



USDA  
National  
Agricultural  
Statistics  
Service

# South Dakota 2005 AGRICULTURAL CHEMICAL USAGE

Released July 2006

**OVERVIEW:** The agricultural chemical use estimates in this report are based on data compiled from the Agricultural Resources Management Study (ARMS) conducted during the fall of 2005. All results refer to on-farm use of commercial fertilizers and pesticides on the 2005 South Dakota corn and oat crops.

## CORN

**SOUTH DAKOTA:** Nitrogen was applied to 95 percent of South Dakota's 4.45 million corn acres in 2005. When compared to other states (IA, MN, NE and ND), South Dakota had one of the fewest number of nitrogen applications, at 1.4; however, the rate of 79 pounds per acre was similar to other states. Phosphate was applied to 79 percent of the corn acreage, averaging 1.1 applications per acre with a rate of 40 pounds per acre. Potash was applied to 37 percent of the acreage, averaging 1.0 applications per acre, with a rate of 26 pounds per acre.

Herbicide was applied on 100 percent of the acreage. Glyphosate iso. salt was the most popular herbicide for corn, treating 71 percent of the acres at the rate of 0.663 pounds per acre. Atrazine was also a popular chemical, with applications made on 33 percent of the state's corn, at a rate of 0.599 pounds per acre. Insecticides were applied to 12 percent of the states corn acreage.

**NATIONAL:** Nitrogen was applied to 96 percent of the 2005 corn planted acreage in the program states 1/. Corn growers used an average of 1.8 applications per acre while applying 77 pounds of nitrogen per treatment. In the program states, 81 percent of the corn received a phosphate application, while potash was applied to 65 percent of the planted acreage.

Herbicides were applied to 97 percent of the corn acres in 2005. Atrazine was the most widely used herbicide, with 66 percent of the acres being treated at a rate of 1.028 pounds per acre. Glyphosate iso. salt was the second most widely applied herbicide, with 31 percent of the planted acres treated. In 2005, 23 percent of the corn planted acreage was treated with insecticides, with Tefluthrin, Cyfluthrin and Tebupirimphos being the most widely used insecticides.

1/ Program states include 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, SOUTH DAKOTA, SELECTED YEARS**  
**Acreage, Percent Receiving Fertilizer and Chemicals, Number of Applications, Rate of Applications, 2005 1/**

Year	Acres Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide
		Area Applied	Appli-cations	Rate per Application	Area Applied	Appli-cations	Rate per Application	Area Applied	Appli-cations	Rate per Application	Area Applied	Area Applied
	(1,000)	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Percent
1999	3,600	98	1.5	60	88	1.1	37	49	1.0	24	95	18
2000	4,300	99	1.5	63	92	1.0	36	39	1.0	21	100	15
2001	3,800	95	1.5	72	69	1.0	43	32	1.0	29	96	8
2003	4,400	92	1.3	71	78	1.1	42	25	1.1	23	96	2/
2005	4,450	95	1.4	79	79	1.1	40	37	1.0	26	100	12

1/ Data for South Dakota was not collected in 2002 and 2004. 2/ Insufficient reports to publish data for one or more pesticide classes.

**CORN, SELECTED STATES**  
**Acreage, Percent Receiving Fertilizer and Chemicals, Number of Applications, Rate of Application, 2005**

State	Acres Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide
		Area Applied	Appli-cations	Rate per Application	Area Applied	Appli-cations	Rate per Application	Area Applied	Appli-cations	Rate per Application	Area Applied	Area Applied
	(1,000)	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Number	Lbs/Acre	Percent	Percent
IA	12,800	92	1.4	98	70	1.1	60	71	1.0	80	96	11
MN	7,300	94	1.7	81	86	1.2	49	77	1.1	68	100	12
NE	8,500	99	2.2	63	75	1.2	32	22	1.3	15	98	20
ND	1,410	99	1.9	65	94	1.1	40	38	1.0	24	99	1/
SD	4,450	95	1.4	79	79	1.1	40	37	1.0	26	100	12
Total	76,470	96	1.8	77	81	1.1	51	65	1.1	78	97	23

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



**CORN, SOUTH DAKOTA  
Frequency and Extent of Chemical Usage by Active Ingredient, 2005 1/**

Active Ingredient	Common Trade Name	Area Applied	Applications		Rate per Application	Total Applied
			Percent	Number		
Acetochlor 2/	Harness, Surpass	19	1.0	1.286	1,109	
Atrazine	Atrazine	33	1.0	0.599	893	
Dicamba, Digly Salt	Clarity	2	1.0	0.220	21	
Dicamba, Sodium Salt 2/	Banvel, Sterling	3	1.0	0.114	13	
Diflufenzopyr-sodium	Celebrity Plus, Distinct	3	1.0	0.045	5	
Glufosinate-ammonium	Liberty, Rely	4	1.0	0.399	62	
Glyphosate iso. salt 2/	Roundup, Touchdown, Clearout, Credit	71	1.4	0.663	3,030	
Isoxaflutole	Balance	7	1.0	0.058	17	
Mesotrione 2/	Callisto	11	1.0	0.101	50	
Nicosulfuron 2/	Accent	4	1.0	0.023	4	
Rimsulfuron 2/	Basis	4	1.0	0.011	2	
S- Metolachlor 2/	Dual II Magnum and Cinch	6	1.0	1.256	329	

1/ Planted area in 2005 for South Dakota was 4.45 million acres. 2/ Chemical marketed under several trade names.

