamid-P	7	1.0	0.770	0.770	44
EPTC	24	1.0	3.222	3.261	648
Glufosinate-ammonium	4	1.0	0.363	0.374	14
Glyphosate iso. salt	5	1.0	0.625	0.655	27
Linuron	7	1.0	0.665	0.665	41
Metolachlor	1	1.0	1.698	1.698	16
Metribuzin	74	1.1	0.401	0.441	278
Pendimethalin	31	1.0	0.712	0.713	187
Rimsulfuron	27	1.1	0.020	0.021	5
S-Metolachlor	12	1.0	1.202	1.206	120
Sethoxydim	*	1.0	0.168	0.168	1
Trifluralin	2	1.0	0.489	0.502	8
<b>Insecticides</b>					
Aldicarb	9	1.0	2.839	2.839	211
Azinphos-methyl	1	1.1	0.726	0.779	8
Carbaryl	*	1.2	1.072	1.330	3
Carbofuran	4	1.0	0.847	0.847	26
Cyfluthrin	29	1.8	0.028	0.051	12
Diazinon	2	1.0	2.255	2.255	29
Dimethoate	5	1.7	0.310	0.528	22
Endosulfan	2	1.1	0.685	0.745	14
Esfenvalerate	27	1.7	0.030	0.050	12
Ethoprop	3	1.0	5.200	5.353	116
Imidacloprid	38	1.3	0.103	0.135	44
Methamidophos	12	1.6	0.885	1.427	139
Methomyl	2	1.1	0.505	0.549	7
Novaluron	2	1.6	0.069	0.108	2
Oxamyl	13	2.1	0.798	1.656	177
Permethrin	5	1.6	0.119	0.188	8
Phorate	4	1.0	2.688	2.688	98
Phosmet	1	1.2	0.850	1.041	10
Propargite	2	1.1	1.556	1.697	22
Pymetrozine	3	1.6	0.085	0.135	3
Spinosad	1	1.0	0.050	0.050	( <sup>2</sup> )
Spiromesifen	3	1.5	0.182	0.264	7
Thiamethoxam	13	1.1	0.065	0.071	8

See footnote(s) at end of table.

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**Fall Potatoes: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Fungicides</b>					
Azoxystrobin	37	1.5	0.109	0.168	52
Boscalid	17	1.4	0.223	0.302	43
Chlorothalonil	55	4.8	0.940	4.547	2,129
Copper hydroxide	8	1.6	0.571	0.940	62
Copper sulfate	2	1.6	0.484	0.752	13
Cymoxanil	16	1.9	0.111	0.213	30
Dimethomorph	1	1.5	0.122	0.179	2
Famoxadone	10	1.4	0.094	0.136	12
Fenamidone	1	1.0	0.179	0.179	1
Fluazinam	15	1.7	0.234	0.393	50
Flutolanil	6	1.0	0.447	0.447	24
Iprodione	4	1.1	0.666	0.751	24
Mancozeb	61	3.4	1.235	4.215	2,187
Maneb	1	1.0	1.472	1.472	11
Mefenoxam	25	1.4	0.230	0.325	69
Metiram	9	2.6	1.404	3.607	288
PCNB	7	1.6	2.317	3.712	233
Phosphorous acid	1	2.3	1.011	2.311	19
Propamocarb hydroch.	1	1.8	0.727	1.305	12
Pyraclostrobin	12	1.8	0.119	0.215	22
Sulfur	4	2.7	2.544	6.800	208
Triphenyltin hydrox.	10	1.8	0.140	0.247	20
Zoxamide	5	1.1	0.112	0.125	6
<b>Other Chemicals</b>					
Dichloropropene	6	1.0	166.474	166.474	7,878
Diquat dibromide	30	1.5	0.342	0.504	129
Maleic hydrazide	12	1.0	1.966	1.966	200
Metam-potassium	2	1.0	188.196	188.196	3,555
Metam-sodium	16	1.0	151.222	151.222	20,823
Paraquat	2	1.2	0.494	0.588	12
Pyrimethanil	2	1.1	0.273	0.299	4
Sulfuric Acid	12	1.1	313.891	346.085	35,422

\* Area applied is less than 0.5 percent.

<sup>1</sup> Planted acreage in 2005 for the 8 Program States was 845,000 acres.

States included are CO, ID, ME, MI, MN, ND, WA, and WI.

<sup>2</sup> Total applied is less than 500 lbs.



**Fall Potatoes: Agricultural Chemical Applications,  
Colorado, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Metribuzin	64	1.0	0.341	0.341	13
Pendimethalin	17	1.0	0.699	0.699	7
S-Metolachlor	38	1.0	1.345	1.345	30
<b>Insecticides</b>					
Esfenvalerate	15	1.0	0.022	0.022	( <sup>2</sup> )
Permethrin	23	1.0	0.114	0.114	2
Thiamethoxam	16	1.0	0.018	0.018	( <sup>2</sup> )
<b>Fungicides</b>					
Azoxystrobin	53	1.2	0.072	0.085	3
Chlorothalonil	43	1.2	0.768	0.955	24
Mancozeb	28	1.9	1.037	1.928	31
<b>Other Chemicals</b>					
Diquat dibromide	41	1.0	0.399	0.414	10
Sulfuric Acid	34	1.5	331.269	486.599	9,668

<sup>1</sup> Planted acreage in 2005 for Colorado was 58,000 acres.

<sup>2</sup> Total applied is less than 500 lbs.

**Fall Potatoes: Agricultural Chemical Applications,  
Idaho, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Dimethenamid-P	17	1.0	0.761	0.761	42
EPTC	38	1.0	3.166	3.219	396
Glyphosate iso. salt	4	1.0	0.881	0.881	10
Metribuzin	84	1.1	0.422	0.452	124
Pendimethalin	38	1.0	0.719	0.719	90
Rimsulfuron	28	1.0	0.022	0.022	2
S-Metolachlor	4	1.0	1.526	1.565	21
Trifluralin	2	1.1	0.453	0.487	3
<b>Insecticides</b>					
Aldicarb	6	1.0	2.613	2.613	53
Carbofuran	5	1.0	0.826	0.826	14
Cyfluthrin	26	1.2	0.030	0.037	3
Diazinon	3	1.0	2.412	2.412	25
Endosulfan	2	1.0	0.647	0.647	5
Esfenvalerate	17	1.1	0.037	0.039	2
Ethoprop	3	1.0	5.246	5.246	47
Imidacloprid	32	1.2	0.077	0.095	10
Methamidophos	4	1.0	0.897	0.936	12
Oxamyl	10	2.0	0.815	1.608	51
Phorate	11	1.0	2.683	2.683	95
Pymetrozine	5	1.4	0.084	0.118	2
Thiamethoxam	9	1.0	0.047	0.047	1
<b>Fungicides</b>					
Azoxystrobin	36	1.4	0.116	0.159	19
Boscalid	15	1.1	0.254	0.285	14
Chlorothalonil	28	1.8	0.985	1.776	162
Copper hydroxide	4	1.0	0.382	0.396	5
Cymoxanil	7	1.0	0.115	0.115	3
Famoxadone	6	1.0	0.115	0.115	2
Fluazinam	8	1.0	0.210	0.212	5
Flutolanil	5	1.0	0.536	0.536	8
Mancozeb	54	1.9	1.463	2.824	500
Mefenoxam	12	1.4	0.359	0.497	19
Metiram	3	1.2	1.604	1.969	21
PCNB	2	1.0	2.016	2.016	10
Phosphorous acid	3	2.3	1.011	2.311	19
Pyraclostrobin	19	1.4	0.123	0.177	11
Zoxamide	5	1.0	0.139	0.139	2
<b>Other Chemicals</b>					
Dichloropropene	5	1.0	177.501	177.501	2,984
Diquat dibromide	5	1.0	0.430	0.438	7
Maleic hydrazide	11	1.0	2.203	2.203	81
Metam-sodium	14	1.0	141.239	141.239	6,645
Sulfuric Acid	25	1.0	307.797	312.077	25,708

<sup>1</sup> Planted acreage in 2005 for Idaho was 325,000 acres.

**Fall Potatoes: Agricultural Chemical Applications,  
Maine, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Linuron	26	1.0	0.780	0.780	12
Metribuzin	72	1.5	0.343	0.531	22
Insecticides					
Cyfluthrin	34	1.8	0.028	0.050	1
Imidacloprid	65	1.1	0.159	0.175	7
Methamidophos	12	2.0	0.548	1.081	8
Fungicides					
Azoxystrobin	26	1.4	0.079	0.113	2
Chlorothalonil	86	7.4	0.700	5.157	258
Mancozeb	75	7.7	0.934	7.161	310
Mefenoxam	40	1.1	0.232	0.244	6
Triphenyltin hydrox.	9	2.3	0.117	0.263	1
Other Chemicals					
Diquat dibromide	95	2.0	0.277	0.542	30
Maleic hydrazide	12	1.0	1.939	1.939	14

<sup>1</sup> Planted acreage in 2005 for Maine was 58,000 acres.

**Fall Potatoes: Agricultural Chemical Applications,  
Michigan, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Linuron	60	1.0	0.688	0.688	18
Metribuzin	55	1.1	0.295	0.316	8
Rimsulfuron	24	1.0	0.021	0.021	( <sup>2</sup> )
S-Metolachlor	75	1.0	1.099	1.099	36
<b>Insecticides</b>					
Carbaryl	*	2.3	0.744	1.725	( <sup>2</sup> )
Cyfluthrin	43	3.5	0.028	0.098	2
Endosulfan	4	1.2	0.623	0.747	1
Esfenvalerate	15	1.4	0.031	0.042	( <sup>2</sup> )
Imidacloprid	56	1.3	0.106	0.141	3
Permethrin	9	3.5	0.089	0.310	1
Phosmet	*	2.0	0.724	1.464	( <sup>2</sup> )
Thiamethoxam	23	1.0	0.100	0.103	1
<b>Fungicides</b>					
Azoxystrobin	53	2.0	0.108	0.216	5
Chlorothalonil	70	7.5	0.925	6.976	215
Copper hydroxide	6	2.8	0.711	1.993	5
Mancozeb	66	4.5	1.194	5.416	157
Triphenyltin hydrox.	22	1.8	0.111	0.202	2
<b>Other Chemicals</b>					
Diquat dibromide	58	1.5	0.314	0.468	12

\* Area applied is less than 0.5 percent.

<sup>1</sup> Planted acreage in 2005 for Michigan was 44,000 acres.

<sup>2</sup> Total applied is less than 500 lbs.

**Fall Potatoes: Agricultural Chemical Applications,  
Minnesota, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Linuron	8	1.0	0.820	0.820	3
Metribuzin	81	1.0	0.309	0.309	12
S-Metolachlor	28	1.0	1.029	1.029	13
Insecticides					
Esfenvalerate	39	1.7	0.014	0.024	( <sup>2</sup> )
Imidacloprid	59	1.1	0.201	0.217	6
Thiamethoxam	13	1.3	0.040	0.050	( <sup>2</sup> )
Fungicides					
Azoxystrobin	7	2.3	0.105	0.239	1
Chlorothalonil	83	9.9	1.065	10.506	399
Cymoxanil	15	1.0	0.094	0.094	1
Mancozeb	75	3.3	1.347	4.405	152
Mefenoxam	29	1.0	0.238	0.238	3
Metiram	3	2.1	1.082	2.304	4
Triphenyltin hydrox.	7	2.0	0.118	0.239	1
Zoxamide	6	1.5	0.158	0.241	1
Other Chemicals					
Diquat dibromide	22	1.5	0.343	0.526	5

<sup>1</sup> Planted acreage in 2005 for Minnesota was 46,000 acres.

<sup>2</sup> Total applied is less than 500 lbs.

**Fall Potatoes: Agricultural Chemical Applications,  
North Dakota, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Metribuzin	47	1.1	0.426	0.457	20
Pendimethalin	37	1.0	0.757	0.757	26
Rimsulfuron	38	1.2	0.017	0.020	1
Insecticides					
Cyfluthrin	28	2.7	0.020	0.054	1
Dimethoate	11	1.5	0.167	0.244	3
Thiamethoxam	17	1.1	0.032	0.034	1
Fungicides					
Azoxystrobin	13	1.0	0.119	0.119	1
Chlorothalonil	78	6.9	1.039	7.152	510
Cymoxanil	20	1.5	0.086	0.126	2
Famoxadone	20	1.5	0.086	0.126	2
Mancozeb	71	3.7	1.265	4.728	308
Mefenoxam	41	1.0	0.153	0.153	6
Triphenyltin hydrox.	23	2.2	0.167	0.361	8
Other Chemicals					
Diquat dibromide	30	1.4	0.346	0.475	13

<sup>1</sup> Planted acreage in 2005 for North Dakota was 92,000 acres.

**Fall Potatoes: Agricultural Chemical Applications,  
Washington, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
EPTC	38	1.0	3.444	3.465	202
Glufosinate-ammonium	9	1.0	0.363	0.364	5
Glyphosate iso. salt	11	1.0	0.412	0.420	7
Metribuzin	76	1.1	0.421	0.475	56
Pendimethalin	40	1.0	0.700	0.705	44
Rimsulfuron	32	1.0	0.018	0.018	1
S-Metolachlor	3	1.0	1.241	1.241	7
Trifluralin	7	1.0	0.511	0.511	5
<b>Insecticides</b>					
Aldicarb	35	1.0	2.924	2.924	159
Cyfluthrin	33	2.0	0.029	0.060	3
Dimethoate	12	2.0	0.358	0.715	13
Esfenvalerate	60	1.7	0.031	0.053	5
Ethoprop	6	1.1	5.012	5.378	47
Imidacloprid	29	1.9	0.041	0.078	3
Methamidophos	49	1.7	0.927	1.556	117
Methomyl	9	1.1	0.505	0.549	7
Oxamyl	41	2.2	0.790	1.731	110
Permethrin	10	1.6	0.120	0.188	3
Thiamethoxam	6	1.0	0.087	0.087	1
<b>Fungicides</b>					
Azoxystrobin	47	1.8	0.116	0.211	15
Boscalid	15	1.0	0.272	0.272	6
Chlorothalonil	64	2.2	0.923	2.064	204
Copper hydroxide	14	1.9	0.605	1.152	26
Cymoxanil	33	2.7	0.124	0.334	17
Famoxadone	9	1.0	0.097	0.097	1
Fenamidone	3	1.0	0.179	0.179	1
Fluazinam	59	1.9	0.235	0.457	42
Mancozeb	67	3.0	1.386	4.111	427
Mefenoxam	40	1.7	0.146	0.248	15
Metiram	40	2.4	1.545	3.678	224
PCNB	26	2.0	2.000	3.917	155
Propamocarb hydroch.	6	1.8	0.727	1.305	12
Pyraclostrobin	11	1.4	0.116	0.156	3
Sulfur	20	2.7	2.544	6.800	208
Zoxamide	7	1.0	0.075	0.077	1
<b>Other Chemicals</b>					
Dichloropropene	20	1.0	160.396	160.396	4,892
Diquat dibromide	30	1.1	0.419	0.466	21
Maleic hydrazide	27	1.0	1.866	1.866	77
Metam-sodium	45	1.0	157.959	157.959	10,868
Paraquat	5	1.0	0.384	0.384	3

<sup>1</sup> Planted acreage in 2005 for Washington was 154,000 acres.

**Fall Potatoes: Agricultural Chemical Applications,  
Wisconsin, 2005<sup>1</sup>**

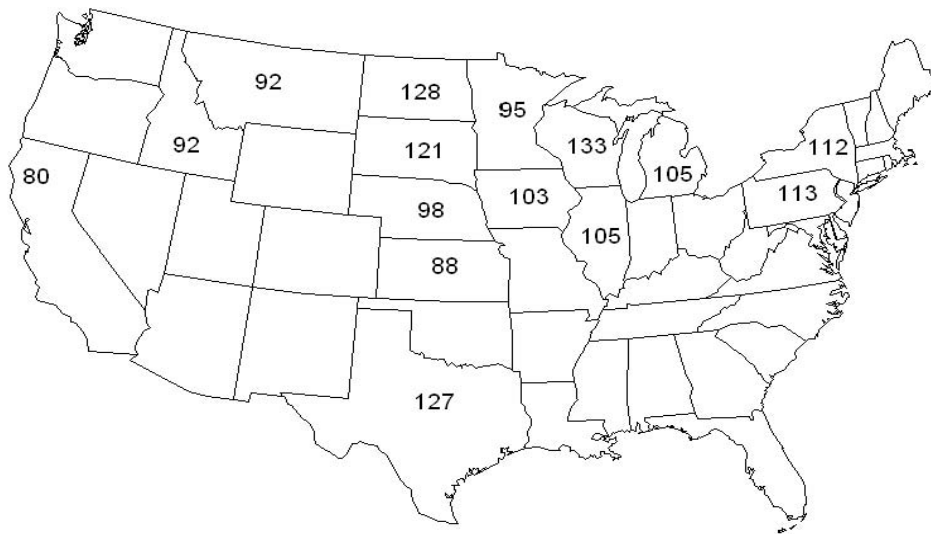
Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Glyphosate iso. salt	12	1.2	0.653	0.787	6
Linuron	25	1.0	0.497	0.497	9
Metribuzin	79	1.0	0.432	0.452	24
Pendimethalin	28	1.0	0.697	0.697	13
Rimsulfuron	43	1.1	0.021	0.023	1
S-Metolachlor	19	1.0	1.036	1.038	13
Sethoxydim	2	1.0	0.253	0.253	( <sup>2</sup> )
<b>Insecticides</b>					
Cyfluthrin	42	1.4	0.033	0.046	1
Dimethoate	2	1.0	0.319	0.319	1
Endosulfan	7	1.2	0.872	1.006	5
Esfenvalerate	54	2.1	0.036	0.077	3
Imidacloprid	56	1.2	0.175	0.204	8
Permethrin	2	4.0	0.150	0.594	1
Phosmet	7	1.4	0.808	1.145	6
Thiamethoxam	35	1.3	0.081	0.107	3
<b>Fungicides</b>					
Azoxystrobin	55	1.7	0.108	0.183	7
Boscalid	51	1.6	0.174	0.287	10
Chlorothalonil	93	6.1	0.935	5.671	357
Copper hydroxide	23	1.7	0.624	1.066	17
Cymoxanil	41	2.1	0.090	0.191	5
Famoxadone	41	2.1	0.089	0.186	5
Mancozeb	73	5.5	1.111	6.091	304
Mefenoxam	46	1.9	0.321	0.621	19
Pyraclostrobin	20	4.1	0.117	0.481	7
Triphenyltin hydrox.	35	1.5	0.104	0.152	4
<b>Other Chemicals</b>					
Diquat dibromide	76	1.7	0.353	0.586	30

<sup>1</sup> Planted acreage in 2005 for Wisconsin was 68,000 acres.

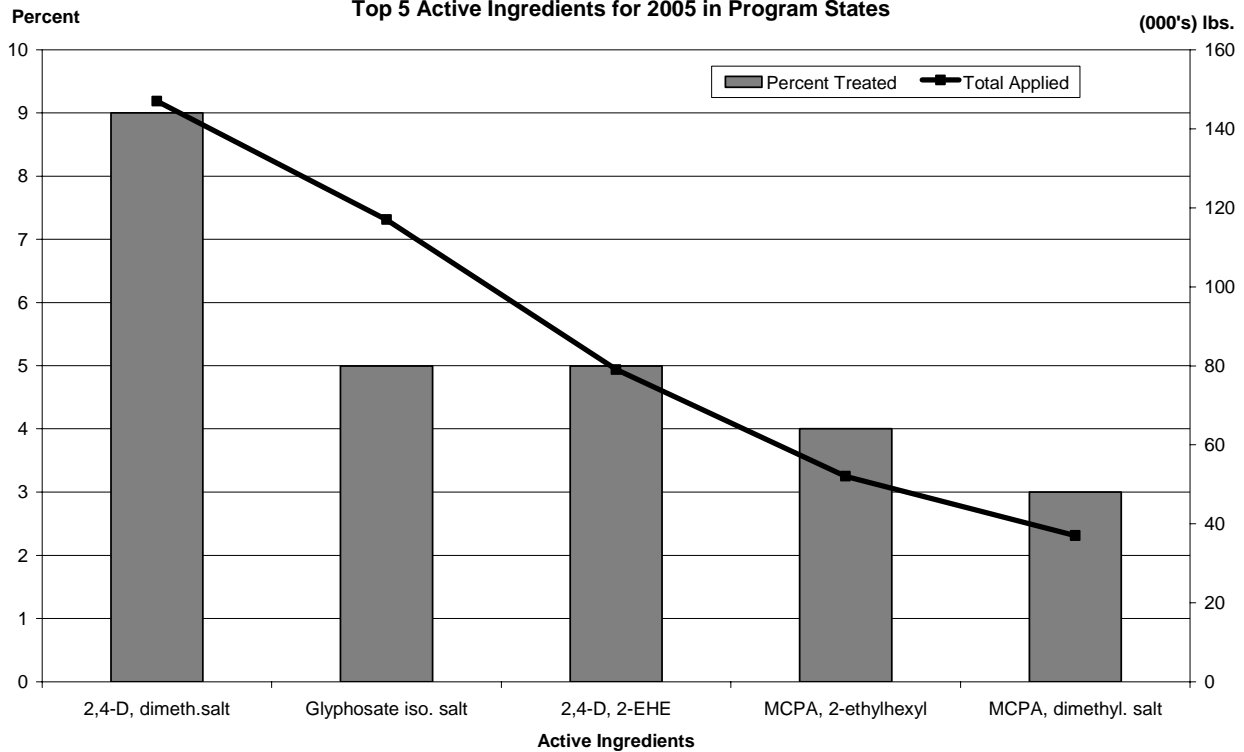
<sup>2</sup> Total applied is less than 500 lbs.



## Oats: Number of Usable Reports 2005



Oats - Percent of Acres Treated and Total Applied  
Top 5 Active Ingredients for 2005 in Program States



**Oats: Fertilizer Use by State, 2005**  
**Percent of Acres Treated and Total Applied**

State	Planted Acreage	Percent of Acres Treated and Total Applied							
		Nitrogen		Phosphate		Potash		Sulfur	
	<i>1,000 Acres</i>	<i>Percent</i>	<i>Mil. lbs.</i>	<i>Percent</i>	<i>Mil. lbs.</i>	<i>Percent</i>	<i>Mil. lbs.</i>	<i>Percent</i>	<i>Mil. lbs.</i>
CA <sup>1</sup>	270	26	4.4						
ID	90	42	1.6	22	1.4	5	0.1	12	0.2
IL <sup>1</sup>	60	15	0.4	12	0.4	26	1.7		
IA <sup>1</sup>	210	31	1.8	30	2.5	40	6.9		
KS <sup>1</sup>	100	84	4.4	39	1.4	17	0.8		
MI <sup>1</sup>	90	82	2.6	72	2.8	77	3.4		
MN	310	28	4.2	22	2.4	28	5.9	5	0.2
MT	90	53	2.0	35	1.0	14	0.4	9	0.1
NE	150	68	4.5	24	1.3	7	0.1	5	0.0
NY <sup>1</sup>	95	75	1.9	72	2.7	72	2.8		
ND	490	71	15.8	49	5.7	9	0.7	5	0.1
PA	140	90	4.5	81	4.9	82	5.1	2	0.1
SD <sup>1</sup>	380	64	11.8	46	5.6	17	1.7		
TX	690	79	45.4	56	12.7	39	4.9	25	1.7
WI	400	23	2.1	24	3.9	35	15.1	8	0.4
Total	3,565	56	107.4	40	48.8	28	49.7	9	3.2

<sup>1</sup> Insufficient reports to publish data for one or more of the fertilizer primary nutrients.

**Oats: Fertilizer Primary Nutrient Applications,  
Program States and Total, 2005**

Primary Nutrient	Planted Acreage	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>1,000 Acres</i>	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>Mil. lbs</i>
California	270					
Nitrogen		26	1.0	63	64	4.4
Phosphate <sup>1</sup>						
Potash <sup>1</sup>						
Sulfur <sup>1</sup>						
Idaho	90					
Nitrogen		42	1.2	37	43	1.6
Phosphate		22	1.0	70	70	1.4
Potash		5	1.0	19	19	0.1
Sulfur		12	1.1	14	15	0.2
Illinois	60					
Nitrogen		15	1.2	38	47	0.4
Phosphate		12	1.0	61	62	0.4
Potash		26	1.0	109	109	1.7
Sulfur <sup>1</sup>						
Iowa	210					
Nitrogen		31	1.1	26	28	1.8
Phosphate		30	1.0	39	39	2.5
Potash		40	1.0	82	82	6.9
Sulfur <sup>1</sup>						
Kansas	100					
Nitrogen		84	1.1	48	52	4.4
Phosphate		39	1.0	37	37	1.4
Potash		17	1.0	47	47	0.8
Sulfur <sup>1</sup>						
Michigan	90					
Nitrogen		82	1.1	32	35	2.6
Phosphate		72	1.0	43	44	2.8
Potash		77	1.0	49	49	3.4
Sulfur <sup>1</sup>						
Minnesota	310					
Nitrogen		28	1.0	47	48	4.2
Phosphate		22	1.0	36	36	2.4
Potash		28	1.0	68	68	5.9
Sulfur		5	1.0	12	12	0.2
Montana	90					
Nitrogen		53	1.1	39	43	2.0
Phosphate		35	1.0	30	32	1.0
Potash		14	1.1	25	28	0.4
Sulfur		9	1.2	10	12	0.1

See footnote(s) at end of table.

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**Oats: Fertilizer Primary Nutrient Applications,  
Program States and Total, 2005 (continued)**

Primary Nutrient	Planted Acreage	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>1,000 Acres</i>	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>Mil. lbs</i>
Nebraska	150					
Nitrogen		68	1.0	43	44	4.5
Phosphate		24	1.0	35	35	1.3
Potash		7	1.0	14	14	0.1
Sulfur		5	1.0	4	4	0.0
New York	95					
Nitrogen		75	1.1	25	27	1.9
Phosphate		72	1.0	38	39	2.7
Potash		72	1.1	38	41	2.8
Sulfur <sup>1</sup>						
North Dakota	490					
Nitrogen		71	1.3	34	45	15.8
Phosphate		49	1.0	23	24	5.7
Potash		9	1.0	17	17	0.7
Sulfur		5	1.0	3	3	0.1
Pennsylvania	140					
Nitrogen		90	1.1	33	36	4.5
Phosphate		81	1.0	43	43	4.9
Potash		82	1.0	45	45	5.1
Sulfur		2	1.0	34	34	0.1
South Dakota	380					
Nitrogen		64	1.0	48	48	11.8
Phosphate		46	1.0	32	32	5.6
Potash		17	1.0	25	25	1.7
Sulfur <sup>1</sup>						
Texas	690					
Nitrogen		79	1.5	55	83	45.4
Phosphate		56	1.1	31	33	12.7
Potash		39	1.0	18	18	4.9
Sulfur		25	1.0	10	10	1.7
Wisconsin	400					
Nitrogen		23	1.1	22	23	2.1
Phosphate		24	1.0	42	42	3.9
Potash		35	1.0	107	107	15.1
Sulfur		8	1.0	13	13	0.4
Total	3,565					
Nitrogen		56	1.2	44	54	107.4
Phosphate		40	1.0	34	35	48.8
Potash		28	1.0	49	50	49.7
Sulfur		9	1.0	10	11	3.2

<sup>1</sup> Insufficient reports to publish fertilizer data.

**Oats : Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States							
	ALL	CA	ID	IL	IA	KS	MI	MN
Herbicides								
2,4-D, 2-EHE	P	*	P			*	*	*
2,4-D, BEE	P						*	
2,4-D, dieth sal	P	*	*				P	*
2,4-D, dimeth. salt	P	P	P		*	*	P	P
2,4-D, isoprop. salt	*							
2,4-DB, dimeth. salt	P		*		*		*	
Acetochlor	*						*	
Atrazine	*						*	
Bromoxynil	P	*		*	*		*	*
Bromoxynil heptanoat	P	*	*	*	*			*
Bromoxynil octanoate	P	*	*	*	*		*	*
Carfentrazone-ethyl	*	*						
Chlorsulfuron	P	P				*		
Clethodim	*							
Clopyralid	P		*		*			
Dicamba	*		*					
Dicamba, Digly Salt	P	*	*				*	*
Dicamba, Dimet. salt	P	*				*		*
Dicamba, Sodium salt	*							
Dicamba, iso salt	*							
Flufenacet	*							
Fluroxypyr	*							
Fluroxypyr 1-methylh	*		*					
Glyphosate	*							
Glyphosate iso. salt	P	*	P	*		P	*	
Halosulfuron	*							
Imazamox	*							
Imazethapyr	*		*					
MCPA	*	*						
MCPA, 2-ethylhexyl	P		*	*		*	*	*
MCPA, dimethyl. salt	P	*	*				P	*
MCPA, sodium salt	P		*				*	
Metsulfuron-methyl	*							
Paraquat	*							
Picloram, K salt	*							
Prosulfuron	P		*					
S-Metolachlor	*							
Thifensulfuron	P		*				*	*
Triasulfuron	*							
Tribenuron-methyl	P		P				*	*
Triclopyr	*							

See footnote(s) at end of table.

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**Oats : Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States							
	ALL	CA	ID	IL	IA	KS	MI	MN
Insecticides								
Carbaryl	*							
Chlorpyrifos	*			*				
Lambda-cyhalothrin	P		*					
Malathion	*							
Methomyl	*							
Permethrin	*			*	*			
Zeta-cypermethrin	*							
Fungicides								
Propiconazole	*							
Pyraclostrobin	*							

See footnote(s) at end of table.

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**Oats : Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States							
	MT	NE	NY	ND	PA	SD	TX	WI
Herbicides								
2,4-D, 2-EHE	P	*	*	P	*	*	P	*
2,4-D, BEE	*			*			*	
2,4-D, dieth sal	*	*	P		*			
2,4-D, dimeth. salt	P	P	P	P	P	P	P	P
2,4-D, isoprop. salt	*					*		
2,4-DB, dimeth. salt			P		P			*
Acetochlor								
Atrazine					*			
Bromoxynil			*		*			*
Bromoxynil heptanoat			*	P	*	*		
Bromoxynil octanoate	*		*	P	*	P		
Carfentrazone-ethyl								
Chlorsulfuron							*	
Clethodim							*	*
Clopyralid	*			P				
Dicamba	*			*		*		
Dicamba, Digly Salt	*							
Dicamba, Dimet. salt	*		*	*	*	*	*	
Dicamba, Sodium salt				*				
Dicamba, iso salt						*		
Flufenacet					*			
Fluroxypyr	*			*				
Fluroxypyr 1-methylh	*							
Glyphosate					*			
Glyphosate iso. salt	P	*		P	*	P	*	*
Halosulfuron		*						
Imazamox								*
Imazethapyr								
MCPA					*			
MCPA, 2-ethylhexyl	*		*	P	*	P		*
MCPA, dimethyl. salt			P	P	P	*	*	*
MCPA, sodium salt			*	*	*	*		*
Metsulfuron-methyl						*	*	
Paraquat					*			
Picloram, K salt	*					*		
Prosulfuron		*			*		*	
S-Metolachlor					*			
Thifensulfuron		*	*	P	*	P	*	
Triasulfuron							*	
Tribenuron-methyl		*	*	P	*	P	*	
Triclopyr							*	

See footnote(s) at end of table.

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**Oats : Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States							
	MT	NE	NY	ND	PA	SD	TX	WI
Insecticides								
Carbaryl							*	
Chlorpyrifos					*		*	
Lambda-cyhalothrin			*		*		*	*
Malathion							*	
Methomyl							*	
Permethrin								
Zeta-cypermethrin							*	
Fungicides								
Propiconazole				*			*	
Pyraclostrobin				*				

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.



**Oats: Planted Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Planted Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>1,000 Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	270	36	59						
ID <sup>1</sup>	90	26	17						
IL <sup>1</sup>	60	7	1						
IA <sup>1</sup>	210	3	2						
KS	100	27	13						
MI	90	61	26						
MN	310	21	26						
MT	90	34	18						
NE	150	7	4						
NY <sup>1</sup>	95	51	23						
ND <sup>1</sup>	490	54	167						
PA <sup>1</sup>	140	58	46						
SD	380	37	52						
TX <sup>1</sup>	690	26	80	18	35				
WI <sup>1</sup>	400	18	25						
Total <sup>1</sup>	3,565	31	559	4	35				

<sup>1</sup> Insufficient reports to publish data for one or more pesticide classes.

**Oats: Agricultural Chemical Applications,  
Program States, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	5	1.0	0.450	0.450	79
2,4-D, BEE	*	1.0	0.347	0.347	4
2,4-D, dieth sal	1	1.0	0.598	0.598	24
2,4-D, dimeth. salt	9	1.1	0.424	0.447	147
2,4-DB, dimeth. salt	1	1.0	0.630	0.630	12
Bromoxynil	1	1.0	0.270	0.270	8
Bromoxynil heptanoat	1	1.0	0.224	0.224	10
Bromoxynil octanoate	3	1.0	0.236	0.236	22
Chlorsulfuron	1	1.0	0.014	0.014	( <sup>2</sup> )
Clopyralid	1	1.0	0.083	0.084	2
Dicamba, Digly Salt	*	1.0	0.109	0.109	1
Dicamba, Dimet. salt	2	1.0	0.066	0.066	5
Glyphosate iso. salt	5	1.0	0.586	0.604	117
MCPA, 2-ethylhexyl	4	1.1	0.377	0.407	52
MCPA, dimethyl. salt	3	1.0	0.338	0.338	37
MCPA, sodium salt	*	1.0	0.815	0.815	14
Prosulfuron	*	1.0	0.005	0.005	( <sup>2</sup> )
Thifensulfuron	2	1.0	0.010	0.010	1
Tribenuron-methyl	2	1.0	0.005	0.005	( <sup>2</sup> )
<b>Insecticides</b>					
Lambda-cyhalothrin	*	1.0	0.027	0.027	( <sup>2</sup> )

\* Area applied is less than 0.5 percent.

<sup>1</sup> Planted acreage in 2005 for the 13 Program States was 3.6 million acres.

States included are CA, ID, KS, MI, MN, MT, NE, NY, ND, PA, SD, TX, and WI.

<sup>2</sup> Total applied is less than 500 lbs.

**Oats: Agricultural Chemical Applications,  
California, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, dimeth. salt	11	1.6	0.547	0.888	25
Chlorsulfuron	7	1.0	0.014	0.014	( <sup>2</sup> )

<sup>1</sup> Planted acreage in 2005 for California was 270,000 acres.

<sup>2</sup> Total applied is less than 500 lbs.

**Oats: Agricultural Chemical Applications,  
Idaho, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, 2-EHE	5	1.0	0.516	0.516	2
2,4-D, dimeth. salt	7	1.0	0.867	0.867	5
Glyphosate iso. salt	4	1.0	1.033	1.033	4
Tribenuron-methyl	2	1.0	0.008	0.008	( <sup>2</sup> )

<sup>1</sup> Planted acreage in 2005 for Idaho was 90,000 acres.

<sup>2</sup> Total applied is less than 500 lbs.

**Oats: Agricultural Chemical Applications,  
Kansas, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Glyphosate iso. salt	13	1.0	0.721	0.721	9

<sup>1</sup> Planted acreage in 2005 for Kansas was 100,000 acres.

**Oats: Agricultural Chemical Applications,  
Michigan, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, dieth sal	7	1.0	0.546	0.546	3
2,4-D, dimeth. salt	36	1.0	0.456	0.456	15
MCPA, dimethyl. salt	5	1.0	0.359	0.359	2

<sup>1</sup> Planted acreage in 2005 for Michigan was 90,000 acres.

**Oats: Agricultural Chemical Applications,  
Minnesota, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, dimeth. salt	3	1.0	0.502	0.502	5

<sup>1</sup> Planted acreage in 2005 for Minnesota was 310,000 acres.

**Oats: Agricultural Chemical Applications,  
Montana, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, 2-EHE	10	1.0	0.381	0.381	3
2,4-D, dimeth. salt	11	1.0	0.466	0.466	5
Glyphosate iso. salt	12	1.1	0.505	0.560	6

<sup>1</sup> Planted acreage in 2005 for Montana was 90,000 acres.

**Oats: Agricultural Chemical Applications,  
Nebraska, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, dimeth. salt	1	1.0	0.444	0.444	1

<sup>1</sup> Planted acreage in 2005 for Nebraska was 150,000 acres.

**Oats: Agricultural Chemical Applications,  
New York, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, dieth sal	9	1.0	0.501	0.501	4
2,4-D, dimeth. salt	19	1.0	0.526	0.526	10
2,4-DB, dimeth. salt	2	1.0	0.694	0.694	2
MCPA, dimethyl. salt	15	1.0	0.402	0.402	6

<sup>1</sup> Planted acreage in 2005 for New York was 95,000 acres.

**Oats: Agricultural Chemical Applications,  
North Dakota, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, 2-EHE	1	1.0	0.329	0.329	2
2,4-D, dimeth. salt	21	1.0	0.387	0.387	39
Bromoxynil heptanoat	3	1.0	0.213	0.213	3
Bromoxynil octanoate	9	1.0	0.213	0.213	9
Clopyralid	4	1.0	0.089	0.090	2
Glyphosate iso. salt	17	1.0	0.643	0.643	53
MCPA, 2-ethylhexyl	18	1.1	0.398	0.444	40
MCPA, dimethyl. salt	5	1.0	0.290	0.290	8
Thifensulfuron	3	1.0	0.009	0.009	(2)
Tribenuron-methyl	3	1.0	0.006	0.006	(2)

<sup>1</sup> Planted acreage in 2005 for North Dakota was 490,000 acres.

<sup>2</sup> Total applied is less than 500 lbs.

**Oats: Agricultural Chemical Applications,  
Pennsylvania, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, dimeth. salt	16	1.0	0.378	0.387	9
2,4-DB, dimeth. salt	8	1.0	0.580	0.580	6
MCPA, dimethyl. salt	15	1.0	0.350	0.350	8

<sup>1</sup> Planted acreage in 2005 for Pennsylvania was 140,000 acres.

**Oats: Agricultural Chemical Applications,  
South Dakota, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, dimeth. salt	14	1.0	0.190	0.190	10
Bromoxynil octanoate	3	1.0	0.351	0.351	3
Glyphosate iso. salt	11	1.0	0.413	0.413	18
MCPA, 2-ethylhexyl	4	1.0	0.313	0.313	5
Thifensulfuron	5	1.0	0.012	0.012	( <sup>2</sup> )
Tribenuron-methyl	5	1.0	0.006	0.006	( <sup>2</sup> )

<sup>1</sup> Planted acreage in 2005 for South Dakota was 380,000 acres.

<sup>2</sup> Total applied is less than 500 lbs.

**Oats: Agricultural Chemical Applications,  
Texas, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, 2-EHE	15	1.0	0.504	0.504	52
2,4-D, dimeth. salt	3	1.0	0.745	0.745	15

<sup>1</sup> Planted acreage in 2005 for Texas was 690,000 acres.

**Oats: Agricultural Chemical Applications,  
Wisconsin, 2005<sup>1</sup>**

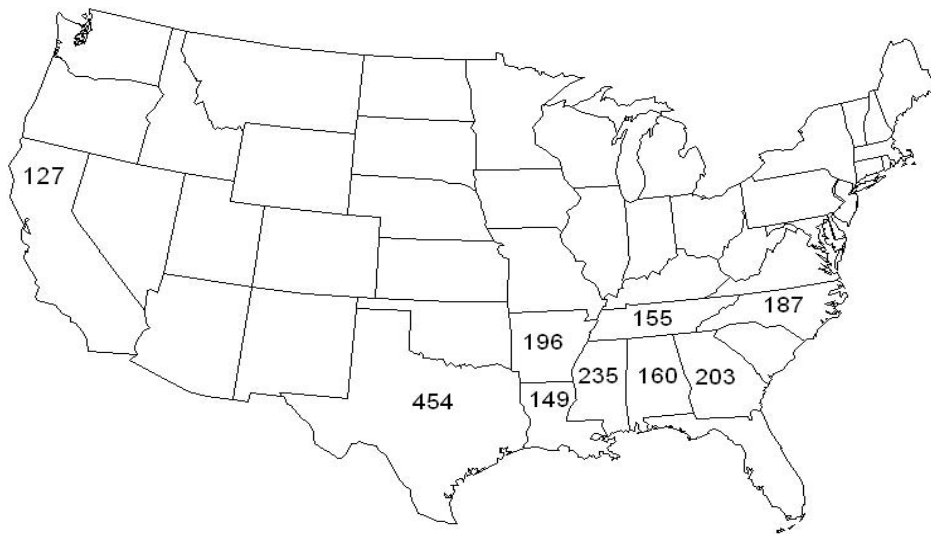
Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, dimeth. salt	4	1.0	0.359	0.359	6

<sup>1</sup> Planted acreage in 2005 for Wisconsin was 400,000 acres.

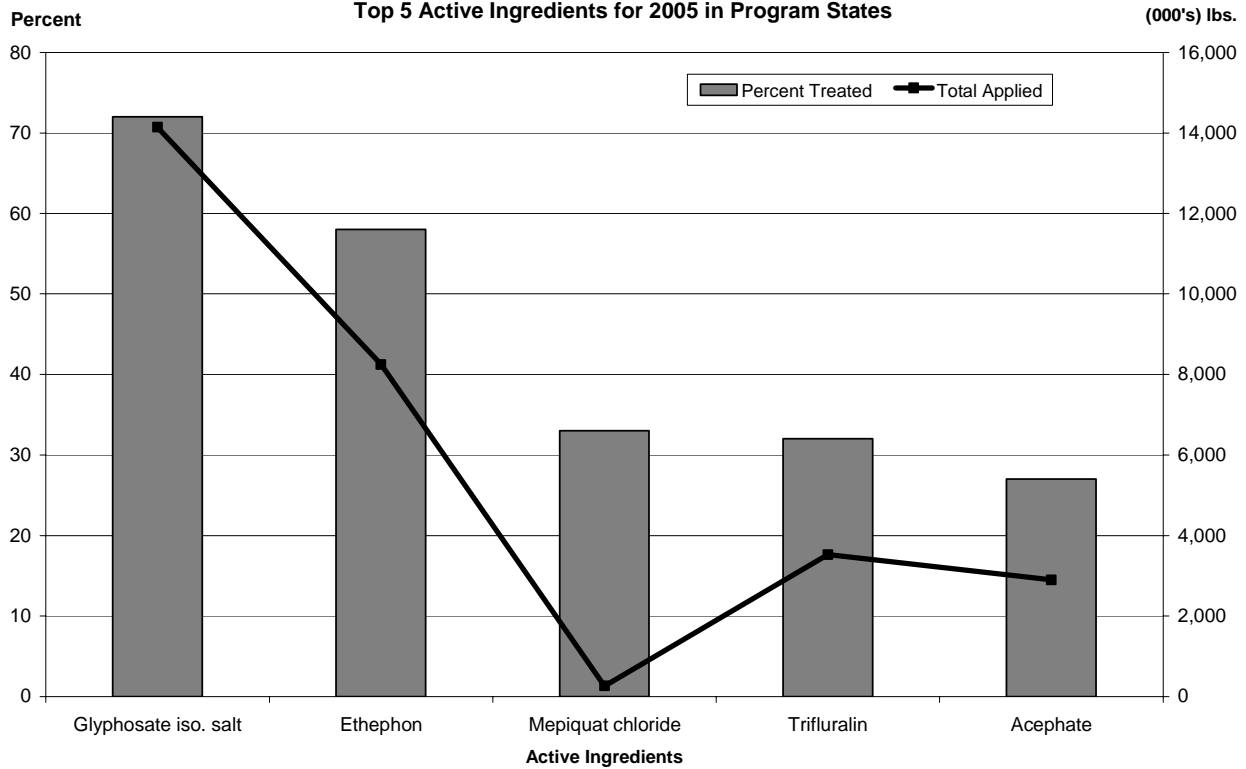
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## Upland Cotton: Number of Usable Reports 2005



**Upland Cotton - Percent of Acres Treated and Total Applied  
Top 5 Active Ingredients for 2005 in Program States**



**Upland Cotton: Fertilizer Use by State, 2005**  
**Percent of Acres Treated and Total Applied**

State	Planted Acreage	Percent of Acres Treated and Total Applied							
		Nitrogen		Phosphate		Potash		Sulfur	
	<i>1,000 Acres</i>	<i>Percent</i>	<i>Mil. lbs.</i>	<i>Percent</i>	<i>Mil. lbs.</i>	<i>Percent</i>	<i>Mil. lbs.</i>	<i>Percent</i>	<i>Mil. lbs.</i>
AL	550	98	51.4	87	27.0	90	37.0	39	3.4
AR	1,050	96	112.8	73	33.3	82	71.2	33	8.5
CA	430	96	79.8	32	10.2	22	8.3	4	0.2
GA	1,220	97	112.6	88	63.8	90	103.7	56	11.7
LA	610	99	47.5	47	12.3	49	23.3	35	1.3
MS	1,210	99	144.5	35	22.6	58	82.7	17	2.8
NC	815	95	57.9	74	25.7	95	79.0	40	7.1
TN	640	100	60.6	90	31.1	99	58.3	42	2.1
TX	5,900	77	310.9	64	144.9	32	35.4	40	32.3
Total	12,425	88	978.0	65	370.9	55	498.9	38	69.4

**Upland Cotton: Fertilizer Primary Nutrient Applications,  
Program States and Total, 2005**

Primary Nutrient	Planted Acreage	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>1,000 Acres</i>	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>Mil. lbs</i>
Alabama	550					
Nitrogen		98	1.6	61	96	51.4
Phosphate		87	1.0	54	57	27.0
Potash		90	1.1	70	75	37.0
Sulfur		39	1.0	15	16	3.4
Arkansas	1,050					
Nitrogen		96	1.6	71	112	112.8
Phosphate		73	1.1	40	44	33.3
Potash		82	1.1	74	82	71.2
Sulfur		33	1.1	23	24	8.5
California	430					
Nitrogen		96	2.1	94	194	79.8
Phosphate		32	1.1	70	76	10.2
Potash		22	1.5	60	89	8.3
Sulfur		4	1.2	8	9	0.2
Georgia	1,220					
Nitrogen		97	1.9	50	95	112.6
Phosphate		88	1.1	53	60	63.8
Potash		90	1.3	72	95	103.7
Sulfur		56	1.1	15	17	11.7
Louisiana	610					
Nitrogen		99	1.3	62	78	47.5
Phosphate		47	1.0	42	43	12.3
Potash		49	1.1	71	78	23.3
Sulfur		35	1.0	6	6	1.3
Mississippi	1,210					
Nitrogen		99	1.5	81	120	144.5
Phosphate		35	1.1	49	54	22.6
Potash		58	1.1	106	117	82.7
Sulfur		17	1.4	10	13	2.8
North Carolina	815					
Nitrogen		95	1.9	40	75	57.9
Phosphate		74	1.1	37	43	25.7
Potash		95	1.2	89	102	79.0
Sulfur		40	1.1	19	22	7.1
Tennessee	640					
Nitrogen		100	1.3	76	95	60.6
Phosphate		90	1.0	52	54	31.1
Potash		99	1.0	88	92	58.3
Sulfur		42	1.0	8	8	2.1

See footnote(s) at end of table.

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**Upland Cotton: Fertilizer Primary Nutrient Applications,  
Program States and Total, 2005 (continued)**

Primary Nutrient	Planted Acreage	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>1,000 Acres</i>	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>Mil. lbs</i>
Texas	5,900					
Nitrogen		77	1.4	49	68	310.9
Phosphate		64	1.1	34	38	144.9
Potash		32	1.1	17	19	35.4
Sulfur		40	1.1	12	14	32.3
Total	12,425					
Nitrogen		88	1.5	59	90	978.0
Phosphate		65	1.1	42	46	370.9
Potash		55	1.1	63	73	498.9
Sulfur		38	1.1	13	15	69.4

**Upland Cotton : Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States									
	ALL	AL	AR	CA	GA	LA	MS	NC	TN	TX
Herbicides										
2,4-D, 2-EHE	P	P	*		*	P	P		*	*
2,4-D, dimeth. salt	P	*	P		P	P	P	P	*	P
2,4-DB, dimeth. salt	*								*	
Atrazine	*		*							
Bensulfuron-methyl	*							*		
Carfentrazone-ethyl	P	P	P	P	P	P	P	P	P	P
Clethodim	P	P		*	*	P	P	*		P
Clomazone	P						*	*	P	
Cloransulam-methyl	*							*		
DSMA	*	*								*
Desmedipham	*									*
Dicamba, Digly Salt	P	P	P			*	*		P	
Dicamba, Dimet. salt	P		*			*	*			*
Dimethenamid	*							*		
Diuron	P	P	P	P	P	P	P	P	P	P
Fenoxaprop	*		*							
Fenoxaprop-p-ethyl	*				*					*
Flumioxazin	P	*	P	P	*	P	P	P	*	*
Fluometuron	P	P	P	*	P	*	P	P	P	P
Glufosinate-ammonium	P		P		*		*	*	P	P
Glyphosate	P	P	P	*	*	P	P	P	*	*
Glyphosate amm. salt	P		P		*	*			*	*
Glyphosate iso. salt	P	P	P	P	P	P	P	P	P	P
Imazamethabenz	*					*				
Lactofen	*				*		*		*	
Linuron	P	*	*		*	*	P	*		
MSMA	P	P	P		P	P	P	P		
Metolachlor	P		*				*	*		*
Metribuzin	*								*	
Norflurazon	*				*					
Oxyfluorfen	P			P	*		*			*
Pendimethalin	P	P	P	P	P	*	P	P	*	P
Phenmedipham	*									*
Prometryn	P	P	P	P	P	P	P	P	P	P
Propanil	*							*		
Pyraflufen-ethyl	P	P	*	P	P	*	*	P	*	P
Pyrithiobac-sodium	P	P	P	P	P	*	P	P	*	P
Quinclorac	*		*							
Quizalofop-P-ethyl	P		*			*	*			*
Rimsulfuron	*							*	*	
S-Metolachlor	P	P	P	P	P	P	P	P	P	P
Sethoxydim	P			*	*	*		*		
Sulfosate	P		P		*	P	P	P	*	*
Thifensulfuron	P		*			*		*		
Thiobencarb	*		*					*		
Tribenuron-methyl	P		*			*		*		

See footnote(s) at end of table.

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**Upland Cotton : Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States									
	ALL	AL	AR	CA	GA	LA	MS	NC	TN	TX
Herbicides (continued)										
Trifloxysulfuron-sod	P	P	P		P	P	P	P	*	*
Trifluralin	P	P	P	P	P		P	*	*	P
Insecticides										
Abamectin	P		*	P			*			
Acephate	P	P	P	P	P	P	P	P	P	P
Acetamiprid	P			P		P	P			P
Aldicarb	P	P	P	P	P	P	P	P	P	P
Benzoic acid	P		P	*	P		*			*
Bifenthrin	P	*	P	P	*	P	*	*	*	*
Bt subsp. kurstaki	*				*					*
Buprofezin	*	*		*						
Carbaryl	*							*	*	
Chlorpyrifos	P		*	P	*	P		*	P	*
Cyfluthrin	P	*	P	*	P	P	P	P	P	P
Cypermethrin	P	P	P		P	P	P	P	P	P
Deltamethrin	P				P			*		*
Diazinon	*				*				*	*
Dicofol	P		*	P			*	*		*
Dicrotophos	P	P	P		P	P	P	P	P	P
Diflubenzuron	*									*
Dimethoate	P	*	*	*		P	*	*	*	P
Disulfoton	*	*			*					
Emamectin benzoate	*					*				*
Endosulfan	P			*						*
Esfenvalerate	P	*	P	*	P	*	P	*	*	P
Etoxazole	P		*	P						*
Fenpropathrin	*			*						
Imidacloprid	P	*	P	P		P	P		P	*
Indoxacarb	P	*	*	P	*		*			P
Lambda-cyhalothrin	P	*	P	*	P	P	P	P	P	P
Malathion	P		P		*	P	*		P	P
Methamidophos	P		*				*		*	
Methomyl	P					*		*		*
Methyl parathion	P				P		*			*
Naled	P		*	P					*	
Novaluron	P		*			*	P			*
Oxamyl	P	*	P	P		P	P		*	P
Oxydemeton-methyl	*		*							
Permethrin	P			*	*	*	*			*
Petroleum distillate	P			*	*			*		*
Phorate	P	*		*	*			*		
Phosphamidon	*									*
Profenofos	P			*		P	*		*	*
Propargite	P			*			*			*
Pyriproxyfen	*			*						

See footnote(s) at end of table.

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**Upland Cotton : Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States									
	ALL	AL	AR	CA	GA	LA	MS	NC	TN	TX
<b>Insecticides (continued)</b>										
Spinosad	P				*	*	*			*
Spiromesifen	P			P						
Thiamethoxam	P	P	P	P	*	P	P	*	P	P
Thiodicarb	*									*
Tralomethrin	*				*			*	*	
Zeta-cypermethrin	P	P	P	*	P	*	P	P	P	P
<b>Fungicides</b>										
Azoxystrobin	P	*	*	*		*	P	*	P	*
Carboxin	*				*					
Chlorothalonil	*								*	
Dinocap	*		*							
Etridiazole	P	*	*	*	*	*		*	*	
Iprodione	*	*								
Mancozeb	*		*							
Mefenoxam	P		P			*	*	P	P	
Metalaxyl	*				*					
PCNB	P	*	*	*	*	*	*	P	P	
Propiconazole	*								*	
Pyraclostrobin	*								*	
<b>Other Chemicals</b>										
Bacillus cereus	P	P	P	P	P	P	P	P	P	P
Cacodylic acid	*		*	*	*					
Cyclanilide	P	P	P	P	P	P	P	P	P	P
Dichloropropene	*				*					
Dimethipin	P	*		*	*	*				*
Endothall	P			P				*		*
Ethephon	P	P	P	P	P	P	P	P	P	P
Gibberellic acid	P	*	*		*				*	*
Harpin a B protein	*						*			
Indolebutyric acid	P	*	*		*				*	*
Kinetin	P	P	P	*	P	P	P	P	P	*
Mepiquat chloride	P	P	P	P	P	P	P	P	P	P
Mepiquat pentaborate	P	P	P		*	P	*	P	P	P
Monocarbamide dihyd.	P	*	P	P	P	P	P	P	*	P
Paraquat	P	P	*	P	*	*	P	P	P	P
Sodium chlorate	P	P	P	P	*	P	P	*	P	*
Thidiazuron	P	P	P	P	P	P	P	P	P	P
Tribufos	P	P	P	P	P	P	P	P	P	P

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Upland Cotton: Planted Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Planted Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>1,000 Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
AL	550	98	1,186	74	192	2	3	89	697
AR	1,050	95	2,997	84	2,669	6	18	87	1,910
CA	430	92	551	96	574	4	2	96	1,570
GA	1,220	99	2,958	88	1,145	*	1	95	2,539
LA	610	98	1,897	94	1,358	3	7	99	888
MS	1,210	100	3,947	92	1,917	6	28	98	1,880
NC	815	99	2,181	82	597	7	41	92	1,642
TN	640	99	1,339	87	253	11	23	94	1,030
TX <sup>1</sup>	5,900	93	8,677	53	5,946			47	3,075
Total	12,425	95	25,733	71	14,651	3	123	72	15,231

\* Applied on less than one percent of acres.

<sup>1</sup> Insufficient reports to publish data for one or more pesticide classes.