## OATS

**SOUTH DAKOTA:** Nitrogen was applied to 64 percent of South Dakota's 380,000 oat acres in 2005. Growers averaged 1.0 application at a rate of 48 pounds per acre. Phosphate was applied to 46 percent of the state's oats, at a rate of 32 pounds per acre. Potash was applied to only 17 percent of the acreage, with an average application rate of 25 pounds per acre.

In 2005, 37 percent of South Dakota's oat crop was treated with herbicide. The most popular herbicide used was 2,4-D, dimeth. salt which was applied to 14 percent of the acreage. Glyphosate iso. salt was the second most popular herbicide, applied to 11 percent of the oat acres.

**NATIONAL:** Nitrogen was applied to 56 percent of the 2005 oats planted acreage in the program states 1/. Oat growers in the program states applied nitrogen on average 1.2 times per

acre, putting down 44 pounds of nitrogen per treatment. Phosphate was applied to 40 percent of the plant acreage, while 28 percent of the acreage received potash applications.

Herbicides were applied to 31 percent of the oat acreage in 2005. 2,4-D, dimeth salt was the most widely applied herbicide with 9 percent of the acreage treated. Glyphosate iso. salt and 2,4-D,2-EHE were the second most widely used herbicide, applied to 5 percent of the planted oat acreage in the program states. In 2005, 4 percent of the oats planted acreage was treated with insecticides.

1/ Program states include California, Idaho, Illinois, Iowa, Kansas, Michigan, Minnesota, Montana, Nebraska, New York, North Dakota, Pennsylvania, South Dakota, Texas, and Wisconsin.

### OATS, SOUTH DAKOTA

#### Acreage, Percent Receiving Fertilizer and Chemicals, Number of Applications, Rate of Application, 2005 1/

Year	Acres Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide
		Area Applied	Applications	Rate per Application	Area Applied	Applications	Rate per Application	Area Applied	Applications	Rate per Application	Area Applied	Area Applied
2005	(1,000) 380	Percent 64	Number 1.0	Lbs/Acre 48	Percent 46	Number 1.0	Lbs/Acre 32	Percent 17	Number 1.0	Lbs/Acre 25	Percent 37	Percent 1/

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

### OATS, SELECTED STATES

#### Acreage, Percent Receiving Fertilizer and Chemicals, Number of Applications, Rate of Application, 2005

Year	Acres Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide
		Area Applied	Applications	Rate per Application	Area Applied	Applications	Rate per Application	Area Applied	Applications	Rate per Application	Area Applied	Area Applied
IA	210	31	1.1	26	30	1.0	39	40	1.0	82	3	1/
MN	310	28	1.0	47	22	1.0	36	28	1.0	68	21	1/
NE	150	68	1.0	43	24	1.0	35	7	1.0	14	7	1/
ND	490	71	1.3	34	49	1.0	23	9	1.0	17	54	1/
SD	380	64	1.0	48	46	1.0	32	17	1.0	25	37	1/
Total	3,565	56	1.2	44	40	1.0	34	28	1.0	49	31	4

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

### OATS, SOUTH DAKOTA

#### Frequency and Extent of Chemical Usage by Active Ingredient, 2005 1/

Active Ingredient	Common Trade Name	Area Applied	Applications		Rate per Application	Total Applied
			Percent	Number		
2, 4-D, dimeth. Salt	2/	14	1.0	0.190	10	
Bromoxynil octanoate 2/	Buctril, Moxy, Bromox, Broclean, Bromil, Box	3	1.0	0.351	3	
Glyphosate iso. Salt 2/	Roundup, Touchdown, Clearout, Credit	11	1.0	0.413	18	
MCPA, 2-ethylhexyl	2/	4	1.0	0.313	5	
Thifensulfuron 2/	Harmony, Harmony GT	5	1.0	0.012	/3	
Tribenuron-methyl 2/	Express	5	1.0	0.006	/3	

1/ Planted acreage in 2005 for South Dakota was 380,000 acres. 2/ Chemical marketed under several trade names. 3/ Total Applied is less than 500 lbs.