**Upland Cotton: Agricultural Chemical Applications,  
Program States, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	1	1.2	0.538	0.653	68
2,4-D, dimeth. salt	6	1.0	0.592	0.619	458
Carfentrazone-ethyl	6	1.1	0.015	0.017	12
Clethodim	1	1.0	0.123	0.125	19
Clomazone	*	1.0	0.272	0.272	12
Dicamba, Digly Salt	2	1.0	0.232	0.235	69
Dicamba, Dimet. salt	*	1.4	0.065	0.090	3
Diuron	27	1.1	0.462	0.508	1,707
Flumioxazin	3	1.1	0.056	0.062	20
Fluometuron	5	1.1	0.759	0.800	487
Glufosinate-ammonium	4	1.5	0.416	0.633	297
Glyphosate	3	1.9	0.627	1.175	428
Glyphosate amm. salt	*	1.2	0.344	0.398	18
Glyphosate iso. salt	71	2.2	0.713	1.592	14,112
Linuron	1	1.1	0.551	0.590	55
MSMA	6	1.1	1.222	1.327	937
Metolachlor	*	1.0	1.668	1.668	90
Oxyfluorfen	1	1.0	0.222	0.222	18
Pendimethalin	12	1.0	0.791	0.816	1,211
Prometryn	7	1.1	0.726	0.797	669
Pyraflufen-ethyl	4	1.0	0.003	0.003	1
Pyrithiobac-sodium	9	1.0	0.041	0.043	50
Quizalofop-P-ethyl	*	1.0	0.046	0.046	1
S-Metolachlor	6	1.1	0.999	1.078	757
Sethoxydim	*	1.0	0.262	0.262	10
Sulfosate	2	2.0	1.031	2.098	593
Thifensulfuron	*	1.0	0.009	0.009	( <sup>2</sup> )
Tribenuron-methyl	*	1.0	0.005	0.005	( <sup>2</sup> )
Trifloxysulfuron-sod	4	1.1	0.006	0.006	3
Trifluralin	32	1.0	0.862	0.900	3,522
<b>Insecticides</b>					
Abamectin	2	1.2	0.006	0.007	2
Acephate	27	2.1	0.412	0.862	2,897
Acetamiprid	7	1.0	0.037	0.038	34
Aldicarb	19	1.0	0.657	0.673	1,554
Benzoic acid	1	1.3	0.098	0.123	17
Bifenthrin	1	1.2	0.080	0.094	17
Chlorpyrifos	2	1.2	0.612	0.708	219
Cyfluthrin	8	1.3	0.034	0.043	41
Cypermethrin	13	1.3	0.055	0.071	115
Deltamethrin	1	2.7	0.026	0.072	10
Dicofol	1	1.4	0.988	1.362	181
Dicrotophos	19	1.6	0.289	0.452	1,090
Dimethoate	2	1.5	0.320	0.466	96
Endosulfan	*	1.1	0.291	0.332	7
Esfenvalerate	3	1.2	0.044	0.055	19

See footnote(s) at end of table.

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**Upland Cotton: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Insecticides (continued)</b>					
Etoxazole	*	1.0	0.044	0.044	2
Imidacloprid	6	1.5	0.038	0.058	46
Indoxacarb	2	1.3	0.095	0.125	26
Lambda-cyhalothrin	12	1.4	0.031	0.043	62
Malathion	15	4.3	0.891	3.829	7,297
Methamidophos	1	1.0	0.140	0.140	10
Methomyl	*	1.6	0.169	0.275	7
Methyl parathion	2	1.4	0.622	0.895	183
Naled	*	1.5	0.692	1.030	38
Novaluron	1	1.4	0.041	0.056	6
Oxamyl	3	1.4	0.346	0.492	196
Permethrin	1	1.1	0.063	0.073	6
Petroleum distillate	*	1.3	3.131	4.094	190
Phorate	1	1.0	1.183	1.183	78
Profenofos	*	1.2	0.727	0.898	54
Propargite	*	1.1	1.281	1.384	39
Spinosad	1	1.2	0.050	0.059	5
Spiromesifen	*	1.1	0.172	0.197	4
Thiamethoxam	8	1.5	0.023	0.036	37
Zeta-cypermethrin	6	1.4	0.021	0.030	23
<b>Fungicides</b>					
Azoxystrobin	1	1.0	0.083	0.083	12
Etridiazole	*	1.0	0.142	0.142	3
Mefenoxam	2	1.0	0.087	0.087	19
PCNB	1	1.0	0.678	0.678	87
<b>Other Chemicals</b>					
Bacillus cereus	9	2.0	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Cyclanilide	12	1.0	0.129	0.132	202
Dimethipin	*	1.0	0.190	0.190	6
Endothall	*	1.0	0.067	0.067	4
Ethephon	58	1.1	1.055	1.147	8,248
Gibberellic acid	*	1.7	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Indolebutyric acid	*	1.7	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Kinetin	4	2.1	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Mepiquat chloride	33	2.1	0.030	0.063	260
Mepiquat pentaborate	4	2.0	0.052	0.106	49
Monocarbamide dihyd.	6	1.0	2.505	2.600	2,078
Paraquat	15	1.1	0.324	0.355	642
Sodium chlorate	3	1.1	2.577	2.917	931
Thidiazuron	35	1.1	0.064	0.070	308
Tribufos	26	1.1	0.534	0.590	1,937

\* Area applied is less than 0.5 percent.

<sup>1</sup> Planted acreage in 2005 for the 9 Program States was 12.4 million acres.

States included are AL, AR, CA, GA, LA, MS, NC, TN, and TX.

<sup>2</sup> Total applied is less than 500 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Upland Cotton: Agricultural Chemical Applications,  
Alabama, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	5	1.0	0.535	0.535	14
Carfentrazone-ethyl	5	1.0	0.015	0.015	( <sup>2</sup> )
Clethodim	3	1.0	0.123	0.123	2
Dicamba, Digly Salt	5	1.0	0.207	0.207	6
Diuron	44	1.2	0.322	0.378	91
Fluometuron	5	1.0	0.927	0.927	24
Glyphosate	6	2.2	1.122	2.475	75
Glyphosate iso. salt	91	2.2	0.676	1.521	763
MSMA	3	1.0	1.349	1.349	22
Pendimethalin	17	1.0	0.783	0.783	73
Prometryn	8	1.0	0.932	0.932	42
Pyraflufen-ethyl	6	1.0	0.003	0.003	( <sup>2</sup> )
Pyriithiobac-sodium	17	1.0	0.050	0.051	5
S-Metolachlor	2	1.0	0.803	0.803	11
Trifloxysulfuron-sod	7	1.0	0.008	0.008	( <sup>2</sup> )
Trifluralin	8	1.0	0.556	0.556	25
<b>Insecticides</b>					
Acephate	15	1.2	0.364	0.418	34
Aldicarb	19	1.0	0.649	0.649	68
Cypermethrin	30	1.4	0.057	0.082	13
Dicrotophos	23	1.5	0.228	0.335	43
Thiamethoxam	6	1.2	0.028	0.034	1
Zeta-cypermethrin	6	1.1	0.017	0.019	1
<b>Other Chemicals</b>					
Bacillus cereus	4	2.6	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Cyclanilide	42	1.0	0.130	0.130	30
Ethephon	74	1.0	1.121	1.145	464
Kinetin	7	1.3	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Mepiquat chloride	36	2.2	0.032	0.069	14
Mepiquat pentaborate	6	1.1	0.080	0.089	3
Paraquat	4	1.0	0.426	0.442	9
Sodium chlorate	6	1.1	0.748	0.857	28
Thidiazuron	46	1.0	0.046	0.046	12
Tribufos	30	1.0	0.627	0.627	102

<sup>1</sup> Planted acreage in 2005 for Alabama was 550,000 acres.

<sup>2</sup> Total applied is less than 500 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Upland Cotton: Agricultural Chemical Applications,  
Arkansas, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	5	1.2	0.461	0.557	28
Carfentrazone-ethyl	7	1.2	0.015	0.018	1
Dicamba, Digly Salt	8	1.0	0.250	0.250	22
Diuron	17	1.1	0.540	0.573	104
Flumioxazin	8	1.0	0.062	0.062	5
Fluometuron	8	1.0	0.603	0.628	52
Glufosinate-ammonium	10	1.2	0.483	0.581	58
Glyphosate	7	1.6	0.559	0.893	61
Glyphosate amm. salt	1	1.5	0.649	0.970	12
Glyphosate iso. salt	88	3.0	0.830	2.456	2,281
MSMA	2	1.6	1.224	1.897	41
Pendimethalin	3	1.0	0.724	0.724	25
Prometryn	4	1.2	0.707	0.822	31
Pyriithiobac-sodium	7	1.0	0.036	0.036	3
S-Metolachlor	11	1.3	0.900	1.187	132
Sulfosate	2	2.1	1.394	2.943	70
Trifloxysulfuron-sod	6	1.1	0.008	0.009	1
Trifluralin	4	1.0	1.391	1.391	52
<b>Insecticides</b>					
Acephate	43	1.9	0.436	0.838	380
Aldicarb	19	1.0	0.704	0.718	146
Benzoic acid	2	2.7	0.125	0.333	6
Bifenthrin	4	1.0	0.089	0.089	4
Cyfluthrin	10	1.3	0.023	0.031	3
Cypermethrin	14	1.4	0.040	0.057	9
Dicrotophos	38	1.4	0.235	0.320	129
Esfenvalerate	4	1.5	0.036	0.053	2
Imidacloprid	14	1.6	0.035	0.055	8
Lambda-cyhalothrin	24	1.7	0.024	0.040	10
Malathion	48	4.9	0.769	3.763	1,883
Oxamyl	9	1.6	0.363	0.592	57
Thiamethoxam	15	1.6	0.022	0.035	6
Zeta-cypermethrin	5	1.7	0.016	0.026	1
<b>Fungicides</b>					
Mefenoxam	5	1.0	0.055	0.055	3
<b>Other Chemicals</b>					
Bacillus cereus	10	2.3	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Cyclanilide	4	1.0	0.147	0.147	6
Ethephon	63	1.5	0.976	1.417	936
Kinetin	8	3.0	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Mepiquat chloride	53	2.7	0.032	0.086	48
Mepiquat pentaborate	2	1.6	0.055	0.087	2
Monocarbamide dihyd.	9	1.3	2.452	3.217	290
Sodium chlorate	3	1.4	1.805	2.481	67

See footnote(s) at end of table.

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**Upland Cotton: Agricultural Chemical Applications,  
Arkansas, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Other Chemicals (continued)	d)				
Thidiazuron	28	1.1	0.063	0.072	22
Tribufos	62	1.4	0.591	0.815	530

<sup>1</sup> Planted acreage in 2005 for Arkansas was 1.1 million acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 500 lbs.

**Upland Cotton: Agricultural Chemical Applications,  
California, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Carfentrazone-ethyl	11	1.2	0.022	0.027	1
Diuron	63	1.1	0.031	0.033	9
Flumioxazin	4	1.1	0.077	0.085	1
Glyphosate iso. salt	55	1.9	0.637	1.184	278
Oxyfluorfen	8	1.0	0.386	0.386	13
Pendimethalin	15	1.0	0.913	0.913	58
Prometryn	7	1.4	1.236	1.689	49
Pyraflufen-ethyl	18	1.0	0.003	0.003	( <sup>2</sup> )
Pyriproxyfen	9	1.0	0.066	0.066	3
S-Metolachlor	6	1.0	1.153	1.153	32
Trifluralin	24	1.0	0.839	0.848	88
<b>Insecticides</b>					
Abamectin	65	1.2	0.006	0.007	2
Acephate	4	1.3	0.542	0.728	12
Acetamiprid	25	1.0	0.053	0.053	6
Aldicarb	26	1.3	1.118	1.448	164
Bifenthrin	11	1.1	0.059	0.062	3
Chlorpyrifos	21	1.1	0.980	1.101	99
Dicofol	23	1.3	0.990	1.261	125
Etoxazole	3	1.0	0.063	0.063	1
Imidacloprid	11	1.3	0.044	0.058	3
Indoxacarb	22	1.2	0.099	0.119	11
Naled	8	1.4	0.696	0.946	31
Oxamyl	12	1.0	0.877	0.877	47
Spiromesifen	4	1.1	0.172	0.197	4
Thiamethoxam	15	1.0	0.028	0.028	2
<b>Other Chemicals</b>					
Bacillus cereus	16	1.1	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Cyclanilide	7	1.2	0.130	0.158	4
Endothal	11	1.0	0.083	0.083	4
Ethephon	65	1.1	0.961	1.051	293
Mepiquat chloride	50	1.3	0.047	0.061	13
Monocarbamide dihyd.	39	1.0	2.520	2.520	427
Paraquat	33	1.1	0.423	0.470	68
Sodium chlorate	36	1.2	3.678	4.324	664
Thidiazuron	65	1.1	0.055	0.059	17
Tribufos	13	1.0	1.474	1.474	79

<sup>1</sup> Planted acreage in 2005 for California was 430,000 acres.

<sup>2</sup> Total applied is less than 500 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Upland Cotton: Agricultural Chemical Applications,  
Georgia, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	3	1.0	0.594	0.594	23
Carfentrazone-ethyl	4	1.2	0.015	0.018	1
Diuron	41	1.1	0.581	0.656	324
Fluometuron	3	1.5	0.591	0.914	30
Glyphosate iso. salt	93	1.9	0.684	1.273	1,439
MSMA	18	1.1	1.484	1.572	340
Pendimethalin	29	1.1	0.853	0.922	328
Prometryn	9	1.0	0.787	0.787	85
Pyraflufen-ethyl	10	1.0	0.002	0.002	( <sup>2</sup> )
Pyriproxyfen-sodium	20	1.1	0.045	0.049	12
S-Metolachlor	4	1.0	1.018	1.018	56
Trifloxysulfuron-sod	5	1.0	0.005	0.005	( <sup>2</sup> )
Trifluralin	22	1.0	0.882	0.882	236
<b>Insecticides</b>					
Acephate	5	1.6	0.330	0.535	34
Aldicarb	46	1.0	0.746	0.749	417
Benzoic acid	3	1.1	0.053	0.059	2
Cyfluthrin	12	1.4	0.039	0.054	8
Cypermethrin	7	1.5	0.073	0.107	9
Deltamethrin	3	1.4	0.022	0.032	1
Diclotophos	52	1.7	0.375	0.648	407
Esfenvalerate	4	1.5	0.063	0.093	5
Lambda-cyhalothrin	19	1.6	0.033	0.051	12
Methyl parathion	11	1.4	0.705	0.966	133
Zeta-cypermethrin	14	1.6	0.025	0.040	7
<b>Other Chemicals</b>					
Bacillus cereus	20	2.1	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Cyclanilide	25	1.0	0.135	0.136	42
Ethephon	79	1.0	1.228	1.273	1,230
Kinetin	5	2.1	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Mepiquat chloride	58	2.1	0.034	0.070	50
Monocarbamide dihyd.	8	1.0	3.396	3.471	330
Thidiazuron	46	1.0	0.059	0.060	34
Tribufos	46	1.0	0.472	0.484	274

<sup>1</sup> Planted acreage in 2005 for Georgia was 1.2 million acres.

<sup>2</sup> Total applied is less than 500 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Upland Cotton: Agricultural Chemical Applications,  
Louisiana, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	7	1.3	0.466	0.614	27
2,4-D, dimeth. salt	33	1.1	0.666	0.744	148
Carfentrazone-ethyl	6	1.3	0.012	0.016	1
Clethodim	5	1.0	0.161	0.161	5
Diuron	51	1.1	0.737	0.816	256
Flumioxazin	7	1.2	0.058	0.072	3
Glyphosate	11	2.7	0.567	1.517	101
Glyphosate iso. salt	78	2.7	0.697	1.888	893
MSMA	21	1.2	0.860	1.011	129
Prometryn	13	1.1	0.651	0.727	60
S-Metolachlor	12	1.0	1.008	1.054	76
Sulfosate	13	2.0	0.918	1.875	147
Trifloxysulfuron-sod	13	1.2	0.004	0.005	( <sup>2</sup> )
<b>Insecticides</b>					
Acephate	70	2.7	0.462	1.256	535
Acetamiprid	4	1.7	0.049	0.084	2
Aldicarb	7	1.0	0.610	0.610	25
Bifenthrin	6	1.4	0.107	0.147	5
Chlorpyrifos	12	1.5	0.438	0.654	46
Cyfluthrin	16	1.6	0.033	0.052	5
Cypermethrin	27	1.4	0.050	0.070	12
Dicrotophos	51	1.7	0.289	0.480	149
Dimethoate	16	1.3	0.327	0.437	44
Imidacloprid	21	1.6	0.045	0.073	9
Lambda-cyhalothrin	33	1.3	0.031	0.041	8
Malathion	20	4.1	0.918	3.767	468
Oxamyl	2	1.3	0.274	0.367	5
Profenofos	7	1.3	0.610	0.813	35
Thiamethoxam	19	1.7	0.028	0.047	6
<b>Other Chemicals</b>					
Bacillus cereus	5	2.5	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Cyclanilide	5	1.4	0.084	0.116	3
Ethephon	86	1.2	0.862	1.044	545
Kinetin	5	2.5	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Mepiquat chloride	29	2.7	0.031	0.081	15
Mepiquat pentaborate	7	1.6	0.074	0.118	5
Monocarbamide dihyd.	11	1.0	1.695	1.695	111
Sodium chlorate	5	1.0	1.381	1.381	39
Thidiazuron	84	1.0	0.088	0.091	47
Tribufos	46	1.1	0.405	0.425	118

<sup>1</sup> Planted acreage in 2005 for Louisiana was 610,000 acres.

<sup>2</sup> Total applied is less than 500 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.



**Upland Cotton: Agricultural Chemical Applications,  
Mississippi, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	2	1.0	0.718	0.718	14
2,4-D, dimeth. salt	13	1.0	0.597	0.597	95
Carfentrazone-ethyl	8	1.3	0.014	0.018	2
Clethodim	3	1.0	0.124	0.124	4
Diuron	49	1.2	0.634	0.748	441
Flumioxazin	7	1.2	0.059	0.072	6
Fluometuron	8	1.1	0.524	0.576	54
Glyphosate	7	1.5	0.582	0.886	78
Glyphosate iso. salt	95	3.1	0.731	2.271	2,605
Linuron	3	1.2	0.548	0.651	23
MSMA	11	1.1	0.977	1.051	145
Pendimethalin	12	1.0	0.717	0.752	113
Prometryn	5	1.5	0.708	1.090	72
Pyriproxyfen-sodium	8	1.0	0.044	0.046	4
S-Metolachlor	7	1.0	0.717	0.717	59
Sulfosate	6	2.3	1.116	2.581	182
Trifloxysulfuron-sod	3	1.0	0.008	0.008	( <sup>2</sup> )
Trifluralin	1	1.0	0.949	0.949	13
<b>Insecticides</b>					
Acephate	71	3.2	0.447	1.433	1,232
Acetamiprid	4	1.1	0.034	0.038	2
Aldicarb	20	1.0	0.616	0.616	152
Cyfluthrin	14	1.2	0.031	0.036	6
Cypermethrin	31	1.4	0.039	0.053	20
Dicofol	33	1.9	0.282	0.536	212
Esfenvalerate	4	1.7	0.051	0.089	4
Imidacloprid	15	2.1	0.039	0.081	15
Lambda-cyhalothrin	15	1.2	0.026	0.032	6
Novaluron	8	1.3	0.039	0.050	5
Oxamyl	6	1.8	0.249	0.437	32
Thiamethoxam	31	1.8	0.023	0.041	16
Zeta-cypermethrin	7	1.5	0.031	0.047	4
<b>Fungicides</b>					
Azoxystrobin	3	1.0	0.096	0.096	4
<b>Other Chemicals</b>					
Bacillus cereus	17	3.2	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Cyclanilide	16	1.0	0.100	0.100	20
Ethephon	90	1.0	1.052	1.099	1,200
Kinetin	6	2.3	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Mepiquat chloride	52	2.9	0.027	0.077	48
Monocarbamide dihyd.	5	1.0	2.553	2.553	168
Paraquat	5	1.1	0.458	0.498	28
Sodium chlorate	2	1.0	2.461	2.461	60
Thidiazuron	88	1.0	0.077	0.080	86

See footnote(s) at end of table.

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**Upland Cotton: Agricultural Chemical Applications,  
Mississippi, 2005<sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Other Chemicals (continued)					
Tribufos	d) 34	1.1	0.577	0.650	268

<sup>1</sup> Planted acreage in 2005 for Mississippi was 1.2 million acres.

<sup>2</sup> Total applied is less than 500 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Upland Cotton: Agricultural Chemical Applications,  
North Carolina, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	12	1.0	0.321	0.321	31
Carfentrazone-ethyl	10	1.1	0.011	0.012	1
Diuron	10	1.1	0.448	0.474	40
Flumioxazin	3	1.3	0.038	0.047	1
Fluometuron	12	1.0	1.079	1.079	109
Glyphosate	9	2.0	0.559	1.094	85
Glyphosate iso. salt	87	2.3	0.657	1.483	1,056
MSMA	23	1.0	1.372	1.393	260
Pendimethalin	20	1.0	0.676	0.676	111
Prometryn	27	1.0	0.754	0.767	166
Pyraflufen-ethyl	10	1.1	0.002	0.003	( <sup>2</sup> )
Pyriithiobac-sodium	12	1.0	0.048	0.048	5
S-Metolachlor	20	1.0	1.086	1.086	178
Sulfosate	4	2.5	0.989	2.447	81
Trifloxysulfuron-sod	13	1.0	0.006	0.006	1
<b>Insecticides</b>					
Acephate	37	1.1	0.245	0.279	85
Aldicarb	46	1.0	0.718	0.718	269
Cyfluthrin	18	1.2	0.036	0.043	6
Cypermethrin	8	1.2	0.089	0.103	7
Diclotophos	22	1.0	0.282	0.289	52
Lambda-cyhalothrin	20	1.2	0.031	0.036	6
Zeta-cypermethrin	10	1.2	0.022	0.027	2
<b>Fungicides</b>					
Mefenoxam	6	1.0	0.037	0.037	2
PCNB	6	1.0	0.751	0.751	38
<b>Other Chemicals</b>					
Bacillus cereus	19	1.4	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Cyclanilide	40	1.0	0.154	0.154	50
Ethephon	81	1.1	1.197	1.261	829
Kinetin	12	1.7	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Mepiquat chloride	63	1.6	0.036	0.057	30
Mepiquat pentaborate	16	1.4	0.069	0.097	12
Monocarbamide dihyd.	20	1.0	3.424	3.424	556
Paraquat	4	1.0	0.441	0.441	13
Thidiazuron	34	1.0	0.056	0.058	16
Tribufos	40	1.0	0.397	0.409	132

<sup>1</sup> Planted acreage in 2005 for North Carolina was 815,000 acres.

<sup>2</sup> Total applied is less than 500 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Upland Cotton: Agricultural Chemical Applications,  
Tennessee, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Carfentrazone-ethyl	4	1.0	0.006	0.006	( <sup>2</sup> )
Clomazone	3	1.0	0.100	0.100	2
Dicamba, Digly Salt	27	1.0	0.227	0.231	40
Diuron	25	1.2	0.308	0.363	59
Fluometuron	12	1.0	0.732	0.732	56
Glufosinate-ammonium	4	1.0	0.360	0.360	10
Glyphosate iso. salt	97	2.6	0.663	1.717	1,070
Prometryn	9	1.1	0.644	0.677	39
S-Metolachlor	2	1.0	0.973	0.973	10
<b>Insecticides</b>					
Acephate	45	1.2	0.352	0.429	122
Aldicarb	2	1.3	0.184	0.234	3
Chlorpyrifos	3	1.1	0.716	0.790	16
Cyfluthrin	17	1.1	0.029	0.032	3
Cypermethrin	14	1.3	0.048	0.061	6
Diclotophos	23	1.3	0.255	0.328	49
Imidacloprid	26	1.2	0.031	0.037	6
Lambda-cyhalothrin	12	1.3	0.023	0.029	2
Malathion	7	1.0	0.624	0.624	29
Thiamethoxam	26	1.4	0.018	0.025	4
Zeta-cypermethrin	20	1.2	0.018	0.021	3
<b>Fungicides</b>					
Azoxystrobin	6	1.0	0.091	0.091	4
Mefenoxam	6	1.0	0.176	0.176	7
PCNB	3	1.0	0.679	0.679	11
<b>Other Chemicals</b>					
Bacillus cereus	16	1.2	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Cyclanilide	42	1.0	0.136	0.140	38
Ethephon	87	1.1	1.261	1.396	774
Kinetin	12	2.1	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Mepiquat chloride	65	1.8	0.036	0.064	27
Mepiquat pentaborate	7	1.4	0.050	0.071	3
Paraquat	18	1.1	0.444	0.495	57
Sodium chlorate	4	1.0	1.177	1.177	31
Thidiazuron	20	1.0	0.035	0.036	5
Tribufos	47	1.0	0.303	0.306	92

<sup>1</sup> Planted acreage in 2005 for Tennessee was 640,000 acres.

<sup>2</sup> Total applied is less than 500 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Upland Cotton: Agricultural Chemical Applications,  
Texas, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	2	1.0	0.767	0.767	106
Carfentrazone-ethyl	5	1.0	0.016	0.016	5
Clethodim	1	1.0	0.112	0.114	8
Diuron	17	1.0	0.369	0.375	382
Fluometuron	2	1.0	0.915	0.915	126
Glufosinate-ammonium	5	1.6	0.391	0.616	184
Glyphosate iso. salt	53	1.7	0.702	1.197	3,726
Pendimethalin	10	1.0	0.794	0.808	479
Prometryn	3	1.1	0.594	0.634	124
Pyraflufen-ethyl	2	1.0	0.003	0.003	( <sup>2</sup> )
Pyriproxyfen-sodium	8	1.0	0.035	0.036	17
S-Metolachlor	3	1.1	1.110	1.223	204
Trifluralin	58	1.0	0.858	0.901	3,077
<b>Insecticides</b>					
Acephate	15	1.5	0.345	0.532	463
Acetamiprid	12	1.0	0.034	0.034	24
Aldicarb	11	1.0	0.464	0.472	310
Cyfluthrin	3	1.3	0.039	0.049	8
Cypermethrin	9	1.1	0.068	0.076	41
Dicrathophos	4	1.4	0.160	0.223	49
Dimethoate	1	2.1	0.176	0.366	17
Esfenvalerate	3	1.0	0.035	0.035	6
Indoxacarb	1	1.5	0.099	0.145	11
Lambda-cyhalothrin	5	1.4	0.039	0.055	17
Malathion	19	4.6	0.948	4.347	4,783
Oxamyl	2	1.3	0.258	0.343	50
Thiamethoxam	2	1.1	0.027	0.030	3
Zeta-cypermethrin	4	1.3	0.017	0.021	5
<b>Other Chemicals</b>					
Bacillus cereus	2	1.2	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Cyclanilide	2	1.0	0.082	0.082	9
Ethephon	35	1.0	0.959	0.961	1,977
Mepiquat chloride	13	1.3	0.017	0.022	16
Mepiquat pentaborate	3	2.9	0.041	0.118	21
Monocarbamide dihyd.	2	1.0	1.164	1.164	157
Paraquat	24	1.1	0.291	0.320	444
Thidiazuron	18	1.2	0.057	0.069	71
Tribufos	9	1.0	0.634	0.634	342

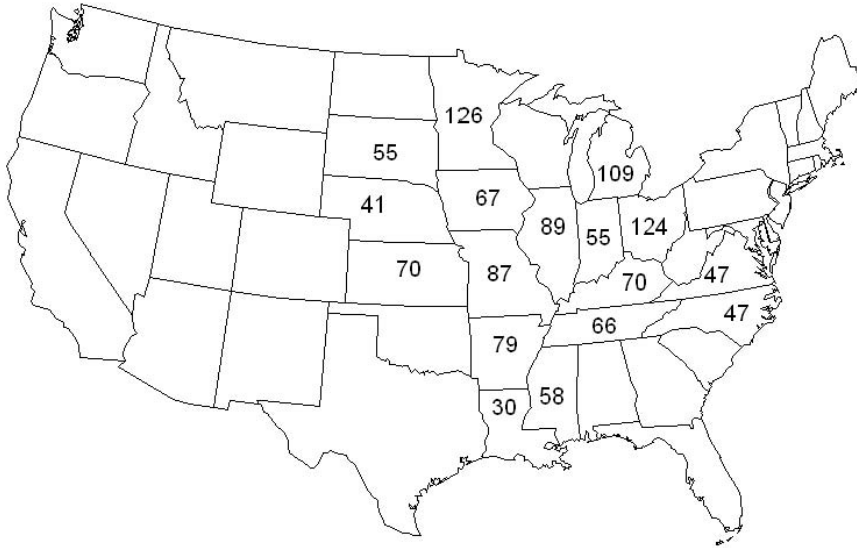
<sup>1</sup> Planted acreage in 2005 for Texas was 5.9 million acres.

<sup>2</sup> Total applied is less than 500 lbs.

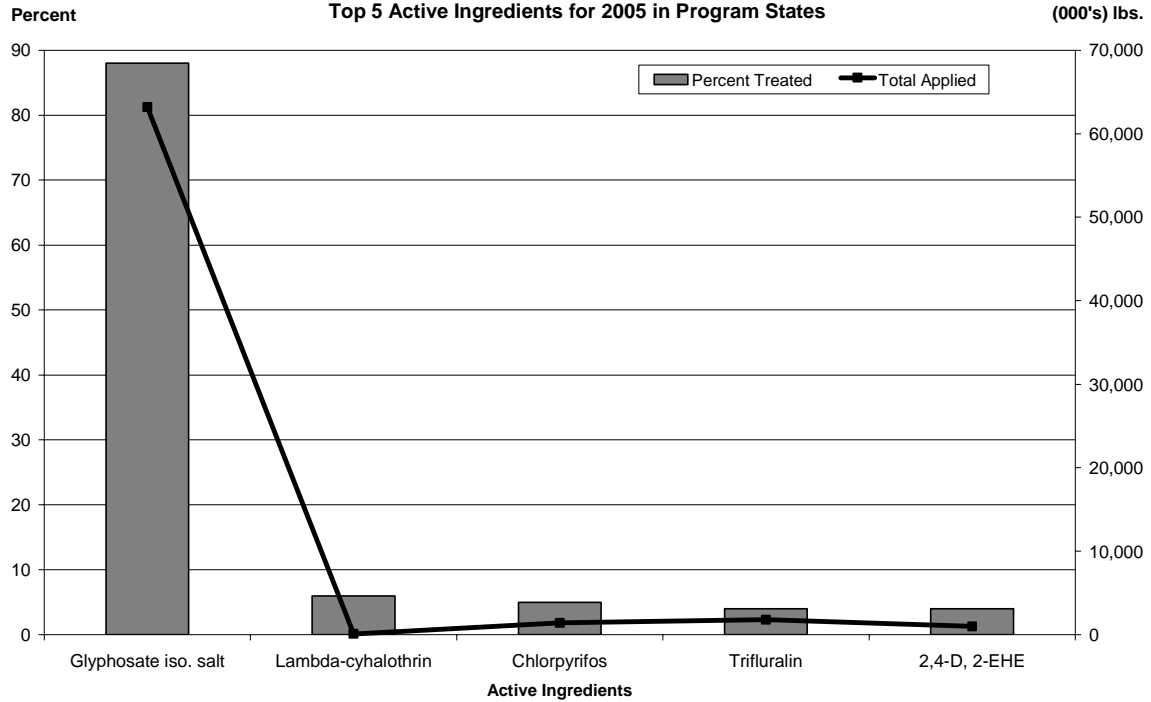
<sup>3</sup> Rate per acre is less than 0.0005 lbs.

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## Soybeans: Number of Usable Reports 2005



Soybeans - Percent of Acres Treated and Total Applied  
Top 5 Active Ingredients for 2005 in Program States



**Soybeans : Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States
	ALL
Herbicides	
2,4-D, 2-EHE	P
2,4-D, BEE	P
2,4-D, dimeth. salt	P
2,4-D, isoprop. salt	*
2,4-DB, dimeth. salt	*
2,4-DP, 2-BEE	*
Acetochlor	*
Acifluorfen, sodium	*
Alachlor	*
Atrazine	P
Barban	*
Bentazon	*
Carfentrazone-ethyl	*
Chlorimuron-ethyl	P
Chlorsulfuron	*
Clethodim	P
Clomazone	*
Clopyralid	*
Cloransulam-methyl	P
Dicamba, Digly Salt	P
Dicamba, Dimet. salt	*
Ethalfuralin	*
Fenoxaprop	P
Fenoxaprop-p-ethyl	*
Fluazifop-P-butyl	P
Flufenacet	*
Flumetsulam	*
Flumiclorac-pentyl	P
Flumioxazin	P
Fluometuron	*
Fomesafen	P
Glyphosate	P
Glyphosate amm. salt	*
Glyphosate iso. salt	P
Imazamox	P
Imazaquin	P
Imazethapyr	P
Imazethapyr, ammon	*
Lactofen	P
Linuron	*
MCPA, 2-ethylhexyl	*
MCPA, sodium salt	*
Metolachlor	*
Metribuzin	P
Metsulfuron-methyl	*
Paraquat	P

See footnote(s) at end of table.

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**Soybeans : Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States	
	ALL	
Herbicides (continued)		
Pendimethalin		P
Quizalofop-P-ethyl		P
S-Metolachlor		P
Sethoxydim		*
Simazine		*
Sulfentrazone		P
Sulfosate		P
Thifensulfuron		P
Tribenuron-methyl		*
Triclopyr		*
Trifluralin		P
Insecticides		
Acephate		P
Benzoic acid		*
Bifenthrin		*
Carbofuran		*
Chlorpyrifos		P
Cyfluthrin		P
Cypermethrin		*
Diflubenzuron		*
Emamectin benzoate		*
Esfenvalerate		P
Gamma-cyhalothrin		*
Lambda-cyhalothrin		P
Malathion		*
Methyl parathion		*
Permethrin		P
Petroleum distillate		*
Phorate		*
Propargite		*
Thiodicarb		*
Zeta-cypermethrin		P
Fungicides		
Azoxystrobin		P
Propiconazole		*
Pyraclostrobin		P
Tebuconazole		P
Tetraconazole		*
Trifloxystrobin		*

See footnote(s) at end of table.

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**Soybeans: Planted Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Planted Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>1,000 Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
AR	3,030	95	4,152	14	344	8	21		
IL	9,500	99	11,767	9	384				
IN	5,400	99	6,511	18	209				
IA <sup>1</sup>	10,100	96	11,281	16	509				
KS	2,900	100	3,549						
KY <sup>1</sup>	1,260	89	1,385	2	9				
LA	880	97	1,285	44	277	13	15		
MI <sup>1</sup>	2,000	92	2,061	42	172				
MN <sup>1</sup>	6,900	99	7,310	30	125				
MS <sup>1</sup>	1,610	100	2,860	10	9				
MO <sup>1</sup>	5,000	99	5,382						
NE	4,700	100	5,856						
NC	1,490	86	1,427	11	94				
OH	4,500	99	5,358	18	152	3	13		
SD <sup>1</sup>	3,900	98	5,046	13	12				
TN	1,130	96	1,436	15	5	25	39		
VA <sup>1</sup>	530	97	521						
Total	64,830	98	77,187	14	2,390	2	192		

<sup>1</sup> Insufficient reports to publish data for one or more pesticide classes.

**Soybeans: Agricultural Chemical Applications,  
Program States, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, 2-EHE	4	1.0	0.440	0.440	998
2,4-D, BEE	1	1.0	0.436	0.436	298
2,4-D, dimeth. salt	1	1.0	0.501	0.501	243
Atrazine	*	1.0	3.257	3.257	542
Chlorimuron-ethyl	4	1.0	0.013	0.013	34
Clethodim	3	1.0	0.086	0.086	156
Cloransulam-methyl	1	1.1	0.032	0.034	31
Dicamba, Digly Salt	*	1.0	0.263	0.263	40
Fenoxaprop	2	1.0	0.032	0.032	31
Fluazifop-P-butyl	2	1.0	0.109	0.109	125
Flumiclorac-pentyl	1	1.0	0.013	0.013	7
Flumioxazin	3	1.0	0.061	0.062	105
Fomesafen	3	1.0	0.247	0.247	411
Glyphosate	3	1.2	0.861	1.020	1,683
Glyphosate iso. salt	88	1.5	0.755	1.101	63,047
Imazamox	*	1.0	0.028	0.028	6
Imazaquin	1	1.0	0.099	0.099	39
Imazethapyr	2	1.1	0.050	0.057	85
Lactofen	1	1.0	0.128	0.128	57
Metribuzin	2	1.0	0.148	0.148	204
Paraquat	*	1.0	0.479	0.479	151
Pendimethalin	3	1.0	0.968	0.968	2,123
Quizalofop-P-ethyl	*	1.0	0.052	0.052	8
S-Metolachlor	1	1.0	0.951	0.951	549
Sulfentrazone	2	1.0	0.083	0.083	131
Sulfosate	2	1.5	1.162	1.752	2,681
Thifensulfuron	2	1.0	0.005	0.005	6
Trifluralin	4	1.0	0.782	0.782	1,791
<b>Insecticides</b>					
Acephate	*	1.4	0.603	0.826	220
Chlorpyrifos	5	1.0	0.477	0.482	1,413
Cyfluthrin	*	1.4	0.026	0.038	8
Esfenvalerate	1	1.1	0.040	0.043	25
Lambda-cyhalothrin	6	1.0	0.023	0.023	88
Permethrin	1	1.0	0.122	0.122	67
Zeta-cypermethrin	1	1.0	0.024	0.024	19
<b>Fungicides</b>					
Azoxystrobin	1	1.0	0.100	0.100	57
Pyraclostrobin	1	1.0	0.104	0.104	80
Tebuconazole	*	1.0	0.177	0.177	48

\* Area applied is less than 0.5 percent.

<sup>1</sup> Planted acreage in 2005 for the 17 Program States was 64.8 million acres.

States included are AR, IL, IN, IA, KS, KY, LA, MI, MN, MS, MO, NE, NC, OH, SD, TN, and VA.

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## Distribution Tables – Highlights

This section provides details about the distribution of agricultural chemical active ingredients commonly applied to the selected field. Chemical distribution rates are listed by active ingredient for the Percent of Acres Treated, Number of Applications, Rate per Application, and Rate per Crop year. In order for an active ingredient to be published in these tables, at least 30 farm operators would have had to report applying the active ingredient on the specified crop. The data in each table are summarized for a specific group of States, called Program States. The Program States designation is specific for each crop and provided in tables within the publication (See page 6).

These distribution tables show the 10<sup>th</sup> percentile, median, 90<sup>th</sup> percentile, mean, and coefficient of variation (cv) of the reported rates. The 10<sup>th</sup> percentile is the value below which 10 percent of all application rates fall. Thus, only 10 percent of operators reported an application rate for the active ingredient on the specified crop that was lower than the 10<sup>th</sup> percentile value. Likewise, the 90<sup>th</sup> percentile is a value for which 90 percent of all applications were at rates lower than this value. The median is the midpoint of the distribution with half of the reported application rates higher and half lower than the median value. The mean is the weighted average that is calculated by summing the application rate multiplied by the acres applied and then dividing by the acres applied.

The cv is a relative measure of the variability, expressed as a percentage of the estimate. For a specific commodity, the states have different agricultural practices which can lead to a wide range of pesticide rate uses. These ranges can lead to higher cv rates for different active ingredients. Some active ingredients are only applied in one manner resulting in smaller cv's, while other active ingredients have more varied agricultural uses which will have larger cv's. Please see the Survey and Estimation Procedures and Reliability sections for more information.

The Number of Applications, Rate per Application, and Rate per Crop Year distribution tables are calculated using data only from reports where the farm operator applied the active ingredient. Data presented in the Percent of Acres Treated table account for all operations in the sample producing the target commodity, whether or not the listed active ingredient was applied.

**Corn: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, 2-EHE	0	0	0	3	14
2,4-D, dimeth. salt	0	0	0	3	16
Acetochlor	0	0	100	23	4
Alachlor	0	0	0	1	18
Atrazine	0	100	100	66	2
Clopyralid	0	0	0	5	11
Dicamba	0	0	0	1	21
Dicamba, Digly Salt	0	0	0	2	15
Dicamba, Dimet. salt	0	0	0	3	15
Dicamba, Pot. salt	0	0	0	2	23
Dicamba, Sodium salt	0	0	0	4	14
Diflufenzopyr-sodium	0	0	0	4	14
Dimethenamid-P	0	0	0	4	17
Flufenacet	0	0	0	3	19
Flumetsulam	0	0	0	6	11
Foramsulfuron	0	0	0	2	28
Glufosinate-ammonium	0	0	0	5	12
Glyphosate	0	0	0	2	18
Glyphosate iso. salt	0	0	100	31	3
Imazapyr	0	0	0	1	22
Imazethapyr	0	0	0	1	21
Isoxaflutole	0	0	0	6	13
Mesotrione	0	0	100	20	5
Metolachlor	0	0	0	2	20
Nicosulfuron	0	0	21	10	7
Paraquat	0	0	0	1	22
Pendimethalin	0	0	0	2	14
Primisulfuron	0	0	0	2	18
Prosulfuron	0	0	0	1	23
Rimsulfuron	0	0	0	8	8
S-Metolachlor	0	0	100	23	5
Simazine	0	0	0	3	13
<b>Insecticides</b>					
Bifenthrin	0	0	0	2	33
Chlorpyrifos	0	0	0	2	18
Cyfluthrin	0	0	0	7	11
Fipronil	0	0	0	1	25
Lambda-cyhalothrin	0	0	0	1	24
Permethrin	0	0	0	1	24
Tebupirimphos	0	0	0	6	12
Tefluthrin	0	0	0	7	10

<sup>1</sup> Planted acreage in 2005 for the 19 Program States was 76.5 million acres.

**Corn: Number of Applications Distribution,  
Program States, 2005**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, 2-EHE	1.0	1.0	1.0	1.1	3
2,4-D, dimeth. salt	1.0	1.0	1.0	1.0	1
Acetochlor	1.0	1.0	1.0	1.0	1
Alachlor	1.0	1.0	1.0	1.0	1
Atrazine	1.0	1.0	1.0	1.1	1
Clopyralid	1.0	1.0	1.0	1.0	0
Dicamba	1.0	1.0	1.0	1.0	4
Dicamba, Digly Salt	1.0	1.0	1.0	1.0	3
Dicamba, Dimet. salt	1.0	1.0	1.0	1.1	4
Dicamba, Pot. salt	1.0	1.0	1.0	1.0	0
Dicamba, Sodium salt	1.0	1.0	1.0	1.0	1
Diflufenzopyr-sodium	1.0	1.0	1.0	1.0	1
Dimethenamid-P	1.0	1.0	1.0	1.0	1
Flufenacet	1.0	1.0	1.0	1.0	0
Flumetsulam	1.0	1.0	1.0	1.0	0
Foramsulfuron	1.0	1.0	1.0	1.0	0
Glufosinate-ammonium	1.0	1.0	1.0	1.0	1
Glyphosate	1.0	1.0	2.0	1.2	7
Glyphosate iso. salt	1.0	1.0	2.0	1.3	2
Imazapyr	1.0	1.0	1.0	1.0	2
Imazethapyr	1.0	1.0	1.0	1.0	2
Isoxaflutole	1.0	1.0	1.0	1.0	3
Mesotrione	1.0	1.0	1.0	1.0	1
Metolachlor	1.0	1.0	1.0	1.0	0
Nicosulfuron	1.0	1.0	1.0	1.0	0
Paraquat	1.0	1.0	1.0	1.0	1
Pendimethalin	1.0	1.0	1.0	1.0	1
Primisulfuron	1.0	1.0	1.0	1.0	0
Prosulfuron	1.0	1.0	1.0	1.0	0
Rimsulfuron	1.0	1.0	1.0	1.0	2
S-Metolachlor	1.0	1.0	1.0	1.0	1
Simazine	1.0	1.0	1.0	1.0	0
<b>Insecticides</b>					
Bifenthrin	1.0	1.0	1.0	1.0	3
Chlorpyrifos	1.0	1.0	1.0	1.0	0
Cyfluthrin	1.0	1.0	1.0	1.0	0
Fipronil	1.0	1.0	1.0	1.0	3
Lambda-cyhalothrin	1.0	1.0	2.0	1.1	10
Permethrin	1.0	1.0	1.0	1.0	1
Tebupirimphos	1.0	1.0	1.0	1.0	0
Tefluthrin	1.0	1.0	1.0	1.0	0

<sup>1</sup> Planted acreage in 2005 for the 19 Program States was 76.5 million acres.

**Corn: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, 2-EHE	0.219	0.448	0.700	0.450	7
2,4-D, dimeth. salt	0.118	0.336	0.475	0.352	9
Acetochlor	0.900	1.750	2.400	1.645	2
Alachlor	0.625	1.875	2.500	1.747	7
Atrazine	0.450	0.978	1.705	1.028	2
Clopyralid	0.056	0.117	0.156	0.110	3
Dicamba	0.100	0.137	0.185	0.137	6
Dicamba, Digly Salt	0.094	0.125	0.406	0.198	11
Dicamba, Dimet. salt	0.063	0.125	0.250	0.146	10
Dicamba, Pot. salt	0.206	0.406	0.481	0.354	6
Dicamba, Sodium salt	0.063	0.107	0.138	0.103	5
Diflufenzopyr-sodium	0.025	0.043	0.053	0.040	5
Dimethenamid-P	0.319	0.850	0.978	0.741	4
Flufenacet	0.120	0.400	0.577	0.378	9
Flumetsulam	0.023	0.043	0.058	0.045	10
Foramsulfuron	0.015	0.028	0.033	0.026	10
Glufosinate-ammonium	0.219	0.417	0.418	0.370	2
Glyphosate	0.445	0.563	0.750	0.632	6
Glyphosate iso. salt	0.500	0.750	0.949	0.727	2
Imazapyr	0.011	0.014	0.014	0.013	3
Imazethapyr	0.016	0.042	0.042	0.038	5
Isoxaflutole	0.025	0.047	0.075	0.051	5
Mesotrione	0.063	0.094	0.198	0.116	4
Metolachlor	0.808	1.500	2.100	1.578	10
Nicosulfuron	0.012	0.023	0.025	0.021	2
Paraquat	0.313	0.563	1.219	0.570	13
Pendimethalin	0.413	0.825	1.444	0.846	6
Primisulfuron	0.019	0.027	0.027	0.024	3
Prosulfuron	0.009	0.009	0.009	0.009	5
Rimsulfuron	0.008	0.012	0.012	0.017	21
S-Metolachlor	0.653	1.332	2.005	1.323	3
Simazine	0.500	1.000	1.600	1.076	8
<b>Insecticides</b>					
Bifenthrin	0.033	0.055	0.080	0.055	5
Chlorpyrifos	0.640	1.125	1.350	1.112	6
Cyfluthrin	0.003	0.006	0.008	0.007	14
Fipronil	0.078	0.125	0.131	0.113	5
Lambda-cyhalothrin	0.016	0.020	0.025	0.023	5
Permethrin	0.038	0.100	0.150	0.107	6
Tebupirimphos	0.065	0.122	0.151	0.115	4
Tefluthrin	0.066	0.129	0.135	0.118	3

<sup>1</sup> Planted acreage in 2005 for the 19 Program States was 76.5 million acres.



**Corn: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, 2-EHE	0.234	0.462	0.950	0.474	8
2,4-D, dimeth. salt	0.118	0.336	0.475	0.360	9
Acetochlor	0.900	1.750	2.430	1.661	2
Alachlor	0.625	1.875	2.500	1.765	7
Atrazine	0.469	1.000	1.938	1.133	2
Clopyralid	0.056	0.117	0.156	0.110	3
Dicamba	0.100	0.137	0.231	0.142	7
Dicamba, Digly Salt	0.094	0.125	0.406	0.203	10
Dicamba, Dimet. salt	0.063	0.125	0.250	0.156	9
Dicamba, Pot. salt	0.206	0.406	0.481	0.354	6
Dicamba, Sodium salt	0.063	0.109	0.138	0.105	5
Diflufenzopyr-sodium	0.025	0.043	0.053	0.041	5
Dimethenamid-P	0.319	0.850	0.984	0.747	4
Flufenacet	0.120	0.400	0.577	0.378	9
Flumetsulam	0.023	0.043	0.058	0.045	10
Foramsulfuron	0.015	0.028	0.033	0.026	10
Glufosinate-ammonium	0.219	0.417	0.418	0.377	2
Glyphosate	0.375	0.563	1.500	0.737	10
Glyphosate iso. salt	0.560	0.773	1.500	0.963	2
Imazapyr	0.013	0.014	0.014	0.014	2
Imazethapyr	0.025	0.042	0.042	0.039	4
Isoxaflutole	0.031	0.047	0.075	0.053	5
Mesotrione	0.063	0.094	0.201	0.119	4
Metolachlor	0.808	1.500	2.100	1.578	10
Nicosulfuron	0.012	0.023	0.025	0.021	2
Paraquat	0.313	0.563	1.219	0.575	13
Pendimethalin	0.413	0.825	1.444	0.854	6
Primisulfuron	0.019	0.027	0.027	0.024	3
Prosulfuron	0.009	0.009	0.009	0.009	5
Rimsulfuron	0.008	0.012	0.012	0.017	23
S-Metolachlor	0.658	1.340	2.010	1.354	3
Simazine	0.500	1.000	1.600	1.076	8
<b>Insecticides</b>					
Bifenthrin	0.039	0.055	0.080	0.057	5
Chlorpyrifos	0.640	1.125	1.350	1.112	6
Cyfluthrin	0.003	0.006	0.008	0.007	14
Fipronil	0.078	0.125	0.156	0.117	6
Lambda-cyhalothrin	0.016	0.020	0.050	0.026	13
Permethrin	0.038	0.100	0.150	0.109	7
Tebupirimphos	0.065	0.122	0.151	0.115	4
Tefluthrin	0.066	0.129	0.135	0.118	3

<sup>1</sup> Planted acreage in 2005 for the 19 Program States was 76.5 million acres.

**Fall Potatoes: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Dimethenamid-P	0	0	0	7	20
EPTC	0	0	100	24	11
Glyphosate iso. salt	0	0	0	5	21
Linuron	0	0	0	7	15
Metribuzin	0	100	100	74	3
Pendimethalin	0	0	100	31	9
Rimsulfuron	0	0	100	27	9
S-Metolachlor	0	0	100	12	11
<b>Insecticides</b>					
Aldicarb	0	0	0	9	18
Cyfluthrin	0	0	100	29	7
Dimethoate	0	0	0	5	24
Endosulfan	0	0	0	2	21
Esfenvalerate	0	0	100	27	8
Imidacloprid	0	0	100	38	6
Methamidophos	0	0	100	12	11
Oxamyl	0	0	100	13	18
Permethrin	0	0	0	5	21
Phorate	0	0	0	4	17
Thiamethoxam	0	0	100	13	16
<b>Fungicides</b>					
Azoxystrobin	0	0	100	37	6
Boscalid	0	0	100	17	14
Chlorothalonil	0	100	100	55	3
Copper hydroxide	0	0	0	8	21
Cymoxanil	0	0	100	16	15
Famoxadone	0	0	100	10	22
Fluazinam	0	0	100	15	12
Mancozeb	0	100	100	61	4
Mefenoxam	0	0	100	25	11
Metiram	0	0	0	9	21
Pyraclostrobin	0	0	100	12	15
Triphenyltin hydrox.	0	0	0	10	21
<b>Other</b>					
Diquat dibromide	0	0	100	30	7
Maleic hydrazide	0	0	100	12	18
Metam-sodium	0	0	100	16	14
Sulfuric Acid	0	0	100	12	11

<sup>1</sup> Planted acreage in 2005 for the 8 Program States was 845 thousand acres.

**Fall Potatoes: Number of Applications Distribution,  
Program States, 2005**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Dimethenamid-P	1.0	1.0	1.0	1.0	0
EPTC	1.0	1.0	1.0	1.0	1
Glyphosate iso. salt	1.0	1.0	1.0	1.0	4
Linuron	1.0	1.0	1.0	1.0	0
Metribuzin	1.0	1.0	1.0	1.1	4
Pendimethalin	1.0	1.0	1.0	1.0	0
Rimsulfuron	1.0	1.0	1.0	1.1	2
S-Metolachlor	1.0	1.0	1.0	1.0	0
<b>Insecticides</b>					
Aldicarb	1.0	1.0	1.0	1.0	0
Cyfluthrin	1.0	1.0	3.0	1.8	9
Dimethoate	1.0	1.0	4.0	1.7	19
Endosulfan	1.0	1.0	1.0	1.1	5
Esfenvalerate	1.0	1.0	3.0	1.7	11
Imidacloprid	1.0	1.0	2.0	1.3	6
Methamidophos	1.0	1.0	2.0	1.6	9
Oxamyl	1.0	2.0	4.0	2.1	15
Permethrin	1.0	1.0	4.0	1.6	16
Phorate	1.0	1.0	1.0	1.0	0
Thiamethoxam	1.0	1.0	1.0	1.1	6
<b>Fungicides</b>					
Azoxystrobin	1.0	1.0	3.0	1.5	7
Boscalid	1.0	1.0	2.0	1.4	12
Chlorothalonil	1.0	4.0	11.0	4.8	7
Copper hydroxide	1.0	1.0	3.0	1.6	10
Cymoxanil	1.0	2.0	3.0	1.9	9
Famoxadone	1.0	1.0	2.0	1.4	9
Fluazinam	1.0	1.0	3.0	1.7	12
Mancozeb	1.0	3.0	7.0	3.4	6
Mefenoxam	1.0	1.0	3.0	1.4	10
Metiram	1.0	2.0	4.0	2.6	10
Pyraclostrobin	1.0	1.0	5.0	1.8	19
Triphenyltin hydrox.	1.0	2.0	3.0	1.8	9
<b>Other</b>					
Diquat dibromide	1.0	1.0	2.0	1.5	4
Maleic hydrazide	1.0	1.0	1.0	1.0	0
Metam-sodium	1.0	1.0	1.0	1.0	0
Sulfuric Acid	1.0	1.0	2.0	1.1	8

<sup>1</sup> Planted acreage in 2005 for the 8 Program States was 845 thousand acres.

**Fall Potatoes: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Dimethenamid-P	0.703	0.750	0.844	0.770	3
EPTC	1.750	3.500	4.375	3.222	5
Glyphosate iso. salt	0.347	0.539	1.125	0.625	14
Linuron	0.380	0.500	1.000	0.665	10
Metribuzin	0.248	0.375	0.563	0.401	3
Pendimethalin	0.413	0.722	0.825	0.712	3
Rimsulfuron	0.016	0.023	0.023	0.020	4
S-Metolachlor	0.955	1.267	1.433	1.202	4
<b>Insecticides</b>					
Aldicarb	2.250	3.000	3.000	2.839	2
Cyfluthrin	0.016	0.030	0.032	0.028	6
Dimethoate	0.125	0.334	0.500	0.310	10
Endosulfan	0.375	0.750	0.975	0.685	8
Esfenvalerate	0.015	0.030	0.041	0.030	8
Imidacloprid	0.038	0.047	0.250	0.103	10
Methamidophos	0.542	1.000	1.000	0.885	4
Oxamyl	0.500	0.942	0.990	0.798	9
Permethrin	0.088	0.125	0.175	0.119	7
Phorate	2.100	3.000	3.000	2.688	4
Thiamethoxam	0.016	0.061	0.125	0.065	12
<b>Fungicides</b>					
Azoxystrobin	0.077	0.100	0.150	0.109	3
Boscalid	0.153	0.241	0.263	0.223	4
Chlorothalonil	0.709	0.963	1.155	0.940	3
Copper hydroxide	0.300	0.633	0.800	0.571	7
Cymoxanil	0.074	0.107	0.125	0.111	5
Famoxadone	0.074	0.094	0.125	0.094	4
Fluazinam	0.195	0.254	0.261	0.234	4
Mancozeb	0.750	1.219	1.562	1.235	2
Mefenoxam	0.081	0.141	0.844	0.230	20
Metiram	0.800	1.600	1.600	1.404	3
Pyraclostrobin	0.098	0.114	0.147	0.119	4
Triphenyltin hydrox.	0.094	0.125	0.188	0.140	8
<b>Other</b>					
Diquat dibromide	0.250	0.375	0.500	0.342	4
Maleic hydrazide	1.500	2.250	2.400	1.966	7
Metam-sodium	115.0	158.8	213.0	151.2	4
Sulfuric Acid	306.5	306.5	332.1	313.9	1

<sup>1</sup> Planted acreage in 2005 for the 8 Program States was 845 thousand acres.

**Fall Potatoes: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Dimethenamid-P	0.703	0.750	0.844	0.770	3
EPTC	1.750	3.500	4.375	3.261	6
Glyphosate iso. salt	0.375	0.557	1.500	0.655	15
Linuron	0.380	0.500	1.000	0.665	10
Metribuzin	0.248	0.398	0.625	0.441	4
Pendimethalin	0.413	0.722	0.825	0.713	3
Rimsulfuron	0.014	0.023	0.023	0.021	4
S-Metolachlor	0.955	1.267	1.433	1.206	4
<b>Insecticides</b>					
Aldicarb	2.250	3.000	3.000	2.839	2
Cyfluthrin	0.026	0.044	0.097	0.051	7
Dimethoate	0.150	0.500	1.335	0.528	21
Endosulfan	0.375	0.750	0.998	0.745	10
Esfenvalerate	0.018	0.036	0.089	0.050	12
Imidacloprid	0.040	0.094	0.250	0.135	8
Methamidophos	0.750	1.000	2.000	1.427	10
Oxamyl	0.500	1.000	3.366	1.656	12
Permethrin	0.023	0.141	0.469	0.188	15
Phorate	2.100	3.000	3.000	2.688	4
Thiamethoxam	0.016	0.087	0.125	0.071	12
<b>Fungicides</b>					
Azoxystrobin	0.076	0.130	0.300	0.168	6
Boscalid	0.153	0.241	0.394	0.302	12
Chlorothalonil	0.825	3.750	9.904	4.547	8
Copper hydroxide	0.200	0.750	1.900	0.940	15
Cymoxanil	0.094	0.148	0.360	0.213	13
Famoxadone	0.094	0.125	0.188	0.136	9
Fluazinam	0.179	0.277	0.591	0.393	10
Mancozeb	1.252	3.375	8.250	4.215	7
Mefenoxam	0.080	0.189	0.945	0.325	19
Metiram	1.600	3.200	6.400	3.607	11
Pyraclostrobin	0.098	0.147	0.490	0.215	17
Triphenyltin hydrox.	0.125	0.188	0.400	0.247	14
<b>Other</b>					
Diquat dibromide	0.250	0.500	0.750	0.504	4
Maleic hydrazide	1.500	2.250	2.400	1.966	7
Metam-sodium	115.0	158.8	213.0	151.2	4
Sulfuric Acid	306.5	306.5	536.4	346.1	8

<sup>1</sup> Planted acreage in 2005 for the 8 Program States was 845 thousand acres.

**Oats: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides					
2,4-D, 2-EHE	0	0	0	5	39
2,4-D, dieth sal	0	0	0	1	23
2,4-D, dimeth. salt	0	0	0	9	15
Bromoxynil octanoate	0	0	0	3	24
Glyphosate iso. salt	0	0	0	5	16
MCPA, 2-ethylhexyl	0	0	0	4	22
MCPA, dimethyl. salt	0	0	0	3	17

<sup>1</sup> Planted acreage in 2005 for the 15 Program States was 3.6 million acres.

**Oats: Number of Applications Distribution,  
Program States, 2005**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides					
2,4-D, 2-EHE	1.0	1.0	1.0	1.0	0
2,4-D, dieth sal	1.0	1.0	1.0	1.0	0
2,4-D, dimeth. salt	1.0	1.0	1.0	1.1	5
Bromoxynil octanoate	1.0	1.0	1.0	1.0	0
Glyphosate iso. salt	1.0	1.0	1.0	1.0	2
MCPA, 2-ethylhexyl	1.0	1.0	1.0	1.1	6
MCPA, dimethyl. salt	1.0	1.0	1.0	1.0	0

<sup>1</sup> Planted acreage in 2005 for the 15 Program States was 3.6 million acres.

**Oats: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
2,4-D, 2-EHE	0.238	0.438	0.700	0.450	8
2,4-D, dieth sal	0.475	0.475	0.950	0.598	8
2,4-D, dimeth. salt	0.090	0.470	0.940	0.424	10
Bromoxynil octanoate	0.125	0.250	0.375	0.236	10
Glyphosate iso. salt	0.328	0.563	1.000	0.586	9
MCPA, 2-ethylhexyl	0.125	0.313	0.544	0.377	17
MCPA, dimethyl. salt	0.125	0.250	0.500	0.338	11

<sup>1</sup> Planted acreage in 2005 for the 15 Program States was 3.6 million acres.

**Oats: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
2,4-D, 2-EHE	0.238	0.438	0.700	0.450	8
2,4-D, dieth sal	0.475	0.475	0.950	0.598	8
2,4-D, dimeth. salt	0.090	0.470	0.940	0.447	12
Bromoxynil octanoate	0.125	0.250	0.375	0.236	10
Glyphosate iso. salt	0.333	0.563	1.000	0.604	10
MCPA, 2-ethylhexyl	0.125	0.313	1.088	0.407	20
MCPA, dimethyl. salt	0.125	0.250	0.500	0.338	11

<sup>1</sup> Planted acreage in 2005 for the 15 Program States was 3.6 million acres.

**Upland Cotton: Percent of Acres Treated Distribution,  
Program States, 2005<sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, dimeth. salt	0	0	0	6	10
Carfentrazone-ethyl	0	0	0	6	16
Clethodim	0	0	0	1	33
Dicamba, Digly Salt	0	0	0	2	17
Diuron	0	0	100	27	5
Flumioxazin	0	0	0	3	15
Fluometuron	0	0	0	5	12
Glufosinate-ammonium	0	0	0	4	19
Glyphosate	0	0	0	3	15
Glyphosate iso. salt	0	100	100	71	2
MSMA	0	0	0	6	8
Pendimethalin	0	0	100	12	6
Prometryn	0	0	0	7	11
Pyraflufen-ethyl	0	0	0	4	14
Pyrithiobac-sodium	0	0	0	9	9
S-Metolachlor	0	0	0	6	10
Sulfosate	0	0	0	2	21
Trifloxysulfuron-sod	0	0	0	4	13
Trifluralin	0	0	100	32	4
<b>Insecticides</b>					
Abamectin	0	0	0	2	9
Acephate	0	0	100	27	4
Acetamiprid	0	0	0	7	15
Aldicarb	0	0	100	19	6
Bifenthrin	0	0	0	1	21
Chlorpyrifos	0	0	0	2	34
Cyfluthrin	0	0	0	8	11
Cypermethrin	0	0	100	13	10
Dicofol	0	0	0	1	19
Dicrotophos	0	0	100	19	4
Dimethoate	0	0	0	2	24
Esfenvalerate	0	0	0	3	23
Imidacloprid	0	0	0	6	10
Indoxacarb	0	0	0	2	20
Lambda-cyhalothrin	0	0	100	12	8
Malathion	0	0	100	15	9
Methyl parathion	0	0	0	2	21
Oxamyl	0	0	0	3	14
Thiamethoxam	0	0	0	8	9
Zeta-cypermethrin	0	0	0	6	12
<b>Fungicides</b>					
Mefenoxam	0	0	0	2	20
PCNB	0	0	0	1	22
<b>Other</b>					
Bacillus cereus	0	0	0	9	8
Cyclanilide	0	0	100	12	7
Ethephon	0	100	100	58	2
Kinetin	0	0	0	4	12
Mepiquat chloride	0	0	100	33	3
Mepiquat pentaborate	0	0	0	4	16
Monocarbamide dihyd.	0	0	0	6	11
Paraquat	0	0	100	15	10
Sodium chlorate	0	0	0	3	10
Thidiazuron	0	0	100	35	3
Tribufos	0	0	100	26	3

<sup>1</sup> Planted acreage in 2005 for the 9 Program States was 12.4 million acres.



**Upland Cotton: Number of Applications Distribution,  
Program States, 2005**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, dimeth. salt	1.0	1.0	1.0	1.0	3
Carfentrazone-ethyl	1.0	1.0	1.0	1.1	3
Clethodim	1.0	1.0	1.0	1.0	2
Dicamba, Digly Salt	1.0	1.0	1.0	1.0	1
Diuron	1.0	1.0	1.0	1.1	1
Flumioxazin	1.0	1.0	2.0	1.1	4
Fluometuron	1.0	1.0	1.0	1.1	3
Glufosinate-ammonium	1.0	1.0	2.0	1.5	6
Glyphosate	1.0	1.0	4.0	1.9	9
Glyphosate iso. salt	1.0	2.0	4.0	2.2	2
MSMA	1.0	1.0	1.0	1.1	3
Pendimethalin	1.0	1.0	1.0	1.0	1
Prometryn	1.0	1.0	1.0	1.1	4
Pyraflufen-ethyl	1.0	1.0	1.0	1.0	2
Pyrithiobac-sodium	1.0	1.0	1.0	1.0	1
S-Metolachlor	1.0	1.0	1.0	1.1	3
Sulfosate	1.0	2.0	3.0	2.0	7
Trifloxysulfuron-sod	1.0	1.0	1.0	1.1	3
Trifluralin	1.0	1.0	1.0	1.0	1
<b>Insecticides</b>					
Abamectin	1.0	1.0	2.0	1.2	7
Acephate	1.0	2.0	4.0	2.1	4
Acetamiprid	1.0	1.0	1.0	1.0	2
Aldicarb	1.0	1.0	1.0	1.0	1
Bifenthrin	1.0	1.0	2.0	1.2	6
Chlorpyrifos	1.0	1.0	2.0	1.2	8
Cyfluthrin	1.0	1.0	2.0	1.3	4
Cypermethrin	1.0	1.0	2.0	1.3	5
Dicofol	1.0	1.0	2.0	1.4	14
Dicrotophos	1.0	1.0	3.0	1.6	3
Dimethoate	1.0	1.0	2.0	1.5	9
Esfenvalerate	1.0	1.0	2.0	1.2	8
Imidacloprid	1.0	1.0	3.0	1.5	7
Indoxacarb	1.0	1.0	2.0	1.3	10
Lambda-cyhalothrin	1.0	1.0	2.0	1.4	5
Malathion	1.0	3.0	10.0	4.3	8
Methyl parathion	1.0	1.0	3.0	1.4	15
Oxamyl	1.0	1.0	3.0	1.4	9
Thiamethoxam	1.0	1.0	2.0	1.5	5
Zeta-cypermethrin	1.0	1.0	2.0	1.4	6
<b>Fungicides</b>					
Mefenoxam	1.0	1.0	1.0	1.0	0
PCNB	1.0	1.0	1.0	1.0	0
<b>Other</b>					
Bacillus cereus	1.0	2.0	4.0	2.0	6
Cyclanilide	1.0	1.0	1.0	1.0	1
Ethephon	1.0	1.0	1.0	1.1	1
Kinetin	1.0	2.0	3.0	2.1	7
Mepiquat chloride	1.0	2.0	4.0	2.1	3
Mepiquat pentaborate	1.0	1.0	4.0	2.0	25
Monocarbamide dihyd.	1.0	1.0	1.0	1.0	2
Paraquat	1.0	1.0	1.0	1.1	4
Sodium chlorate	1.0	1.0	2.0	1.1	6
Thidiazuron	1.0	1.0	1.0	1.1	2
Tribufos	1.0	1.0	2.0	1.1	2

<sup>1</sup> Planted acreage in 2005 for the 9 Program States was 12.4 million acres.

**Upland Cotton: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, dimeth. salt	0.176	0.475	0.950	0.592	8
Carfentrazone-ethyl	0.006	0.016	0.025	0.015	7
Clethodim	0.055	0.125	0.167	0.123	6
Dicamba, Digly Salt	0.125	0.250	0.250	0.232	4
Diuron	0.016	0.500	1.000	0.462	5
Flumioxazin	0.032	0.064	0.067	0.056	6
Fluometuron	0.400	0.750	1.000	0.759	6
Glufosinate-ammonium	0.261	0.418	0.522	0.416	8
Glyphosate	0.406	0.563	0.773	0.627	9
Glyphosate iso. salt	0.469	0.703	0.925	0.713	2
MSMA	0.563	1.500	1.815	1.222	5
Pendimethalin	0.413	0.825	1.139	0.791	3
Prometryn	0.250	0.750	1.000	0.726	6
Pyraflufen-ethyl	0.002	0.002	0.003	0.003	3
Pyriithiobac-sodium	0.016	0.037	0.064	0.041	5
S-Metolachlor	0.591	0.953	1.429	0.999	4
Sulfosate	0.703	0.938	1.406	1.031	7
Trifloxysulfuron-sod	0.002	0.006	0.009	0.006	7
Trifluralin	0.500	0.781	1.250	0.862	4
<b>Insecticides</b>					
Abamectin	0.004	0.005	0.009	0.006	5
Acephate	0.135	0.438	0.720	0.412	4
Acetamiprid	0.018	0.031	0.066	0.037	10
Aldicarb	0.450	0.600	0.900	0.657	3
Bifenthrin	0.047	0.078	0.100	0.080	10
Chlorpyrifos	0.250	0.500	1.000	0.612	12
Cyfluthrin	0.023	0.031	0.048	0.034	4
Cypermethrin	0.020	0.052	0.098	0.055	5
Dicofol	0.375	1.000	1.500	0.988	8
Dicrotophos	0.113	0.250	0.500	0.289	3
Dimethoate	0.164	0.200	0.668	0.320	16
Esfenvalerate	0.015	0.041	0.086	0.044	11
Imidacloprid	0.026	0.039	0.048	0.038	3
Indoxacarb	0.078	0.100	0.107	0.095	2
Lambda-cyhalothrin	0.014	0.031	0.055	0.031	6
Malathion	0.776	0.909	1.080	0.891	2
Methyl parathion	0.333	0.625	0.750	0.622	7
Oxamyl	0.125	0.262	0.625	0.346	9
Thiamethoxam	0.016	0.021	0.031	0.023	4
Zeta-cypermethrin	0.010	0.019	0.040	0.021	6
<b>Fungicides</b>					
Mefenoxam	0.024	0.035	0.250	0.087	29
PCNB	0.472	0.700	0.900	0.678	6
<b>Other</b>					
Bacillus cereus	*	*	*	*	5
Cyclanilide	0.083	0.141	0.164	0.129	2
Ethephon	0.516	1.125	1.500	1.055	2
Kinetin	*	*	*	*	6
Mepiquat chloride	0.014	0.029	0.044	0.030	2
Mepiquat pentaborate	0.022	0.045	0.102	0.052	23
Monocarbamide dihyd.	0.912	2.736	3.648	2.505	7
Paraquat	0.063	0.313	0.750	0.324	6
Sodium chlorate	0.300	2.400	4.800	2.577	8
Thidiazuron	0.031	0.053	0.100	0.064	3
Tribufos	0.188	0.375	1.000	0.534	3

<sup>1</sup> Planted acreage in 2005 for the 9 Program States was 12.4 million acres.

\* Less than 0.0005 pounds per acre.

**Upland Cotton: Rate per Crop Year Distribution,  
Program States, 2005<sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, dimeth. salt	0.197	0.470	0.950	0.619	9
Carfentrazone-ethyl	0.006	0.016	0.025	0.017	8
Clethodim	0.055	0.125	0.167	0.125	6
Dicamba, Digly Salt	0.125	0.250	0.250	0.235	4
Diuron	0.016	0.500	1.000	0.508	6
Flumioxazin	0.032	0.064	0.096	0.062	7
Fluometuron	0.400	0.750	1.250	0.800	6
Glufosinate-ammonium	0.261	0.522	0.992	0.633	9
Glyphosate	0.422	0.703	2.508	1.175	14
Glyphosate iso. salt	0.563	1.406	2.813	1.592	2
MSMA	0.660	1.500	1.950	1.327	5
Pendimethalin	0.413	0.825	1.237	0.816	4
Prometryn	0.250	0.793	1.031	0.797	8
Pyraflufen-ethyl	0.002	0.002	0.003	0.003	3
Pyriithiobac-sodium	0.016	0.037	0.064	0.043	6
S-Metolachlor	0.714	0.953	1.500	1.078	4
Sulfosate	0.820	1.875	3.437	2.098	10
Trifloxysulfuron-sod	0.002	0.006	0.011	0.006	7
Trifluralin	0.500	0.781	1.500	0.900	4
<b>Insecticides</b>					
Abamectin	0.004	0.005	0.013	0.007	8
Acephate	0.169	0.485	2.250	0.862	7
Acetamiprid	0.018	0.031	0.066	0.038	10
Aldicarb	0.450	0.600	0.900	0.673	4
Bifenthrin	0.050	0.078	0.188	0.094	11
Chlorpyrifos	0.250	0.500	1.000	0.708	13
Cyfluthrin	0.023	0.033	0.071	0.043	6
Cypermethrin	0.020	0.050	0.137	0.071	7
Dicofol	0.500	1.000	1.500	1.362	18
Dicrctophos	0.125	0.375	0.937	0.452	4
Dimethoate	0.200	0.334	1.000	0.466	12
Esfenvalerate	0.015	0.033	0.119	0.055	18
Imidacloprid	0.028	0.047	0.117	0.058	8
Indoxacarb	0.098	0.104	0.200	0.125	10
Lambda-cyhalothrin	0.014	0.033	0.083	0.043	9
Malathion	0.758	2.728	9.486	3.829	9
Methyl parathion	0.500	0.750	1.406	0.895	17
Oxamyl	0.094	0.324	0.962	0.492	12
Thiamethoxam	0.016	0.031	0.063	0.036	5
Zeta-cypermethrin	0.012	0.023	0.050	0.030	9
<b>Fungicides</b>					
Mefenoxam	0.024	0.035	0.250	0.087	29
PCNB	0.472	0.700	0.900	0.678	6
<b>Other</b>					
Bacillus cereus	*	*	*	*	7
Cyclanilide	0.083	0.141	0.176	0.132	2
Ethephon	0.563	1.125	1.650	1.147	2
Kinetin	*	*	*	*	7
Mepiquat chloride	0.016	0.049	0.131	0.063	4
Mepiquat pentaborate	0.026	0.102	0.205	0.106	15
Monocarbamide dihyd.	0.912	2.736	3.648	2.600	8
Paraquat	0.047	0.375	0.750	0.355	8
Sodium chlorate	0.281	2.760	5.760	2.917	11
Thidiazuron	0.031	0.063	0.125	0.070	4
Tribufos	0.188	0.375	1.125	0.590	4

<sup>1</sup> Planted acreage in 2005 for the 9 Program States was 12.4 million acres.

\* Less than 0.0005 pounds per acre.

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## **Pest Management Practices - Highlights**

Producers of corn, upland cotton, and fall potatoes were last asked about their pest management practices in 2003. Oats were last surveyed in 1998, but pest management practices were not captured at that time.

**Corn:** No-till or minimum tillage practices were incorporated on 62 percent of the corn acreage in the prevention of pests, while 80 percent of the planted acreage was rotated with some other crop(s) over the past 3 years to avoid pests. Scouting for weeds was used on 86 percent of the farms growing corn and on 90 percent of the corn acres.

**Fall Potatoes:** To prevent pests, 69 percent of the farms chopped, sprayed, mowed, plowed, or burned field edges, lanes, ditches, roadways, or fence lines. In addition, 91 percent the potato acreage had been rotated with some other crop over the past 3 to control pests. Ninety-eight percent of the potato acreage was scouted for weeds, insects or mites, and diseases, and the scouting was performed by the operator, partner, or family member on at least 53 percent of the farms.

**Oats:** Over the past 3 years, 62 percent of oats planted acreage was rotated with some other crop(s). Just 59 percent of the farms scouted for weeds, with 53 percent of the farms using weather data to monitor pests as well.

**Upland Cotton:** To aid in the prevention of pests, 64 percent of the farms chopped, sprayed, mowed, plowed, or burned field edges, lanes, ditches, roadways, or fence lines. In addition, 52 of percent upland cotton acres were planted to a crop variety that was resistant to pests. Scouting for weeds, insects, and diseases took place on 89, 94 and 83 percent, respectively, of the cotton acres.

**Pest Management Practices  
Percent of Farms Receiving Practice  
Corn, 2005**

Practice	States				
	US	CO	GA	IL	IN
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	61	60	51	60	63
Plow down crop residue	24	36	49	19	19
Remove crop residue	6	28	12	1	3
Clean implements after fieldwork	33	50	65	29	35
Field edges/etc. chopped, mowed/etc	41	56	55	55	39
Water management practices	2	19	10	1	
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	9	20	15	8	10
Rotate crops to control pests	79	56	61	84	89
Crop variety chosen for pest resistance	44	55	42	40	38
Planting locations planned to avoid pests	14	17	9	9	12
<b>Monitoring Practices:</b>					
Scouting by general observation	42	46	67	40	41
Deliberate scouting activities	45	52	12	53	49
Field was not scouted	13	2	21	7	10
Scouted for pests	14	25	*	20	8
Scouting due to pest advisory warning	7	10	3	16	7
Scouting due to pest development model	7	9	3	9	4
Scouted for weeds	86	98	78	91	89
Scouting for weeds was done by:					
Operator, partner, or family member	81	71	100	83	87
An Employee	1	2		2	2
Farm supply or chemical dealer	10	4		12	9
Indep. crop consultant or comm. scout	8	24		3	3
Scouted for insects or mites	59	80	28	71	68
Scouting for insects or mites was done by:					
Operator, partner, or family member	77	55	100	82	80
An Employee	1	3		1	
Farm supply or chemical dealer	11	5		12	16
Indep. crop consultant or comm. scout	11	38		5	4
Scouted for diseases	43	69	21	49	52
Scouting for diseases was done by:					
Operator, partner, or family member	75	58	100	86	74
An Employee	1	3		*	4
Farm supply or chemical dealer	11	5		8	17
Indep. crop consultant or comm. scout	13	35		7	5
Field mapping of weed problems	10	13	3	10	15
Soil/plant tissue analysis to detect pests	4	18	4	2	7
Records kept to track pests	17	34	6	19	14
Weather monitoring	58	56	65	68	49
<b>Suppression Practices:</b>					
Biological pesticides	5	1	1	5	1
Scouting used to make decisions	18	28	1	21	17
Maintain ground cover or physical barriers	42	60	37	32	32
Adjust planting methods	12	26	7	11	7
Alternate pesticides with different MOA	28	23	12	34	17

See footnote(s) at end of table.

--continued

**Pest Management Practices  
Percent of Farms Receiving Practice  
Corn, 2005 (continued)**

Practice	States				
	IA	KS	KY	MI	MN
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	73	73	88	55	34
Plow down crop residue	12	14	14	44	25
Remove crop residue	3	3	9	5	6
Clean implements after fieldwork	27	43	45	45	45
Field edges/etc. chopped, mowed/etc	48	29	35	27	33
Water management practices		8		*	
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	15	12	11	7	6
Rotate crops to control pests	78	85	76	73	81
Crop variety chosen for pest resistance	62	50	36	31	49
Planting locations planned to avoid pests	13	17	7	13	12
<b>Monitoring Practices:</b>					
Scouting by general observation	41	51	63	33	30
Deliberate scouting activities	45	43	29	44	59
Field was not scouted	14	5	7	23	11
Scouted for pests	15	14	8	11	13
Scouting due to pest advisory warning	9	6	*	5	7
Scouting due to pest development model	7	10	5	3	4
Scouted for weeds	86	95	93	77	89
Scouting for weeds was done by:					
Operator, partner, or family member	81	83	92	87	80
An Employee	*	*	2	5	
Farm supply or chemical dealer	14	1	3	6	11
Indep. crop consultant or comm. scout	4	16	3	2	9
Scouted for insects or mites	60	53	72	55	65
Scouting for insects or mites was done by:					
Operator, partner, or family member	77	74	93	83	77
An Employee	*	1	1	5	
Farm supply or chemical dealer	16	1	3	10	10
Indep. crop consultant or comm. scout	7	24	4	3	12
Scouted for diseases	46	45	60	44	42
Scouting for diseases was done by:					
Operator, partner, or family member	77	71	92	85	77
An Employee	*		1	1	
Farm supply or chemical dealer	17	*	3	10	9
Indep. crop consultant or comm. scout	6	28	4	3	14
Field mapping of weed problems	12	11	5	2	9
Soil/plant tissue analysis to detect pests	2	2	2	5	2
Records kept to track pests	12	20	17	13	22
Weather monitoring	70	61	30	64	73
<b>Suppression Practices:</b>					
Biological pesticides	5	15	6	1	10
Scouting used to make decisions	23	15	8	24	16
Maintain ground cover or physical barriers	48	57	35	39	32
Adjust planting methods	14	17	13	19	12
Alternate pesticides with different MOA	35	34	22	37	36

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Farms Receiving Practice  
Corn, 2005 (continued)**

Practice	States				
	MO	NE	NY	NC	ND
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	62	77	22	57	55
Plow down crop residue	25	11	48	37	20
Remove crop residue	3	3	8	17	7
Clean implements after fieldwork	15	35	18	33	69
Field edges/etc. chopped, mowed/etc	51	42	28	54	51
Water management practices	1	8		3	2
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	9	10	7	11	13
Rotate crops to control pests	86	76	46	82	94
Crop variety chosen for pest resistance	46	58	16	49	58
Planting locations planned to avoid pests	16	17	14	17	38
<b>Monitoring Practices:</b>					
Scouting by general observation	48	48	34	38	22
Deliberate scouting activities	43	39	30	37	70
Field was not scouted	9	13	36	25	8
Scouted for pests	5	15	10	8	22
Scouting due to pest advisory warning	2	7	5	*	4
Scouting due to pest development model	4	7	9	1	9
Scouted for weeds	91	87	63	74	92
Scouting for weeds was done by:					
Operator, partner, or family member	93	75	78	93	73
An Employee	*			3	
Farm supply or chemical dealer	3	4	3	*	
Indep. crop consultant or comm. scout	4	21	19	3	27
Scouted for insects or mites	65	66	37	60	62
Scouting for insects or mites was done by:					
Operator, partner, or family member	91	70	69	94	60
An Employee	*			3	
Farm supply or chemical dealer	3	5	3	*	
Indep. crop consultant or comm. scout	5	26	28	3	40
Scouted for diseases	50	41	31	50	52
Scouting for diseases was done by:					
Operator, partner, or family member	90	58	67	93	52
An Employee	*			3	
Farm supply or chemical dealer	2	6	1	*	2
Indep. crop consultant or comm. scout	7	35	32	4	47
Field mapping of weed problems	4	10	16	*	9
Soil/plant tissue analysis to detect pests	3	8	7	3	4
Records kept to track pests	10	24	15	8	36
Weather monitoring	31	60	47	58	83
<b>Suppression Practices:</b>					
Biological pesticides	14	7	5		5
Scouting used to make decisions	15	23	13	7	30
Maintain ground cover or physical barriers	33	62	23	46	61
Adjust planting methods	13	16	6	15	27
Alternate pesticides with different MOA	21	31	21	13	23

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Farms Receiving Practice  
Corn, 2005 (continued)**

Practice	States				
	OH	PA	SD	TX	WI
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	54	63	65	41	63
Plow down crop residue	32	37	19	67	24
Remove crop residue	6	16	5	7	10
Clean implements after fieldwork	32	30	39	43	30
Field edges/etc. chopped, mowed/etc	36	39	34	51	31
Water management practices	*	3	1	12	*
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	2	5	10	18	9
Rotate crops to control pests	81	71	83	74	78
Crop variety chosen for pest resistance	25	42	68	48	37
Planting locations planned to avoid pests	9	15	26	21	15
<b>Monitoring Practices:</b>					
Scouting by general observation	47	46	31	51	46
Deliberate scouting activities	36	43	56	36	37
Field was not scouted	17	11	13	12	17
Scouted for pests	17	14	11	17	11
Scouting due to pest advisory warning	4	3	15	5	4
Scouting due to pest development model	5	10	4	7	10
Scouted for weeds	83	89	87	86	82
Scouting for weeds was done by:					
Operator, partner, or family member	90	78	86	82	68
An Employee	*	2	2	4	1
Farm supply or chemical dealer	9	7	8	3	21
Indep. crop consultant or comm. scout		13	4	12	10
Scouted for insects or mites	45	53	50	59	50
Scouting for insects or mites was done by:					
Operator, partner, or family member	82	73	82	68	62
An Employee	*	3		2	2
Farm supply or chemical dealer	17	4	11	10	25
Indep. crop consultant or comm. scout	1	20	7	20	12
Scouted for diseases	35	36	35	37	35
Scouting for diseases was done by:					
Operator, partner, or family member	78	69	81	58	56
An Employee		4		4	3
Farm supply or chemical dealer	21	4	9	11	25
Indep. crop consultant or comm. scout	1	23	10	27	17
Field mapping of weed problems	4	14	6	4	14
Soil/plant tissue analysis to detect pests	*	3	3	6	4
Records kept to track pests	11	18	14	19	17
Weather monitoring	55	60	75	49	39
<b>Suppression Practices:</b>					
Biological pesticides	2	4	8	6	4
Scouting used to make decisions	14	20	20	16	13
Maintain ground cover or physical barriers	31	49	55	34	48
Adjust planting methods	7	8	22	18	8
Alternate pesticides with different MOA	20	23	15	11	30

\* Percentage is less than 0.5

**Pest Management Practices  
Percent of Acres Receiving Practice  
Corn, 2005**

Practice	States				
	US	CO	GA	IL	IN
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	62	71	60	60	59
Plow down crop residue	22	25	45	26	22
Remove crop residue	4	17	13	2	2
Clean implements after fieldwork	35	52	61	34	37
Field edges/etc. chopped, mowed/etc	44	47	57	63	41
Water management practices	3	23	13	1	
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	10	28	18	8	13
Rotate crops to control pests	80	48	64	81	89
Crop variety chosen for pest resistance	52	54	37	43	42
Planting locations planned to avoid pests	16	20	8	8	8
<b>Monitoring Practices:</b>					
Scouting by general observation	41	49	71	42	37
Deliberate scouting activities	50	51	15	51	53
Field was not scouted	9	1	14	7	10
Scouted for pests	17	26	*	22	15
Scouting due to pest advisory warning	9	12	2	15	9
Scouting due to pest development model	8	9	2	10	9
Scouted for weeds	90	99	84	92	89
Scouting for weeds was done by:					
Operator, partner, or family member	79	59	100	82	85
An Employee	1	3		1	1
Farm supply or chemical dealer	9	1		13	9
Indep. crop consultant or comm. scout	11	37		4	4
Scouted for insects or mites	67	84	31	78	70
Scouting for insects or mites was done by:					
Operator, partner, or family member	74	48	100	80	75
An Employee	1	4		1	
Farm supply or chemical dealer	10	1		13	18
Indep. crop consultant or comm. scout	15	48		6	7
Scouted for diseases	49	67	21	56	54
Scouting for diseases was done by:					
Operator, partner, or family member	71	50	100	81	70
An Employee	1	4		1	3
Farm supply or chemical dealer	10	2		9	18
Indep. crop consultant or comm. scout	19	44		8	9
Field mapping of weed problems	11	20	2	11	17
Soil/plant tissue analysis to detect pests	5	15	3	3	8
Records kept to track pests	21	41	9	21	19
Weather monitoring	61	65	61	70	52
<b>Suppression Practices:</b>					
Biological pesticides	7	2	1	5	2
Scouting used to make decisions	23	35	1	25	23
Maintain ground cover or physical barriers	42	69	45	27	28
Adjust planting methods	14	34	6	14	7
Alternate pesticides with different MOA	29	24	9	33	22

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Acres Receiving Practice  
Corn, 2005 (continued)**

Practice	States				
	IA	KS	KY	MI	MN
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	68	75	87	61	34
Plow down crop residue	16	14	11	41	22
Remove crop residue	3	4	8	4	4
Clean implements after fieldwork	21	50	51	48	41
Field edges/etc. chopped, mowed/etc	47	28	40	30	34
Water management practices		15		2	
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	10	10	10	5	7
Rotate crops to control pests	79	80	81	80	82
Crop variety chosen for pest resistance	60	57	37	35	58
Planting locations planned to avoid pests	13	25	15	10	14
<b>Monitoring Practices:</b>					
Scouting by general observation	44	43	60	34	28
Deliberate scouting activities	45	53	32	49	66
Field was not scouted	10	4	8	17	7
Scouted for pests	14	21	10	13	17
Scouting due to pest advisory warning	8	7	*	6	10
Scouting due to pest development model	7	11	6	7	5
Scouted for weeds	90	96	92	82	93
Scouting for weeds was done by:					
Operator, partner, or family member	83	72	85	86	80
An Employee	*	1	3	3	
Farm supply or chemical dealer	13	2	5	5	9
Indep. crop consultant or comm. scout	4	26	7	6	11
Scouted for insects or mites	66	66	73	65	69
Scouting for insects or mites was done by:					
Operator, partner, or family member	81	61	84	83	77
An Employee	*	2	3	2	
Farm supply or chemical dealer	13	2	6	8	8
Indep. crop consultant or comm. scout	6	36	7	8	15
Scouted for diseases	50	51	56	50	48
Scouting for diseases was done by:					
Operator, partner, or family member	81	53	81	80	76
An Employee	*		4	1	
Farm supply or chemical dealer	14	1	6	9	9
Indep. crop consultant or comm. scout	5	46	9	10	15
Field mapping of weed problems	11	17	8	4	9
Soil/plant tissue analysis to detect pests	2	4	5	7	2
Records kept to track pests	11	33	17	15	23
Weather monitoring	66	61	31	63	75
<b>Suppression Practices:</b>					
Biological pesticides	5	19	9	2	12
Scouting used to make decisions	20	25	11	29	18
Maintain ground cover or physical barriers	45	65	38	44	36
Adjust planting methods	13	18	15	10	12
Alternate pesticides with different MOA	31	31	26	36	37

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Acres Receiving Practice  
Corn, 2005 (continued)**

Practice	States				
	MO	NE	NY	NC	ND
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	57	76	25	68	55
Plow down crop residue	28	8	48	35	16
Remove crop residue	3	2	5	33	6
Clean implements after fieldwork	14	36	23	34	72
Field edges/etc. chopped, mowed/etc	55	43	34	54	48
Water management practices	1	9		12	4
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	12	11	13	8	13
Rotate crops to control pests	83	74	52	82	94
Crop variety chosen for pest resistance	44	68	23	54	60
Planting locations planned to avoid pests	18	18	14	22	31
<b>Monitoring Practices:</b>					
Scouting by general observation	38	46	36	36	15
Deliberate scouting activities	51	45	40	44	79
Field was not scouted	11	9	24	20	5
Scouted for pests	6	27	18	14	22
Scouting due to pest advisory warning	2	12	6	3	4
Scouting due to pest development model	5	11	10	4	8
Scouted for weeds	89	91	74	80	95
Scouting for weeds was done by:					
Operator, partner, or family member	86	62	75	90	72
An Employee	*			6	
Farm supply or chemical dealer	4	5	4	1	
Indep. crop consultant or comm. scout	10	33	21	4	28
Scouted for insects or mites	67	68	41	67	70
Scouting for insects or mites was done by:					
Operator, partner, or family member	83	53	63	92	62
An Employee	*			5	
Farm supply or chemical dealer	4	6	4	1	
Indep. crop consultant or comm. scout	13	41	33	3	38
Scouted for diseases	48	50	34	52	60
Scouting for diseases was done by:					
Operator, partner, or family member	80	44	61	89	57
An Employee	1			6	
Farm supply or chemical dealer	1	7	1	1	2
Indep. crop consultant or comm. scout	18	49	38	4	41
Field mapping of weed problems	7	11	22	3	9
Soil/plant tissue analysis to detect pests	4	10	8	3	4
Records kept to track pests	16	35	20	9	41
Weather monitoring	31	58	52	50	82
<b>Suppression Practices:</b>					
Biological pesticides	13	10	8		5
Scouting used to make decisions	16	33	20	7	37
Maintain ground cover or physical barriers	36	58	26	48	59
Adjust planting methods	15	17	14	24	26
Alternate pesticides with different MOA	20	37	23	14	24

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Acres Receiving Practice  
Corn, 2005 (continued)**

Practice	States				
	OH	PA	SD	TX	WI
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	65	68	71	45	59
Plow down crop residue	23	31	15	66	25
Remove crop residue	4	14	6	7	8
Clean implements after fieldwork	26	33	46	49	31
Field edges/etc. chopped, mowed/etc	29	45	31	59	26
Water management practices	1	2	*	15	*
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	3	4	12	23	15
Rotate crops to control pests	83	71	89	68	79
Crop variety chosen for pest resistance	26	51	71	58	42
Planting locations planned to avoid pests	9	11	32	33	24
<b>Monitoring Practices:</b>					
Scouting by general observation	52	39	37	52	40
Deliberate scouting activities	35	43	54	42	47
Field was not scouted	14	18	8	7	13
Scouted for pests	12	12	12	20	15
Scouting due to pest advisory warning	8	1	13	9	8
Scouting due to pest development model	6	8	4	12	11
Scouted for weeds	86	82	92	93	87
Scouting for weeds was done by:					
Operator, partner, or family member	89	79	83	72	66
An Employee	1	1	3	5	2
Farm supply or chemical dealer	10	8	11	2	15
Indep. crop consultant or comm. scout		12	3	21	16
Scouted for insects or mites	53	49	53	64	54
Scouting for insects or mites was done by:					
Operator, partner, or family member	83	75	80	58	61
An Employee	*	1		6	3
Farm supply or chemical dealer	15	7	15	6	12
Indep. crop consultant or comm. scout	1	16	5	30	23
Scouted for diseases	43	37	34	44	43
Scouting for diseases was done by:					
Operator, partner, or family member	81	73	78	44	54
An Employee		1		9	4
Farm supply or chemical dealer	17	8	14	6	13
Indep. crop consultant or comm. scout	2	18	8	41	30
Field mapping of weed problems	3	11	6	9	27
Soil/plant tissue analysis to detect pests	1	6	3	12	8
Records kept to track pests	12	17	13	25	26
Weather monitoring	47	63	71	53	37
<b>Suppression Practices:</b>					
Biological pesticides	3	4	6	8	6
Scouting used to make decisions	15	17	15	19	26
Maintain ground cover or physical barriers	31	44	54	36	46
Adjust planting methods	9	6	23	22	12
Alternate pesticides with different MOA	21	29	12	10	35

\* Percentage is less than 0.5

**Pest Management Practices  
Percent of Farms Receiving Practice  
Fall Potatoes, 2005**

Practice	States				
	US	CO	ID	ME	MI
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	29	51	20	39	21
Plow down crop residue	65	58	54	83	94
Remove crop residue	12	27	12		8
Clean implements after fieldwork	67	98	62	48	63
Field edges/etc. chopped, mowed/etc	69	98	76	59	31
Water management practices	39	38	55	2	50
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	22	22	23	13	31
Rotate crops to control pests	88	90	83	77	88
Grow trap crop to control insects	3		2		2
Crop variety chosen for pest resistance	22	14	18	19	41
Planting locations planned to avoid pests	28	24	24	10	44
<b>Monitoring Practices:</b>					
Scouting by general observation	25	12	34	36	27
Deliberate scouting activities	74	87	65	64	72
Field was not scouted	1	1	1		1
Scouted for pests	46	67	24	49	56
Scouting due to pest advisory warning	23	14	16	28	12
Scouting due to pest development model	25	14	12	30	19
Scouted for weeds	96	99	95	91	97
Scouting for weeds was done by:					
Operator, partner, or family member	58	43	63	75	59
An Employee	6	6	10		1
Farm supply or chemical dealer	11	5	16	6	2
Indep. crop consultant or comm. scout	26	46	12	19	38
Scouted for insects or mites	98	99	96	100	99
Scouting for insects or mites was done by:					
Operator, partner, or family member	54	43	55	74	57
An Employee	6	6	11		1
Farm supply or chemical dealer	12	5	21	5	2
Indep. crop consultant or comm. scout	28	46	14	21	39
Scouted for diseases	98	99	97	100	97
Scouting for diseases was done by:					
Operator, partner, or family member	53	43	55	68	57
An Employee	6	6	11		1
Farm supply or chemical dealer	12	5	18	8	2
Indep. crop consultant or comm. scout	29	46	16	25	40
Field mapping of weed problems	38	34	28	44	48
Soil/plant tissue analysis to detect pests	43	70	50	24	38
Records kept to track pests	48	60	32	27	52
Weather monitoring	79	79	62	87	76
<b>Suppression Practices:</b>					
Beneficial organisms	2	13	4	1	1
Biological pesticides	3	2	1	5	2
Scouting used to make decisions	51	21	35	73	43
Maintain ground cover or physical barriers	54	45	51	51	67
Adjust planting methods	23	39	20	10	37
Alternate pesticides with different MOA	58	44	61	34	77
Biological pest controls	13	9	4	28	18

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Farms Receiving Practice  
Fall Potatoes, 2005 (continued)**

Practice	States			
	MN	ND	WA	WI
<b>Prevention Practices:</b>				
No-till or minimum till used to manage pests	31	37	15	41
Plow down crop residue	56	29	81	53
Remove crop residue	21	7	35	9
Clean implements after fieldwork	87	81	82	66
Field edges/etc. chopped, mowed/etc	71	79	90	48
Water management practices	52	33	50	65
<b>Avoidance Practices:</b>				
Adjust planting/harvesting dates	27	20	25	30
Rotate crops to control pests	98	96	100	97
Grow trap crop to control insects	15		3	7
Crop variety chosen for pest resistance	26	17	22	35
Planting locations planned to avoid pests	56	38	39	30
<b>Monitoring Practices:</b>				
Scouting by general observation	8	15	13	14
Deliberate scouting activities	92	85	87	85
Field was not scouted		*	*	2
Scouted for pests	53	45	56	74
Scouting due to pest advisory warning	30	9	45	29
Scouting due to pest development model	52	24	25	48
Scouted for weeds	99	99	100	92
Scouting for weeds was done by:				
Operator, partner, or family member	51	47	48	31
An Employee	22	1	5	14
Farm supply or chemical dealer		1	34	
Indep. crop consultant or comm. scout	27	51	13	55
Scouted for insects or mites	100	91	99	98
Scouting for insects or mites was done by:				
Operator, partner, or family member	52	41	47	28
An Employee	22	1	5	9
Farm supply or chemical dealer		1	34	1
Indep. crop consultant or comm. scout	26	57	14	62
Scouted for diseases	99	90	97	98
Scouting for diseases was done by:				
Operator, partner, or family member	52	42	47	27
An Employee	22	1	5	9
Farm supply or chemical dealer		1	35	1
Indep. crop consultant or comm. scout	26	56	13	62
Field mapping of weed problems	61	33	34	43
Soil/plant tissue analysis to detect pests	40	49	58	40
Records kept to track pests	71	63	74	78
Weather monitoring	85	80	94	83
<b>Suppression Practices:</b>				
Beneficial organisms			1	3
Biological pesticides			3	9
Scouting used to make decisions	68	35	51	70
Maintain ground cover or physical barriers	41	51	65	66
Adjust planting methods	41	10	30	36
Alternate pesticides with different MOA	70	54	77	75
Biological pest controls			21	1

\* Percentage is less than 0.5

**Pest Management Practices  
Percent of Acres Receiving Practice  
Fall Potatoes, 2005**

Practice	States				
	US	CO	ID	ME	MI
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	30	48	20	39	18
Plow down crop residue	60	61	53	88	94
Remove crop residue	18	30	13		5
Clean implements after fieldwork	75	98	66	48	61
Field edges/etc. chopped, mowed/etc	79	98	78	70	27
Water management practices	53	34	54	2	58
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	27	22	26	13	46
Rotate crops to control pests	91	93	85	80	87
Grow trap crop to control insects	3		3		*
Crop variety chosen for pest resistance	23	17	22	23	53
Planting locations planned to avoid pests	30	24	23	6	53
<b>Monitoring Practices:</b>					
Scouting by general observation	20	12	33	42	17
Deliberate scouting activities	79	88	66	58	83
Field was not scouted	1	*	1		*
Scouted for pests	50	66	24	46	74
Scouting due to pest advisory warning	27	15	15	30	12
Scouting due to pest development model	26	16	14	23	30
Scouted for weeds	98	100	96	93	99
Scouting for weeds was done by:					
Operator, partner, or family member	46	46	59	78	42
An Employee	11	4	14		3
Farm supply or chemical dealer	15	6	15	8	2
Indep. crop consultant or comm. scout	28	44	12	14	53
Scouted for insects or mites	98	100	97	100	100
Scouting for insects or mites was done by:					
Operator, partner, or family member	41	46	47	77	41
An Employee	10	4	15		3
Farm supply or chemical dealer	18	6	22	7	2
Indep. crop consultant or comm. scout	32	44	16	16	54
Scouted for diseases	98	100	98	100	100
Scouting for diseases was done by:					
Operator, partner, or family member	40	46	48	66	41
An Employee	10	4	14		3
Farm supply or chemical dealer	17	6	20	15	2
Indep. crop consultant or comm. scout	32	44	18	19	54
Field mapping of weed problems	37	30	31	36	62
Soil/plant tissue analysis to detect pests	54	72	50	29	62
Records kept to track pests	58	58	39	22	61
Weather monitoring	79	79	64	91	85
<b>Suppression Practices:</b>					
Beneficial organisms	3	13	4	1	*
Biological pesticides	2	3	2	3	3
Scouting used to make decisions	48	18	38	74	50
Maintain ground cover or physical barriers	54	43	49	40	80
Adjust planting methods	25	39	21	15	55
Alternate pesticides with different MOA	64	39	62	36	85
Biological pest controls	10	7	3	34	21

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Acres Receiving Practice  
Fall Potatoes, 2005 (continued)**

Practice	States			
	MN	ND	WA	WI
<b>Prevention Practices:</b>				
No-till or minimum till used to manage pests	42	44	17	57
Plow down crop residue	69	33	76	48
Remove crop residue	26	5	44	17
Clean implements after fieldwork	90	77	92	75
Field edges/etc. chopped, mowed/etc	78	81	96	65
Water management practices	71	38	64	84
<b>Avoidance Practices:</b>				
Adjust planting/harvesting dates	45	16	34	26
Rotate crops to control pests	100	95	100	98
Grow trap crop to control insects	27		3	4
Crop variety chosen for pest resistance	28	15	14	37
Planting locations planned to avoid pests	67	30	42	23
<b>Monitoring Practices:</b>				
Scouting by general observation	4	8	6	7
Deliberate scouting activities	96	92	94	93
Field was not scouted		*	*	*
Scouted for pests	71	58	66	89
Scouting due to pest advisory warning	34	13	62	42
Scouting due to pest development model	60	33	24	56
Scouted for weeds	100	99	100	98
Scouting for weeds was done by:				
Operator, partner, or family member	32	35	32	21
An Employee	36	1	8	20
Farm supply or chemical dealer		1	46	
Indep. crop consultant or comm. scout	32	62	14	59
Scouted for insects or mites	100	94	100	100
Scouting for insects or mites was done by:				
Operator, partner, or family member	32	29	31	12
An Employee	36	1	8	7
Farm supply or chemical dealer		1	46	1
Indep. crop consultant or comm. scout	32	68	15	80
Scouted for diseases	100	94	99	100
Scouting for diseases was done by:				
Operator, partner, or family member	32	32	31	12
An Employee	36	1	8	7
Farm supply or chemical dealer		1	46	1
Indep. crop consultant or comm. scout	32	66	15	80
Field mapping of weed problems	76	37	25	59
Soil/plant tissue analysis to detect pests	47	60	62	57
Records kept to track pests	82	73	82	92
Weather monitoring	91	83	97	91
<b>Suppression Practices:</b>				
Beneficial organisms			1	1
Biological pesticides			3	3
Scouting used to make decisions	79	36	53	85
Maintain ground cover or physical barriers	48	50	71	59
Adjust planting methods	54	6	27	30
Alternate pesticides with different MOA	70	60	69	89
Biological pest controls			29	1

\* Percentage is less than 0.5

**Pest Management Practices  
Percent of Farms Receiving Practice  
Oats, 2005**

Practice	States					
	US	CA	ID	IL	IA	KS
<b>Prevention Practices:</b>						
No-till or minimum till used to manage pests	37	37	34	27	56	59
Plow down crop residue	37	86	47	20	25	21
Remove crop residue	15	40	27	8	11	19
Clean implements after fieldwork	26	53	49	19	17	49
Field edges/etc. chopped, mowed/etc	23	61	41	29	33	14
Water management practices	2	22	14		3	1
<b>Avoidance Practices:</b>						
Adjust planting/harvesting dates	11	20	18	9	14	7
Rotate crops to control pests	71	50	61	59	81	74
Crop variety chosen for pest resistance	11	21	9	9	13	11
Planting locations planned to avoid pests	10	17	6	2	7	13
<b>Monitoring Practices:</b>						
Scouting by general observation	42	55	54	25	45	41
Deliberate scouting activities	19	16	19	24	15	18
Field was not scouted	38	28	27	50	40	41
Scouted for pests	3	5	2	4	5	4
Scouting due to pest advisory warning	1	2		2	3	1
Scouting due to pest development model	2	1	1		3	5
Scouted for weeds	59	72	72	48	56	59
Scouting for weeds was done by:						
Operator, partner, or family member	92	73	92	97	100	95
An Employee	1	3	1			
Farm supply or chemical dealer	6	14	6	1		1
Indep. crop consultant or comm. scout	2	10	1	1	*	4
Scouted for insects or mites	33	45	39	33	43	35
Scouting for insects or mites was done by:						
Operator, partner, or family member	88	79	87	90	96	94
An Employee	1		2			
Farm supply or chemical dealer	9	20	12	8	3	1
Indep. crop consultant or comm. scout	2	1		2	*	5
Scouted for diseases	27	47	31	31	36	29
Scouting for diseases was done by:						
Operator, partner, or family member	87	77	87	91	100	94
An Employee	1					
Farm supply or chemical dealer	10	19	13	7		
Indep. crop consultant or comm. scout	2	3		2	*	6
Field mapping of weed problems	4	2	17	1	6	3
Soil/plant tissue analysis to detect pests	1	19	2			*
Records kept to track pests	6	14	11	4	2	4
Weather monitoring	53	60	48	71	15	29
<b>Suppression Practices:</b>						
Biological pesticides						
Scouting used to make decisions	4	3	5	10	3	4
Maintain ground cover or physical barriers	36	25	34	26	44	42
Adjust planting methods	7	22	13	4	7	3
Alternate pesticides with different MOA	14	15	14			16

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Farms Receiving Practice  
Oats, 2005 (continued)**

Practice	States					
	MI	MN	MT	NE	NY	ND
<b>Prevention Practices:</b>						
No-till or minimum till used to manage pests	18	27	42	50	18	39
Plow down crop residue	51	16	58	11	57	31
Remove crop residue	7	19	27	3	11	12
Clean implements after fieldwork	30	41	45	26	18	49
Field edges/etc. chopped, mowed/etc	26	29	26	30	28	13
Water management practices		2	4	5		
<b>Avoidance Practices:</b>						
Adjust planting/harvesting dates	7	5	17	3	7	28
Rotate crops to control pests	80	74	68	58	85	68
Crop variety chosen for pest resistance	7	19	10	5	1	5
Planting locations planned to avoid pests	8	14	16	11	3	13
<b>Monitoring Practices:</b>						
Scouting by general observation	47	36	48	55	37	47
Deliberate scouting activities	19	20	24	3	24	9
Field was not scouted	34	43	28	43	39	44
Scouted for pests	3	5	6	1	4	1
Scouting due to pest advisory warning	3	*	1		*	*
Scouting due to pest development model	1	3	1	*	3	*
Scouted for weeds	62	55	72	57	60	54
Scouting for weeds was done by:						
Operator, partner, or family member	99	94	99	98	93	100
An Employee			1	1		
Farm supply or chemical dealer		6		1	2	
Indep. crop consultant or comm. scout	1	*			5	
Scouted for insects or mites	27	18	43	45	16	14
Scouting for insects or mites was done by:						
Operator, partner, or family member	100	98	99	99	90	100
An Employee			1			
Farm supply or chemical dealer		2		1		
Indep. crop consultant or comm. scout		*			10	
Scouted for diseases	19	14	38	29	11	12
Scouting for diseases was done by:						
Operator, partner, or family member	95	98	99	98	85	100
An Employee			1			
Farm supply or chemical dealer		2		2		
Indep. crop consultant or comm. scout	5	*			15	
Field mapping of weed problems	1	1	22		6	
Soil/plant tissue analysis to detect pests		*			4	
Records kept to track pests	8	*	6	1	9	1
Weather monitoring	50	48	67	70	37	72
<b>Suppression Practices:</b>						
Biological pesticides						
Scouting used to make decisions	3	6	7		4	1
Maintain ground cover or physical barriers	28	27	43	50	32	44
Adjust planting methods	7	5	14	3	2	6
Alternate pesticides with different MOA	8	31	24	15	18	21

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Farms Receiving Practice  
Oats, 2005 (continued)**

Practice	States			
	PA	SD	TX	WI
<b>Prevention Practices:</b>				
No-till or minimum till used to manage pests	16	41	20	52
Plow down crop residue	53	33	55	31
Remove crop residue	20	15	14	13
Clean implements after fieldwork	16	39	14	16
Field edges/etc. chopped, mowed/etc	19	19	21	17
Water management practices			1	
<b>Avoidance Practices:</b>				
Adjust planting/harvesting dates	11	13	8	8
Rotate crops to control pests	87	84	18	75
Crop variety chosen for pest resistance	2	8	8	17
Planting locations planned to avoid pests	12	11	4	8
<b>Monitoring Practices:</b>				
Scouting by general observation	42	51	41	39
Deliberate scouting activities	20	22	15	25
Field was not scouted	39	26	44	36
Scouted for pests	1	3	1	5
Scouting due to pest advisory warning		3		1
Scouting due to pest development model	*	*	2	2
Scouted for weeds	59	73	48	60
Scouting for weeds was done by:				
Operator, partner, or family member	96	99	90	83
An Employee			8	*
Farm supply or chemical dealer	2		1	15
Indep. crop consultant or comm. scout	3	1		2
Scouted for insects or mites	26	43	42	41
Scouting for insects or mites was done by:				
Operator, partner, or family member	91	99	87	76
An Employee			9	*
Farm supply or chemical dealer	4		3	22
Indep. crop consultant or comm. scout	5	1		3
Scouted for diseases	24	36	35	30
Scouting for diseases was done by:				
Operator, partner, or family member	92	98	89	69
An Employee			11	*
Farm supply or chemical dealer	4			29
Indep. crop consultant or comm. scout	4	2		1
Field mapping of weed problems	3	3	*	6
Soil/plant tissue analysis to detect pests	2		*	
Records kept to track pests	10	3	2	9
Weather monitoring	55	46	47	50
<b>Suppression Practices:</b>				
Biological pesticides				
Scouting used to make decisions	3	1	*	8
Maintain ground cover or physical barriers	31	34	26	41
Adjust planting methods	4	6	9	9
Alternate pesticides with different MOA	14	3	2	13

\* Percentage is less than 0.5

**Pest Management Practices  
Percent of Acres Receiving Practice  
Oats, 2005**

Practice	States					
	US	CA	ID	IL	IA	KS
<b>Prevention Practices:</b>						
No-till or minimum till used to manage pests	38	32	30	21	56	66
Plow down crop residue	39	82	47	13	20	17
Remove crop residue	15	46	28	6	9	8
Clean implements after fieldwork	32	51	57	15	21	56
Field edges/etc. chopped, mowed/etc	24	67	48	25	31	14
Water management practices	2	19	12		1	3
<b>Avoidance Practices:</b>						
Adjust planting/harvesting dates	12	19	15	7	13	4
Rotate crops to control pests	62	52	61	44	77	76
Crop variety chosen for pest resistance	11	18	6	8	8	9
Planting locations planned to avoid pests	10	14	7	1	8	7
<b>Monitoring Practices:</b>						
Scouting by general observation	40	42	41	18	38	42
Deliberate scouting activities	24	22	32	21	20	18
Field was not scouted	37	36	27	62	43	41
Scouted for pests	4	6	3	7	5	8
Scouting due to pest advisory warning	1	2		2	5	1
Scouting due to pest development model	3	1	*		3	3
Scouted for weeds	60	64	73	37	53	59
Scouting for weeds was done by:						
Operator, partner, or family member	88	62	90	97	99	89
An Employee	5	3	2			
Farm supply or chemical dealer	5	24	7	1		*
Indep. crop consultant or comm. scout	2	11	*	2	1	11
Scouted for insects or mites	38	43	45	28	40	41
Scouting for insects or mites was done by:						
Operator, partner, or family member	83	64	81	90	97	85
An Employee	8		8			
Farm supply or chemical dealer	6	29	11	7	2	*
Indep. crop consultant or comm. scout	3	6		3	1	15
Scouted for diseases	30	44	37	26	32	37
Scouting for diseases was done by:						
Operator, partner, or family member	82	63	88	92	99	83
An Employee	9					
Farm supply or chemical dealer	6	28	12	5		
Indep. crop consultant or comm. scout	3	8		3	1	17
Field mapping of weed problems	4	3	19	1	4	5
Soil/plant tissue analysis to detect pests	2	18	1			*
Records kept to track pests	6	16	16	5	2	8
Weather monitoring	53	57	53	73	17	35
<b>Suppression Practices:</b>						
Biological pesticides						
Scouting used to make decisions	5	4	8	9	4	8
Maintain ground cover or physical barriers	33	22	31	21	42	43
Adjust planting methods	9	21	14	3	6	4
Alternate pesticides with different MOA	13	18	22			20

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Acres Receiving Practice  
Oats, 2005 (continued)**

Practice	States					
	MI	MN	MT	NE	NY	ND
<b>Prevention Practices:</b>						
No-till or minimum till used to manage pests	19	28	45	40	22	55
Plow down crop residue	53	17	48	5	50	25
Remove crop residue	11	22	36	4	16	9
Clean implements after fieldwork	33	42	41	18	23	48
Field edges/etc. chopped, mowed/etc	22	31	33	22	28	21
Water management practices		1	4	1		
<b>Avoidance Practices:</b>						
Adjust planting/harvesting dates	9	7	22	2	8	19
Rotate crops to control pests	81	81	64	57	80	69
Crop variety chosen for pest resistance	7	24	10	5	2	6
Planting locations planned to avoid pests	9	18	15	5	4	14
<b>Monitoring Practices:</b>						
Scouting by general observation	40	34	45	55	37	39
Deliberate scouting activities	25	26	25	2	28	12
Field was not scouted	34	41	31	43	36	49
Scouted for pests	5	4	3	1	7	1
Scouting due to pest advisory warning	6	1	1		1	*
Scouting due to pest development model	2	5	1	1	3	*
Scouted for weeds	61	56	69	57	62	49
Scouting for weeds was done by:						
Operator, partner, or family member	98	89	99	98	90	100
An Employee			1	1		
Farm supply or chemical dealer		11		*	2	
Indep. crop consultant or comm. scout	2	1			8	
Scouted for insects or mites	28	13	41	37	18	20
Scouting for insects or mites was done by:						
Operator, partner, or family member	100	90	99	99	77	100
An Employee			1			
Farm supply or chemical dealer		7		1		
Indep. crop consultant or comm. scout		3			23	
Scouted for diseases	19	13	31	26	14	18
Scouting for diseases was done by:						
Operator, partner, or family member	93	90	98	99	72	100
An Employee			2			
Farm supply or chemical dealer		7		1		
Indep. crop consultant or comm. scout	7	3			28	
Field mapping of weed problems	2	2	21		9	
Soil/plant tissue analysis to detect pests		*			3	
Records kept to track pests	6	2	9	*	8	2
Weather monitoring	47	51	73	62	40	65
<b>Suppression Practices:</b>						
Biological pesticides						
Scouting used to make decisions	4	6	4		8	1
Maintain ground cover or physical barriers	28	27	48	41	25	41
Adjust planting methods	7	5	16	1	2	7
Alternate pesticides with different MOA	9	31	25	12	13	17

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Acres Receiving Practice  
Oats, 2005 (continued)**

Practice	States			
	PA	SD	TX	WI
<b>Prevention Practices:</b>				
No-till or minimum till used to manage pests	21	54	19	49
Plow down crop residue	54	25	62	36
Remove crop residue	17	10	9	14
Clean implements after fieldwork	21	38	14	22
Field edges/etc. chopped, mowed/etc	24	13	15	16
Water management practices			*	
<b>Avoidance Practices:</b>				
Adjust planting/harvesting dates	11	14	4	15
Rotate crops to control pests	88	82	20	78
Crop variety chosen for pest resistance	4	12	8	19
Planting locations planned to avoid pests	12	14	4	11
<b>Monitoring Practices:</b>				
Scouting by general observation	42	48	40	32
Deliberate scouting activities	23	26	32	30
Field was not scouted	35	26	27	38
Scouted for pests	3	3	4	8
Scouting due to pest advisory warning		2		4
Scouting due to pest development model	*	*	6	4
Scouted for weeds	63	73	62	58
Scouting for weeds was done by:				
Operator, partner, or family member	92	99	76	85
An Employee			23	*
Farm supply or chemical dealer	3		1	11
Indep. crop consultant or comm. scout	5	1		4
Scouted for insects or mites	29	40	63	40
Scouting for insects or mites was done by:				
Operator, partner, or family member	84	98	74	78
An Employee			23	*
Farm supply or chemical dealer	7		3	16
Indep. crop consultant or comm. scout	9	2		6
Scouted for diseases	26	33	43	30
Scouting for diseases was done by:				
Operator, partner, or family member	83	98	69	75
An Employee			31	*
Farm supply or chemical dealer	7			21
Indep. crop consultant or comm. scout	9	2		3
Field mapping of weed problems	4	4	*	9
Soil/plant tissue analysis to detect pests	5		*	
Records kept to track pests	12	5	1	12
Weather monitoring	52	48	46	50
<b>Suppression Practices:</b>				
Biological pesticides				
Scouting used to make decisions	4	2	*	17
Maintain ground cover or physical barriers	31	37	23	40
Adjust planting methods	6	7	12	14
Alternate pesticides with different MOA	16	5	1	13

\* Percentage is less than 0.5

**Pest Management Practices  
Percent of Farms Receiving Practice  
Upland Cotton, 2005**

Practice	States				
	US	AL	AR	CA	GA
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	60	64	74	26	68
Plow down crop residue	46	25	57	89	49
Remove crop residue	15	6	25	46	20
Clean implements after fieldwork	53	38	58	57	66
Field edges/etc. chopped, mowed/etc	64	47	78	83	77
Water management practices	8	4	22	39	16
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	25	25	24	40	36
Rotate crops to control pests	56	44	23	63	82
Grow trap crop to control insects	14	8	4	9	4
Crop variety chosen for pest resistance	58	48	71	46	71
Planting locations planned to avoid pests	22	17	19	29	29
<b>Monitoring Practices:</b>					
Scouting by general observation	27	28	18	23	29
Deliberate scouting activities	71	72	82	75	70
Field was not scouted	2	*	*	3	1
Scouted for pests	58	63	63	68	52
Scouting due to pest advisory warning	18	13	13	20	17
Scouting due to pest development model	24	35	16	27	29
Scouted for weeds	92	96	85	93	95
Scouting for weeds was done by:					
Operator, partner, or family member	56	66	30	26	57
An Employee	3	4	1	7	2
Farm supply or chemical dealer	5	*	2	28	*
Indep. crop consultant or comm. scout	36	30	67	39	40
Scouted for insects or mites	96	100	99	96	97
Scouting for insects or mites was done by:					
Operator, partner, or family member	40	57	10	13	43
An Employee	3	4	1	3	2
Farm supply or chemical dealer	5	2	2	26	*
Indep. crop consultant or comm. scout	52	38	87	57	54
Scouted for diseases	87	95	92	92	96
Scouting for diseases was done by:					
Operator, partner, or family member	44	60	16	13	47
An Employee	2	3	1	4	2
Farm supply or chemical dealer	6	1	2	24	*
Indep. crop consultant or comm. scout	48	35	81	59	51
Field mapping of weed problems	25	27	22	32	17
Soil/plant tissue analysis to detect pests	11	9	12	20	19
Records kept to track pests	55	54	72	70	60
Weather monitoring	74	71	64	60	87
<b>Suppression Practices:</b>					
Beneficial organisms	1	2	2	5	
Biological pesticides	20	20	29	9	27
Scouting used to make decisions	46	43	56	61	43
Maintain ground cover or physical barriers	39	44	28	18	47
Adjust planting methods	20	10	20	34	23
Alternate pesticides with different MOA	37	20	48	57	50
Biological pest controls	60	49	55	24	51

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Farms Receiving Practice  
Upland Cotton, 2005 (continued)**

Practice	States				
	LA	MS	NC	TN	TX
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	65	46	74	72	40
Plow down crop residue	61	50	32	28	61
Remove crop residue	24	20	8	7	12
Clean implements after fieldwork	50	43	45	55	61
Field edges/etc. chopped, mowed/etc	88	42	60	79	56
Water management practices	8	5	2	1	7
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	19	11	28	31	20
Rotate crops to control pests	57	24	74	45	52
Grow trap crop to control insects	11	39	19	11	9
Crop variety chosen for pest resistance	79	33	73	53	42
Planting locations planned to avoid pests	16	8	34	14	15
<b>Monitoring Practices:</b>					
Scouting by general observation	17	9	24	26	42
Deliberate scouting activities	83	90	76	74	50
Field was not scouted		1		*	7
Scouted for pests	80	71	65	46	43
Scouting due to pest advisory warning	19	17	23	19	17
Scouting due to pest development model	18	28	19	43	17
Scouted for weeds	96	93	99	96	79
Scouting for weeds was done by:					
Operator, partner, or family member	33	64	52	53	74
An Employee	2	3	3	4	2
Farm supply or chemical dealer		11	8	4	4
Indep. crop consultant or comm. scout	64	23	38	39	19
Scouted for insects or mites	100	99	99	96	88
Scouting for insects or mites was done by:					
Operator, partner, or family member	12	8	49	45	55
An Employee			3	12	1
Farm supply or chemical dealer		*	8	5	9
Indep. crop consultant or comm. scout	88	92	40	39	35
Scouted for diseases	97	72	96	96	69
Scouting for diseases was done by:					
Operator, partner, or family member	14	25	51	53	57
An Employee			2	4	1
Farm supply or chemical dealer		13	8	5	7
Indep. crop consultant or comm. scout	86	62	38	38	35
Field mapping of weed problems	26	19	34	27	21
Soil/plant tissue analysis to detect pests	16	7	14	6	5
Records kept to track pests	87	81	53	51	30
Weather monitoring	80	91	81	85	52
<b>Suppression Practices:</b>					
Beneficial organisms		1	2	*	2
Biological pesticides	34	17	23	21	10
Scouting used to make decisions	49	42	56	44	31
Maintain ground cover or physical barriers	21	18	63	25	31
Adjust planting methods	15	4	21	29	20
Alternate pesticides with different MOA	46	27	47	53	10
Biological pest controls	77	82	72	51	54

\* Percentage is less than 0.5

**Pest Management Practices  
Percent of Acres Receiving Practice  
Upland Cotton, 2005**

Practice	States				
	US	AL	AR	CA	GA
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	52	66	78	22	72
Plow down crop residue	53	29	51	92	45
Remove crop residue	18	13	29	60	18
Clean implements after fieldwork	59	29	60	65	65
Field edges/etc. chopped, mowed/etc	62	50	76	87	75
Water management practices	11	14	21	41	19
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	22	19	21	42	41
Rotate crops to control pests	48	38	23	72	83
Grow trap crop to control insects	11	6	5	9	3
Crop variety chosen for pest resistance	52	58	67	51	78
Planting locations planned to avoid pests	18	24	17	31	31
<b>Monitoring Practices:</b>					
Scouting by general observation	32	23	17	22	29
Deliberate scouting activities	64	77	83	77	71
Field was not scouted	4	*	*	1	*
Scouted for pests	53	68	58	74	56
Scouting due to pest advisory warning	17	14	16	23	16
Scouting due to pest development model	21	49	17	26	27
Scouted for weeds	89	95	83	97	96
Scouting for weeds was done by:					
Operator, partner, or family member	59	67	23	28	55
An Employee	3	4	1	7	3
Farm supply or chemical dealer	4	*	1	26	*
Indep. crop consultant or comm. scout	34	28	74	39	42
Scouted for insects or mites	94	100	100	97	98
Scouting for insects or mites was done by:					
Operator, partner, or family member	39	52	8	12	41
An Employee	2	3	1	3	2
Farm supply or chemical dealer	5	2	1	26	*
Indep. crop consultant or comm. scout	55	43	90	59	56
Scouted for diseases	83	96	91	94	97
Scouting for diseases was done by:					
Operator, partner, or family member	44	61	13	12	45
An Employee	2	3	1	3	2
Farm supply or chemical dealer	5	2	1	25	*
Indep. crop consultant or comm. scout	49	33	85	59	53
Field mapping of weed problems	22	32	23	31	16
Soil/plant tissue analysis to detect pests	11	6	13	21	23
Records kept to track pests	50	56	71	76	59
Weather monitoring	65	73	61	71	91
<b>Suppression Practices:</b>					
Beneficial organisms	1	2	1	4	
Biological pesticides	16	23	29	8	32
Scouting used to make decisions	40	52	53	62	45
Maintain ground cover or physical barriers	31	45	26	17	45
Adjust planting methods	19	10	20	38	24
Alternate pesticides with different MOA	27	19	45	65	50
Biological pest controls	56	55	49	27	55

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Acres Receiving Practice  
Upland Cotton, 2005 (continued)**

Practice	States				
	LA	MS	NC	TN	TX
<b>Prevention Practices:</b>					
No-till or minimum till used to manage pests	60	44	67	70	41
Plow down crop residue	63	56	36	31	57
Remove crop residue	31	23	12	10	12
Clean implements after fieldwork	58	43	43	64	65
Field edges/etc. chopped, mowed/etc	89	38	54	86	58
Water management practices	8	4	5	2	9
<b>Avoidance Practices:</b>					
Adjust planting/harvesting dates	17	11	28	20	20
Rotate crops to control pests	56	25	77	33	46
Grow trap crop to control insects	9	36	17	20	8
Crop variety chosen for pest resistance	77	29	73	53	41
Planting locations planned to avoid pests	15	9	34	8	14
<b>Monitoring Practices:</b>					
Scouting by general observation	26	10	21	22	45
Deliberate scouting activities	74	90	79	78	47
Field was not scouted		1		*	8
Scouted for pests	71	67	71	58	40
Scouting due to pest advisory warning	20	16	21	30	14
Scouting due to pest development model	17	21	22	37	16
Scouted for weeds	96	95	100	97	83
Scouting for weeds was done by:					
Operator, partner, or family member	32	56	53	42	76
An Employee	7	2	3	8	1
Farm supply or chemical dealer		10	6	4	3
Indep. crop consultant or comm. scout	61	32	38	46	19
Scouted for insects or mites	100	99	99	97	89
Scouting for insects or mites was done by:					
Operator, partner, or family member	6	9	50	40	55
An Employee			3	10	1
Farm supply or chemical dealer		1	6	4	7
Indep. crop consultant or comm. scout	94	90	40	46	37
Scouted for diseases	97	73	97	97	73
Scouting for diseases was done by:					
Operator, partner, or family member	9	21	51	42	61
An Employee			3	8	1
Farm supply or chemical dealer		12	7	4	6
Indep. crop consultant or comm. scout	91	66	40	45	33
Field mapping of weed problems	27	16	35	25	20
Soil/plant tissue analysis to detect pests	15	7	16	6	7
Records kept to track pests	83	83	51	55	30
Weather monitoring	82	90	80	84	46
<b>Suppression Practices:</b>					
Beneficial organisms		1	2	*	1
Biological pesticides	33	15	22	22	6
Scouting used to make decisions	47	39	62	51	28
Maintain ground cover or physical barriers	20	16	62	25	29
Adjust planting methods	13	6	23	16	21
Alternate pesticides with different MOA	52	27	52	41	8
Biological pest controls	77	78	70	56	51

\* Percentage is less than 0.5

## Survey and Estimation Procedures

**Survey Procedures:** Data for corn, upland cotton, oats, fall potatoes, and soybeans were collected on two 2005 surveys, the Agricultural Resource Management Survey (ARMS), which collected 6,034 usable records, and the Conservation Effects Assessment Project (CEAP), which collected 2,705 usable records with commodities matching the ARMS.

Data collecting for the ARMS and CEAP survey occurred during the months of September through December 2005 and only those CEAP samples that matched the ARMS crops and states were included. Data collection and sampling procedures were similar for both the ARMS and CEAP surveys. Although CEAP was a nationwide, area-based sample survey based on National Resources Inventory (NRI) points, only a subset of CEAP data was used in this publication. As for ARMS, screening samples were drawn from the NASS List Sampling Frame. This extensive sampling frame covers all types of farms and accounts for approximately 90 percent of all land in farms in the United States. All farms on the list had a possibility of being selected for the screening sample. Farms thought to have the crops of interest were more likely to be in the screening sample. Sampled farms were screened to determine if they grew the target crops in 2005. From this subpopulation of operations identified as producing a 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 corn, fall potatoes, oats, or upland cotton was selected, one field was randomly selected from all the fields on the farm. The operator of the sampled field was personally interviewed to obtain information on chemical applications made to the selected field.

**Estimation Procedures:** The chemical application data, reported by product name or trade name, are reviewed within each 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. For this publication, detailed data within a table may not multiply across or add down due to independent rounding of the published values.

Estimates of the total amount of active ingredient applied are based on the acreage estimates published in the annual NASS report "Crop Production - 2005 Summary" [Cr Pr 2-1 (06)] for corn, upland cotton, oats, fall potatoes, and soybeans. Please note that the estimates for total amount of an active ingredient applied will not be revised even if there are subsequent revisions to acreage for a given crop.

## Reliability

The surveys were designed so that the estimates are statistically representative of chemical use on the targeted crops in the surveyed States. The reliability of these survey results is affected by sampling variability and non-sampling errors.

Since all operations producing the crops of interest are not included in the sample, survey estimates are subject to sampling variability. The sampling variability expressed as a percent of the estimate is called the coefficient of variation (cv). Sampling variability of the estimates differed considerably by chemical and crop. Variability for estimates of percent of acres treated will be higher than the variability for estimates of application rates. This is because application rates have a narrower range of responses, which are recommended by the manufacturer of the product, and are generally followed. In general, the more often the chemical was applied, the smaller the sampling variability. For example, estimates of a commonly used active ingredient such as Glyphosate isopropylamine salt, will exhibit less variability than a rarely used chemical. A commonly used active ingredient is defined as an active ingredient used on at least 40 percent of the acres planted for a crop at the program state level. For these active ingredients, cv's range from 1 percent to 10 percent at the program state level and 1 percent to 52 percent at the individual state level. Active ingredients that are less frequently used have cv's that range from 2 percent to 70 percent.

## Terms and Definitions

**Active ingredient:** Refers to the mechanism of action in pesticides which kills or controls the target pests. Usage data are reported by pesticide product and are converted to an amount of active ingredient. A single method of conversion has been chosen for active ingredients having more than one way of being converted. For example in this report, copper compounds are expressed in their metallic copper equivalent, and others such as 2,4-D and glyphosate are expressed in their acid equivalent.

**Allelopathic:** The release of chemical compounds from a plant that will inhibit the growth of another plant, such as weeds.

**Application Rates:** Refer to the average number of pounds of a fertilizer primary nutrient or pesticide active ingredient is applied to an acre of land. Rate per application is the average number of pounds applied per acre in one application. Rate per crop year is the average number of pounds applied per acre counting multiple applications. Number of applications is the average number of times a treated acre received a specific primary nutrient or active ingredient.

**Area applied:** Represents the percentage of crop acres receiving one or more applications of a specific primary nutrient or active ingredient. This report does not contain acre treatments. However, acre treatments can be calculated by multiplying the acres planted by the percent of area applied and the average number of applications.

**Avoidance:** May be practiced when pest populations exist in a field or site but the impact of the pest on the crop can be avoided through some cultural practice. Examples of avoidance tactics include crop rotation such that the crop of choice is not a host for the pest, choosing cultivars with genetic resistance to pests, using trap crops, choosing cultivars with maturity dates that may allow harvest before pest populations develop, fertilization programs to promote rapid crop development, and simply not planting certain areas of fields where pest populations are likely to cause crop failure. Some tactics for prevention and avoidance strategies may overlap.

The following pest management questions were categorized as avoidance practices:

Were planting or harvesting dates adjusted for this field to manage pests?

Were crops rotated in this field during the past 3 years for the purpose of managing pests?

Were planting locations planned to avoid infestation of pests?

Was a trap crop grown to help manage insects in this field?

Was a seed variety chosen to plant in this field because it had resistance to a specific pest?

**Beneficial Insects:** Insects collected and introduced into locations because of their value in biologic control as prey on harmful insects and parasites.

**Chemigation:** Application of an agricultural chemical by injecting it into irrigation water.

**Common name:** An officially recognized name for an active ingredient. This report shows active ingredient by common name.

## Terms and Definitions (continued)

**Crop year:** Refers to the period immediately following harvest of the previous crop through harvest of the current crop.

**Cultivar:** A horticulturally or agriculturally derived variety of a plant, as distinguished from a natural variety.

**Farm:** Any establishment from which \$1,000 or more of agricultural products were sold or would normally be sold during the year. Government payments are included in sales. Places with all acreage enrolled in set aside or other government programs are considered operating.

**Fertilizer:** Refers to applications of the primary nutrients; nitrogen, phosphate, and potash.

**Fungi:** A lower form of parasitic plant life which often reduces crop production and/or lowers the grade quality of its host.

**Land in Farms:** All land operated as part of a farming operation during the year. It includes crop and livestock acreage, wasteland, woodland, pasture, land in summer fallow, idle cropland, and land enrolled in the Conservation Reserve Program and other set-aside, conservation, or commodity acreage programs. It excludes public, industrial, and grazing association land, and nonagricultural land. It excludes all land operated by establishments not qualifying as farms.

**Mechanism of Action (MOA):** The method/biological pathway the pesticide uses to kill the pest.

**Monitoring:** Includes proper identification of pests through systematic sampling or counting or other forms of scouting. Also, weather monitoring to predict levels of pest populations or to determine the most effective time to make pesticide applications, and soil testing where appropriate.

The following pest management practices questions were categorized as monitoring practices:

In 2005, how was this field primarily scouted for insects, weeds, diseases and/or beneficial organisms? (By conducting general observations while performing routine tasks? By deliberately going to the field specifically for scouting activities? This field was not scouted?)

Was an established scouting process used (systematic sampling, recording counts, etc.) or were insect traps used in this field?

Was scouting for pests done in this field due to a pest advisory warning?

Was scouting for pests done in this field due to a pest development model?

Was this field scouted for weeds? (If so, Who did the majority of the scouting? Operator, partner or family member, OR An employee, OR Farm supply or chemical dealer, OR Independent crop consultant or commercial scout?)

## Terms and Definitions (continued)

### Monitoring (continued):

Was this field scouted for insects and mites? (If so, Who did the majority of the scouting? Operator, partner or family member, OR An employee, OR Farm supply or chemical dealer, OR Independent crop consultant or commercial scout?)

Was this field scouted for diseases? (If so, Who did the majority of the scouting? Operator, partner or family member, OR An employee, OR Farm supply or chemical dealer, OR Independent crop consultant or commercial scout?)

Were written or electronic records kept for this field to track the activity or numbers of weeds, insects or diseases?

Was field mapping data used for making weed management decisions on this field?

Were the services of a diagnostic laboratory used for pest identification or soil or plant tissue pest analysis for this field?

Was weather data used to assist in determining either the need or when to make pesticide applications?

Were floral lures, attractants, repellants, pheromone traps or other biological pest controls used on this field?

**Nematodes:** Microscopic, worm-shaped parasitic animals. Damage to many crops can be severe.

**Pesticides:** As defined by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), pesticides include any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant. The four classes of pesticides presented in this report and the pests targeted are: herbicides - weeds, insecticides - insects, fungicides - fungi, and other chemicals - other forms of life. Miticides and nematicides are included as insecticides while soil fumigants, growth regulators, defoliants, and desiccants are included as other chemicals.

**Pheromone:** A chemical substance produced by an insect which serves as a stimulus to other individuals of the same species for one or more behavioral responses.



## Terms and Definitions (continued)

**Prevention:** The practice of keeping a pest population from infesting a crop or field. It includes such tactics as using pest-free seeds or transplants, alternative tillage approaches such as no-till or strip-till systems, choosing cultivars with genetic resistance to insects or disease, irrigation scheduling to avoid situations conducive to disease development, cleaning tillage and harvesting equipment between fields or operations, using field sanitation procedures, and eliminating alternate hosts or sites for insect pests and disease organisms.

The following pest management questions were categorized as prevention practices:

Were field edges, lanes, ditches, roadways or fence lines chopped, mowed, plowed, or burned to manage pests for this field?

Were crop residues plowed down or removed in this field to manage pests?

Were equipment and implements cleaned after completing field work in this field to reduce the spread of pests?

Were water management practices such as irrigation scheduling, controlled drainage, or treatment of retention water used on this field to manage pests?

Was this field cultivated for weed control during the growing season?

Was no-till or minimum till used to manage pests in this field?

**Suppression:** Tactics include cultural practices such as narrow row spacings or optimized in-row plant populations, using cover crops or mulches, or using crops with allelopathic potential in the rotation. Physical suppression tactics may include cultivation or mowing for weed control, baited or pheromone traps for certain insects, and temperature management or exclusion devices for insect and disease management. Biological pesticides and controls, including mating disruption for insects, can be considered as alternatives to conventional pesticides. Determining pest thresholds and alternating pesticide active ingredients to avoid resistance buildup are suppression methods which minimize pesticide use.

The following questions were categorized as suppression practices:

Was scouting data compared to published information on infestation thresholds to determine when to take measures to manage pests in this field?

Were any biological pesticides such as Bt (*Bacillus thuringiensis*), insect growth regulators (Courier, Intrepid, etc.) neem or other natural/biological based products sprayed or applied to manage pests in this field?

Were any beneficial organisms (insects, nematodes, fungi) applied or released in this field to manage pests?

Were ground covers, mulches, or other physical barriers maintained for this field to manage pest problems?

Was row spacing or plant density adjusted in this field to manage pests?

Were pesticides with different mechanisms of action rotated or tank mixed for the primary purpose of keeping pests from becoming resistant to pesticides?

**Trade name:** A trademark name given to a specific formulation of a pesticide product. A formulation contains a specific concentration of the active ingredient, carrier materials, and other ingredients such as emulsifiers and wetting agents.

**Pesticide Class, Common Name, and Trade Name**

The following is a list of common name, associated class and trade name of active ingredients in this publication. The classes are herbicides (H), insecticides (I), fungicides (F), and other chemicals (O). This list is provided as an aid in reviewing pesticide data. Pre-mixes are not cataloged. The list is not complete for all pesticides used on field crops and NASS does not mean to promote use of any specific trade name.

Class	Common Name	Trade Name
H	2,4-D	Dacamine 4D, Scorpion III, Shotgun Flowable Herbicide
H	2,4-D, 2-EHE	2,4-D LV4, 2,4-D LV6, Agsco 400, Barrage, Double Up B+D, LV 400 2,4-D Weed Killer, Low Vol 4 Ester Weed Killer, Nufarm Esteron 99, Outlaw, Salvan, Salvo, Turret, WECO MAX, Weed Killer 4D, Weedone 650, Weedone LV4 Solventless
H	2,4-D, BEE	Crossbow, Weedone 170, Weedone 638, Weedone LV6
H	2,4-D, dieth sal	Hi-Dep, Weedar 64A
H	2,4-D, dimeth. salt	2,4-D Amine, 2,4-D Amine 4, 2,4-D Amine 6, Banvel + 2,4-D, Brash, Formula 40, Hi-Dep, Range Star, Savage, Weedar 64, Weedmaster
H	2,4-D, isoprop. salt	Landmaster BW, RT Master
H	2,4-DB, dimeth. salt	Butyrac 200
H	2,4-DP, 2-BEE	Weedone 170
I	Abamectin	Epi-mek 0.15 EC, Zephyr 0.15 EC
I	Acephate	Acephate 75 WSP, Acephate 90SP, Bracket 90, Orthene 75 S, Orthene 75 WSP, Orthene 90 WSP, Orthene 90S, Orthene 97
I	Acetamiprid	Assail 70WP, Intruder WSP
H	Acetochlor	Confidence, Degree Xtra, Field Master, Fultime Herbicide, Harness, Harness 20G, Harness Xtra, Harness Xtra 5.6L, Keystone, Keystone LA, Surpass 100, Surpass 20G, Surpass EC, TopNotch, Volley ATZ Lite
H	Alachlor	Bullet, Lariat, Lasso, Micro-Tech, Partner WDG, Saddle
I	Aldicarb	Temik 15G
H	Ametryn	Evik 80W
H	Atrazine	AAtrax 4L, AAtrax 80W, AAtrax Nine-O, Atrazine 4L, Atrazine 5L, Atrazine 80, Atrazine 90DF, Basis Gold, Bicep 6L, Bicep II, Bicep II Magnum, Bicep Lite II Magnum, Buctril + Atrazine (1+2EC), Bullet, Cinch ATZ, Degree Xtra, Extrazine 4L, Extrazine II 4L, Field Master, Fultime, G-Max Lite, Guardsman, Guardsman Max, Harness Xtra, Harness Xtra 5.6L, Keystone, Keystone LA, Lariat, LeadOff, Lexar Herbicide, Liberty ATZ, Lumax, Marksman, Rifle Plus, Shotgun Flowable Herbicide, Simazat 4L, Steadfast ATZ, Surpass 100, Volley ATZ Lite
I	Azadirachtin	Agroneem, Azatin XL Plus
I	Azinphos-methyl	Azinphos-M 50 WP, Azinphosmethyl 50W, Guthion Solupak 50%
F	Azoxystrobin	Amistar, Quadris, Uniform

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**Pesticide Class, Common Name, and Trade Name**

Class	Common Name	Trade Name
O	Bacillus cereus	Pix Plus
H	Bentazon	Basagran
I	Benzoic acid	Intrepid 2F
I	Bifenthrin	Capture 2EC, Discipline 2EC, Double Threat, Empower 2, Fanfare 2EC
F	Boscalid	Endura, Pristine
H	Bromoxynil	Buctril, Buctril + Atrazine
H	Bromoxynil heptanoat	Bronate Advanced, Buctril 4EC, WECO MAX
H	Bromoxynil octanoate	Bromox/ MCPA 2-2, Bronate, Bronate (Bronate Pro #2), Bronate Advanced, Buctril 4EC, Connect 20 WSP, Double Up B+D, WECO MAX
I	Bt subsp tenebrionis	Novodor
I	Bt subsp. kurstaki	Biobit HP WP, Dipel 2X, Dipel 4L, Dipel ES, MVP II Bioinsecticide, Thuricide HP
I	Buprofezin	Courier
H	Butoxyethyl triclopy	Crossbow
O	Cacodylic acid	Bolls-Eye, Cotton-Aide HC
F	Captan	Captan 50W
I	Carbaryl	Carbaryl 4L, Sevin 4F, Sevin 80S, Sevin SL, Sevin XLR Plus
I	Carbofuran	Furadan 4F
F	Carboxin	Prevail
H	Carfentrazone-ethyl	Aim, Aim EC, Aim EW, Shark
I	Chlorethoxyfos	Fortress 5G
O	Chloropicrin	Telone C-17
F	Chlorothalonil	Bravo 500, Bravo S, Bravo Ultrex, Bravo Weather Stik, Bravo ZN, Chloronil 720, Chlorothalonil 4L, Chlorthalonil 720 F, Echo 720, Echo 90DF, Echo Zn, Equus 500 ZN, Equus 720, Equus DF, Ridomil Gold + Bravo Liquid, Ridomil Gold/ Bravo
I	Chlorpyrifos	Chlorpyrifos 4E AG, Lorsban 15G, Lorsban 4E, Nufos 15G, Nufos 4E, Warhawk
H	Chlorsulfuron	Glean FC, Telar
H	Clethodim	Arrow 2EC, Prism, Select 2 EC, Volunteer
H	Clomazone	Command 3ME
H	Clopyralid	Accent Gold, Curtail M, Hornet, Hornet WDG, Scorpion III, Stinger, WideMatch
H	Clopyralid mono salt	Transline
H	Cloransulam-methyl	FirstRate
F	Coniothyrium minitan	Intercept or Contans WG
F	Copper amm. Complex	Copper-Count-N
F	Copper chloride hyd.	Microspense COC 50DF
F	Copper hydroxide	Champ Formula 2, Champ Formula II DF, Coppicide 50, Kocide 101, Kocide 2000, Kocide 4.5 LF, Kocide DF, Kocide LF, Nu-Cop 50DF, Ridomil Gold Copper
F	Copper resinate	Tenn-Cop 5E
F	Copper sulfate	Copper Sulfate
I	Cryolite	Kryocide (96% dry)
H	Cyanazine	Extrazine 4L, Extrazine II 4L
O	Cyclanilide	Finish, Finish 6
I	Cyfluthrin	Aztec 2.1% Granular, Aztec 4.67% Granular, Baythroid 2, Leverage 2.7
F	Cymoxanil	Curzate 60DF, Curzate M-8, Tanos
I	Cypermethrin	Ammo 2.5EC, Battery 2.5 EC, Up-Cycle 2.5 EC
O	Cytokinins	Early Harvest

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**Pesticide Class, Common Name, and Trade Name**

Class	Common Name	Trade Name
H	DSMA	DSMA Liquid, DSMA Slurry
I	Deltamethrin	Decis 1.5EC
I	Diazinon	Diazinon 4E, Diazinon 50W, Diazinon AG500
H	Dicamba	Banvel SGF, Celebrity, Fallow Master, NorthStar, Oracle Dicamba, Outlaw, Resolve SG
H	Dicamba Digly Salt	Clarity
H	Dicamba Dimet. salt	Banvel, Banvel + 2,4-D, Brash, Range Star, Sterling, Weedmaster
H	Dicamba Pot. salt	Marksman, Rifle Plus
H	Dicamba Sodium salt	Celebrity Plus, Dicamba SG, Distinct, Yukon Herbicide
H	Dicamba iso salt	Fallow Star
O	Dichloropropene	Telone C-17, Telone II
F	Dicloran	Botran 5F
I	Dicofol	Dicofol 4 E, Kelthane MF
I	Dicrotophos	Bidrin 8
I	Diflubenzuron	Dimilin 2F
H	Diflufenzopyr-sodium	Celebrity Plus, Distinct
H	Dimethenamid	Guardsman Herbicide, LeadOff
H	Dimethenamid-P	G-Max Lite, Guardsman Max, Outlook
O	Dimethipin	Harvade - 5F, Leafless
I	Dimethoate	Dimate 4EC, Dimethoate 2.67 EC, Dimethoate 400, Dimethoate 4EC, Dimethoate 5 lb., Dimethoate E-267
F	Dimethomorph	Acrobat 50WP
H	Diquat dibromide	Diquat, Reglone
I	Disulfoton	Di-Syston 15% G, Di-Syston 8
H	Diuron	Direx 4L, Direx 80DF, Diuron 4L, Diuron 80DF, Diuron 80W, Dropp Ultra, Ginstar EC, Karmex DF, Layby Pro
H	EPTC	Eptam 7-E, Eradicane 6.7E
I	Emamectin benzoate	Denim
I	Endosulfan	Endosulfan 3EC, Endosulfan 50W, Thiodan 3EC, Thionex 3EC
O	Endothall	Accelerate, Des-I-Cate, Desicate II
I	Esfenvalerate	Asana, Asana XL
O	Ethephon	Boll'd, CottonQuik, Ethephon 6, Finish, Finish 6, Prep brand Ethephon, Super Boll
I	Ethoprop	Mocap 15G, Mocap EC
I	Etoxazole	Zeal
F	Etridiazole	Terraclor Super X 18.8G, Terraclor Super X Emulsifiable

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**Pesticide Class, Common Name, and Trade Name**

Class	Common Name	Trade Name
F	Famoxadone	Tanos
F	Fenamidone	Reason 500 SC
H	Fenoxaprop	Whip 1EC
H	Fenoxaprop-p-ethyl	Silverado
I	Fenpropathrin	Danitol 2.4 EC Spray
I	Fipronil	Regent 4 SC, Regent 80 WG
F	Fluazinam	Omega 500F
H	Flufenacet	Axiom DF, DEFINE DF, DEFINE SC , Epic
H	Flumetsulam	Accent Gold, Hornet, Hornet WDG, Python WDG, Scorpion III
H	Flumiclorac-pentyl	Resource
H	Flumioxazin	Chateau, Valor
H	Fluometuron	Cotoran 4L, Cotoran 80W, Cotoran DF, Flo-Met, Flo-Met 80DF, Meturon 4L
H	Fluroxypyr	Starane EC
H	Fluroxypyr 1-methylh	Starane + Sword, WideMatch
F	Flutolanil	Moncut 50WP, Moncut 70 DF
H	Fomesafen	Flexstar
H	Foramsulfuron	Equip Corn Herbicide, Option
O	GABA	Auxigro
I	Gamma-cyhalothrin	Proaxis
O	Garlic oil	Empower
O	Gibberellic acid	Early Harvest, PGR-IV
H	Glufosinate-ammonium	Ignite, Liberty, Liberty ATZ, Rely Herbicide
H	Glyphosate	Glyphomax XRT, Sequence, Touchdown Herbicide, Touchdown Total
H	Glyphosate amm. salt	Credit Duo Extra
H	Glyphosate iso. salt	Accord, Buccaneer Herbicide, ClearOut 41 Plus, Cornerstone, Credit, Credit Duo Extra, Durango, Fallow Master, Fallow Star, Field Master, Gly Star Original, Gly Star Plus, Gly-4 Plus, Glyfos X-TRA, Glyphomax, Glyphosate 4, Glyphosate Original, Helosate Plus, Hi-Yield Killzall, Honcho, Landmaster BW, Mad Dog Glyphosate, Mirage, Protocol, RT Master, Ranger, Roundup Custom, Roundup D-Pak, Roundup Original, Roundup Original II, Roundup Original Max, Roundup Pro, Roundup Super Concentrate, Roundup Ultra, Roundup Ultra Dry, Roundup Ultra Max, Roundup Weather Max
H	Halosulfuron	Permit, Sandea, Yukon Herbicide
O	Harpin a B protein	ProAct
O	Harpin protein	Messenger STS
H	Imazamox	Raptor
H	Imazapyr	Lightning DG
H	Imazethapyr	Lightning DG, Pursuit DG, Resolve SG
I	Imidacloprid	Admire 2 Flowable, Leverage 2.7, Provado 1.6 Flowable, Trimax
O	Indolebutyric acid	Early Harvest, PGR-IV
I	Indoxacarb	Avaunt Insecticide, Steward
H	Iodosulfuron-Met-Sod	Equip Corn Herbicide
F	Iprodione	Rovral 4 Flowable
H	Isoxaflutole	Balance Pro, Balance WDG, Epic

--continued

**Pesticide Class, Common Name, and Trade Name**

Class	Common Name	Trade Name
O	Kinetin	Mepex Plus, Mepiquat Extra
O	L-Glutamic acid	Auxigro
H	Lactofen	Cobra
I	Lambda-cyhalothrin	Karate, Karate Z, Silencer, Warrior,
H	Linuron	Layby Pro, Linex 4L, Linex 50DF, Lorox DF
H	MCPA	MCPA/ Weed Rhap A4
H	MCPA 2-ethylhexyl	Bromox/ MCPA 2-2, Bronate, Bronate (Bronate Pro #2), Bronate Advanced, Curtail M, Dagger, MCP 4 Ester, Starane + Sword
H	MCPA dimethyl. salt	MCP Amine 4
H	MCPA sodium salt	Chiptox MCPA Sodium, Esteron 6E
H	MSMA	MSMA 4 Plus, MSMA 6 Plus, MSMA 6.6, MSMA 600 Plus, MSMA Plus H.C.
I	Malathion	Atrapa 5E, Fyfanon ULV 9.9lbs. (96.5%), Malathion 5 EC (56%), Malathion 5 EC (57%), Malathion 8E, Malathion ULV 9.7lbs. (95%)
O	Maleic hydrazide	Maleic Hydrazide 1.5, Royal MH-30, Royal MH-30 SG, Royal MH-30 Xtra, Super Sprout Stop
F	Mancozeb	Curzate M-8, Dithane 75DF Rainshield, Dithane DF/ 70, Dithane F-45 Rainshield, Dithane M-45, Gavel 75DF, Mancozeb 80% WP, Manex II, Manzate 200, Manzate 75DF, Manzate Flowable, Manzate Pro-Stick, Penncozeb, Penncozeb 75DF, Ridomil Gold MZ
F	Maneb	Maneb 80W, Maneb Plus Zinc, Manex
F	Mefenoxam	Ridomil Gold + Bravo Liquid, Ridomil Gold Copper, Ridomil Gold EC, Ridomil Gold MZ, Ridomil Gold PC, Ridomil Gold PC GR, Ridomil Gold Platinum, Ridomil Gold/ Bravo, Ultra Flourish, Uniform
O	Mepiquat Pentaborate	Pentia
O	Mepiquat chloride	Compact, Mepex, Mepex Plus, Mepichlor 4.2% Liquid, Mepichlor Pill, Mepiquat Chloride, Farm Saver, Mepiquat Extra, Pix, Pix Concentrate, Pix DF, Pix Plus, Pix Ultra
H	Mesotrione	Callisto, Camix, Lexar Herbicide, Lumax
F	Metalaxyl	Prevail
O	Metaldehyde	Metaldehyde 3.5G
O	Metam-potassium	K-Pam HL
O	Metam-sodium	Metam CLR 42%, Nemasol 42%, Sectagon 42, Vapam, Vapam HL
I	Methamidophos	Monitor 4, Monitor 4 Spray
I	Methomyl	Lannate LV, Lannate SP
I	Methyl parathion	Methyl Parathion 4EC, Methyl Parathion 6EC, Penncap-M
F	Metiram	Polyram 80 DF, Polyram 80WP
H	Metolachlor	Bicep 6L, Bicep II, Dual 8E, Me-Too-Lachlor, Parallel, Stalwart C
H	Metribuzin	Axiom DF, Boundary, Lexone DF, Metri DF, Sencor 4, Sencor 50WP, Sencor DF
H	Metsulfuron-methyl	Ally Extra
O	Monocarbamide dihyd.	CottonQuik

--continued

**Pesticide Class, Common Name, and Trade Name**

Class	Common Name	Trade Name
I	Naled	Dibrom 8 Miscible
H	Nicosulfuron	Accent Gold, Accent, Basis Gold, Celebrity, Celebrity Plus, Steadfast, Steadfast ATZ
H	Norflurazon	Zorial Rapid 80
I	Novaluron	Diamond 0.83EC, Rimon 0.83EC
I	Oxamyl	Vydate C-LV, Vydate L
I	Oxydemeton-methyl	Metasystox-R
H	Oxyfluorfen	Goal 2XL
F	PCNB	Blocker 10G, Blocker 4F, PCNB 2-E, Prevail, Ridomil Gold PC, Ridomil Gold PC GR, Terraclor Super X 18.8G, Terraclor Super X Emulsifiable
H	Paraquat	Cyclone, Cyclone Concentrate, Gramox Extra, Gramoxone Extra, Gramoxone Max, Gramoxone Super, Starfire
H	Pendimethalin	Pendimax 3.3, Pendimethalin, Prowl, Prowl 3.3 EC, Prowl DG, Prowl H2O
I	Permethrin	Ambush, Arctic 3.2 EC, Perm-UP 3.2 EC, Permethrin 3.2 AG, Permethrin 3.2 EC, Pounce 1.5G, Pounce 3.2EC, Waylay 3.2 AG
I	Petroleum distillate	Oil
I	Phorate	Phorate 15G, Phorate 20-G, Thimet 10-G, Thimet 15-G, Thimet 20-G
I	Phosmet	Imidan 50-WSB, Imidan 70 WSB
I	Phosphamidon	Swat
F	Phosphorous acid	Phostrol
H	Picloram K salt	Tordon 22K
H	Primisulfuron	NorthStar, Spirit
I	Profenofos	Curacron 8E
H	Prometryn	Caparol 4L, Cotton-Pro, Prometryne 4L, Suprend
F	Propamocarb hydroch.	Previcur Flex
I	Propargite	Comite, Comite II, Omite 6E
F	Propiconazole	Tilt
H	Prosulfuron	Peak, Spirit
I	Pymetrozine	Fulfill
F	Pyraclostrobin	Headline, Pristine
H	Pyraflufen-ethyl	ET
I	Pyrethrins	Evergreen Growers Spray, PyGanic EC 1.4 II, PyGanic EC 5.0 II, Rotenone/ Pyrethrins EC
O	Pyrimethanil	SCALA SC
I	Pyriproxyfen	Knack
H	Pyriithiobac-sodium	Staple

--continued

**Pesticide Class, Common Name, and Trade Name**

Class	Common Name	Trade Name
H	Quinclorac	Paramount Herbicide
H	Quizalofop-P-ethyl	Assure II
F	Rhamnolipid	Zonix Biofungicide
H	Rimsulfuron	Accent Gold, Basis, Basis Gold, Matrix, Steadfast, Steadfast ATZ
I	Rotenone	Rotenone/ Pyrethrins EC
H	S-Metolachlor	Bicep II Magnum, Bicep Lite II Magnum, Boundary, Brawl, Camix, Cinch, Cinch ATZ, Dual II Magnum, Dual II Magnum SI, Dual IIG Magnum, Dual Magnum, Lexar, Lumax, Sequence
H	Sethoxydim	Poast, Poast Plus
H	Simazine	Princep 4L, Princep 80W, Princep Caliber 90, Sim-Trol 4L, Simazat 4L, Simazine 4L, Simazine 80W, Simazine 90DF
O	Sodium chlorate	Defol 5, Defol 6, First Choice Cotton Defoliant, Poly-Foliant Liquid Defoliant, Sodium Chlorate 2lb, Sodium Chlorate 3lb, Sodium Chlorate 6lb
I	Spinosad	Entrust, SpinTor 2SC, Tracer
I	Spiromesifen	Oberon 2 SC
H	Sulfentrazone	Spartan
H	Sulfosate	Touchdown 5, Touchdown 6
F	Sulfur	Bravo S, Kumulus DF, Microspense Wettable Sulfur, Microthiol Disperss, Microthiol Special, Sulfur Flowable, Super Six, Thiolux
O	Sulfuric Acid	Sulfuric Acid Potato Vine Desiccant
I	Tebupirimphos	Aztec 2.1% Granular, Aztec 4.67% Granular
I	Tefluthrin	Force 3G
I	Terbufos	Counter, Counter 20CR
I	Thiamethoxam	Actara, Centric, Platinum, Ridomil Gold Platinum
O	Thidiazuron	DAZE 4SC, Dropp 50WP, Dropp SC, Dropp Ultra, FreeFall, Ginstar EC, Leafless, Takedown SC, Thidiazuron 50 WSB
H	Thifensulfuron	Affinity BroadSpec Herbicide, Ally Extra, Basis, Harmony Extra XP
I	Thiodicarb	Larvin 3.2
I	Tralomethrin	Scout 0.3 EC, Scout X-TRA
H	Triasulfuron	Amber
H	Tribenuron-methyl	Affinity BroadSpec Herbicide, Ally Extra, Express, Harmony Extra XP
O	Tribufos	Def 6 Emulsifiable Defoliant, Folex 6EC
F	Trichoderma harz.	PlantShield
H	Triclopyr	Remedy
F	Trifloxystrobin	Gem
H	Trifloxysulfuron-sod	Envoke, Suprend
H	Trifluralin	Treflan 5, Treflan E.C., Treflan HFP, Treflan M.T.F., Treflan TR-10, Tri-4, Trific 60DF, Trifluralin 10G, Trifluralin 4, Trilin, Trust 4EC
F	Triphenyltin hydrox.	Agri Tin, Super Tin 80WP
I	Zeta-cypermethrin	Fury 1.5 EC, Mustang, Mustang Max
F	Zoxamide	Gavel 75DF

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## Survey Instrument

The following questionnaire sections come from the ARMS 2005 Cotton Questionnaire to provide an example of the survey instrument. The questions used in the Fertilizer and Nutrient Applications section and Pesticide Applications section are the same for the corn, fall potato, oats, upland cotton, and soybean questionnaires. However, the Pest Management Practices section has some questions that are specific to each commodity being surveyed.

1. Were commercial FERTILIZERS applied to this field for the 2005 upland cotton crop?..... YES = 1

CODE	EDIT TABLE
0202	0201

2. [If COMMERCIAL fertilizer applied, continue, else go to Section D.]

3. How many commercial fertilizer applications were made to this field for the 2005 crop? (Include applications made by airplanes and custom applicators).....

NUMBER
0203

4. Now I need to record information for each application

CHECKLIST	
INCLUDE	EXCLUDE
<input type="checkbox"/> Custom applied fertilizers	<input type="checkbox"/> Micronutrients
<input type="checkbox"/> Fertilizers applied in the fall of 2004 and those applied earlier if this field was fallow in 2004.	<input type="checkbox"/> Unprocessed manure
<input type="checkbox"/> Commercially prepared manure	<input type="checkbox"/> Fertilizer applied to previous crops in this field
	<input type="checkbox"/> Lime and Gypsum/landplaster

T-TYPE	TABLE
2	001
Line 99	Office Use Lines in Table 0213

APPLICATION CODES for COLUMN 6	
1 Broadcast, ground without incorporation	5 In irrigation water
2 Broadcast, ground with incorporation	6 Chisel, injected or knifed in
3 Broadcast, by aircraft	7 Banded/Sidedressed in or over row
4 In seed furrow	8 Foliar or directed spray

LINE	2 MATERIALS USED <i>[Enter percentage analysis or actual pounds of plant nutrients applied per acre.]</i> <i>[Show Common Fertilizers in Respondent Booklet.]</i>				3 What quantity was applied per acre? <i>[Leave this column blank if actual nutrients were reported]</i>	4 [Enter material code.] 1 Pounds 12 Gallons 19 Pounds of actual nutrients	5 When was this applied? 1 In the fall before seeding 2 In the spring before seeding 3 At seeding 4 After seeding	6 How was this applied? <i>[Refer to code list above]</i>	7 How many acres were treated in this application?  ACRES
	N Nitrogen	P <sub>2</sub> O <sub>5</sub> Phosphate	K <sub>2</sub> O Potash	S Sulfur					
	01	0205	0206	0207					
02	0205	0206	0207	0214	0208	0209	0210	0211	0212
03	0205	0206	0207	0214	0208	0209	0210	0211	0212
04	0205	0206	0207	0214	0208	0209	0210	0211	0212
05	0205	0206	0207	0214	0208	0209	0210	0211	0212
06	0205	0206	0207	0214	0208	0209	0210	0211	0212
07	0205	0206	0207	0214	0208	0209	0210	0211	0212
08	0205	0206	0207	0214	0208	0209	0210	0211	0212

T - TYPE	TABLE	LINE
0	000	00

Now I have some questions about all the pesticides used on this field for the 2005 upland cotton crop including both custom applications and applications made by this operation.

1. Were any herbicides, insecticides, fungicides or other chemicals used on the upland cotton crop for the 2005 crop?..... YES = 1

[Probe for applications made in the fall of 2004 (and those made earlier if this field was fallow).]  
[If no pesticides applied, go to Section E.]

CODE	EDIT TABLE
0302	0301

Include defoliant, fungicides, herbicides, insecticides, and pesticides.  
Include biological and botanical pesticides.

Exclude fertilizers reported earlier and seed treatments.

T - TYPE	TABLE
3	001
LINE 99	OFFICE USE LINE IN TABLE 0319

CHEMICAL PRODUCT NAME	LINE	2	3	4	5	6	OR	7	8
		What products were applied to this field? [Show product codes from Respondent Booklet.]	Was this product bought in liquid or dry form? [Enter L or D]	Was this part of a tank mix? [If tank mix, enter line number of first product in mix.]	When was this applied? 1 BEFORE planting 3 AT planting 4 AFTER planting	How much was applied per acre per application?	What was the total amount applied per application in this field?	[Enter unit code.] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams	
	01	0305		0306	0307	0308		0309	0310
	02	0305		0306	0307	0308		0309	0310
	03	0305		0306	0307	0308		0309	0310
	04	0305		0306	0307	0308		0309	0310
	05	0305		0306	0307	0308		0309	0310
	06	0305		0306	0307	0308		0309	0310
	07	0305		0306	0307	0308		0309	0310
	08	0305		0306	0307	0308		0309	0310
	09	0305		0306	0307	0308		0309	0310
	10	0305		0306	0307	0308		0309	0310
	11	0305		0306	0307	0308		0309	0310
	12	0305		0306	0307	0308		0309	0310
	13	0305		0306	0307	0308		0309	0310
	14	0305		0306	0307	0308		0309	0310

2. [For pesticides not listed in Respondent Booklet, specify---]

LINE	Pesticide Type (Herbicide, Insecticide, Fungicide, etc.)	EPA No. or Trade name And Formulation	Form Purchased (Liquid or Dry)	Where Purchased [ASK only if EPA No. cannot be reported.]

APPLICATIONS CODES for column 9	
1 Broadcast, ground without incorporation	6 Chisel/Injected or Knifed in
2 Broadcast, ground with incorporation	7 Banded in or over row
3 Broadcast, by aircraft	8 Foliar or directed spray
4 In Seed furrow	9 Spot treatments
5 In Irrigation water	



[If column 9 = 9, then column 6 and column 10 must be blank]

LINE	9	10	11
	How was this product applied? [Enter code from above.]	How many acres in this field were treated with this product?  ACRES	How many times was it applied?  NUMBER
01	0311	0312	0313
02	0311	0312	0313
03	0311	0312	0313
04	0311	0312	0313
05	0311	0312	0313
06	0311	0312	0313
07	0311	0312	0313
08	0311	0312	0313
09	0311	0312	0313
10	0311	0312	0313
11	0311	0312	0313
12	0311	0312	0313
13	0311	0312	0313
14	0311	0312	0313

Now I have some questions about your pest management decisions and practices used on this field for the 2005 upland cotton crop. By pests, we mean WEEDS, INSECTS, and DISEASES.

T-TYPE	TABLE	LINE
0	000	00

1. [Enumerator Action: Were PESTICIDE APPLICATIONS reported in Section D?]

- YES - [Continue.]       NO - [Go to item 10.]

		CODE
2.	Was weather data used to assist in determining either the need or when to make pesticide applications?.....	0800
	YES = 1	
3.	Were any biological pesticides such as Bt ( <i>Bacillus thuringiensis</i> ), insect growth regulators neem or other natural/biological based products sprayed or applied to manage pests in this field?.....	0801
	YES = 1	
4.	Were pesticides with different mechanisms of action rotated or tank mixed for the primary purpose of keeping pests from becoming resistant to pesticides?.....	0802
	YES = 1	

10. In 2005, how was this field primarily scouted for insects, weeds, diseases, and/or beneficial organisms---

- |   |  |
|---|--|
| 1 | By conducting general observations while performing routine tasks? [Enter code 1 and go to item 13.]       |
| 2 | By deliberately going to the field specifically for scouting activities? [Enter code 2 and go to item 11.] |
| 3 | This field was not scouted. [Enter code 3 and go to item 18.]  |

CODE
0808

11. Was an established scouting process used (systematic sampling, recording counts, etc.) or were insect traps used in this field?.....

YES = 1

CODE
0809

12. Was scouting for pests done in this field due to---

- a. a pest advisory warning?..... YES = 1
- b. a pest development model?..... YES = 1

CODE
0810
0811

1	YES = 1	3
		[If column 1 = YES, ask---] Who did the majority of the scouting for [column 1]---
		1 Operator, partner or family member 2 An employee 3 Farm supply or chemical dealer 4 Independent crop consultant or commercial scout
		CODE
13. Was this upland cotton field scouted for--		
a. weeds?.....	0812	0814
b. insects or mites?.....	0815	0817
c. diseases?.....	0827	0829

		CODE
15.	Were written or electronic records kept for this field to track the activity or numbers of weeds, insects or diseases?.....	0832
	YES = 1	
16.	Was scouting data compared to published information on infestation thresholds to determine when to take measures to manage pests in field?.....	0833
	YES = 1	
17.	Did you use field mapping or previous weed problems to assist you in making weed management decisions?.....	0834
	YES = 1	

		CODE
18. Were floral lures, attractants, repellants, pheromone traps or other biological pest controls used on this field? .....	YES = 1	0835
19. Did you do any of the following other type(s) of pest management for the specific purpose of managing or reducing the spread of pests in this field? [Enter code "1" for all that apply.]		
a. Use the services of a diagnostic laboratory for pest identification or soil plant tissue pest analysis for this field? .....	YES = 1	0836
b. Plow down crop residues (using conventional tillage)? .....	YES = 1	0837
c. Remove crop residue? .....	YES = 1	0838
d. Rotate crops in this field during the past 3 years? .....	YES = 1	0839
e. Maintain ground covers, mulches, or other physical barriers? .....	YES = 1	0840
f. Choose crop variety because of specific resistance to certain pest? .....	YES = 1	0841
g. Use no-till or minimum till? .....	YES = 1	0842
h. Plan planting locations to avoid cross infestation of pests? .....	YES = 1	0843
i. Adjust planting or harvesting dates? .....	YES = 1	0844
j. Chop, spray, mow, plow, or burn field edges, lanes, ditches, roadways, or fences lines? .....	YES = 1	0845
k. Clean equipment and field implements after completing field work to reduce the spread of pests? .....	YES = 1	0846
l. Adjust row spacing, plant density or row directions? .....	YES = 1	0847
m. Release beneficial organisms (insects, nematodes, fungi)? .....	YES = 1	0848
n. Grow a trap crop? .....	YES = 1	0849
20. Were water management practices such as irrigation scheduling, controlled drainage, or treatment of retention water used on this field to manage for pests or toxic producing fungi and bacteria (i.e. aflatoxin)? .....	YES = 1	0851

Completion Code for Pest Management Data	
1- Incomp/R	0340

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