

MINNESOTA FERTILIZER USAGE

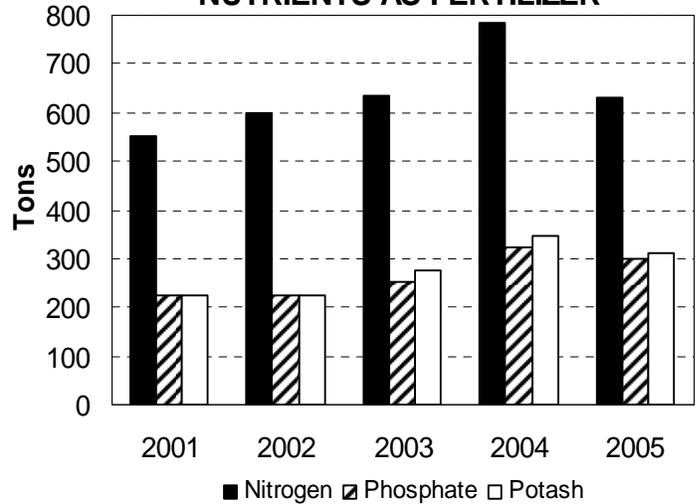
Minnesota fertilizer consumption totaled 2.4 million tons for the year ending June 30, 2005, a decrease of 12 percent from the previous year.

Usage of the primary nutrients is shown on the chart; nitrogen decreased 19 percent from 2004, phosphate (P₂O₅) usage decreased 8 percent, and potash (K₂O) usage decreased 10 percent.

Fertilizer consumption represents all commercial fertilizer sold or shipped for farm and non-farm use as fertilizer.

Source: The Association of American Plant Food Control Officials, University of Kentucky

MINNESOTA'S USAGE OF PRIMARY NUTRIENTS AS FERTILIZER



2005 OAT CHEMICAL USAGE

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.

OATS: Agricultural Chemical Applications, Minnesota, 2005 1/

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

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

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

State	Planted Acreage 1,000 Acres	Nitrogen		Phosphate		Potash		Sulfur	
		Percent	Mil. Lbs.	Percent	Mil. Lbs.	Percent	Mil. Lbs.	Percent	Mil. Lbs.
IL 1/	60	15	0.4	12	0.4	26	1.7	--	--
IA 1/	210	31	1.8	30	2.5	40	6.9	--	--
MI 1/	90	82	2.6	72	2.8	77	3.4	--	--
MN	310	28	4.2	22	2.4	28	5.9	5	0.2
NE	150	68	4.5	24	1.3	7	0.1	5	--
ND	490	71	15.8	49	5.7	9	0.7	5	0.1
SD 1/	380	64	11.8	46	5.6	17	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

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

2/ Totals for 15 reporting states: CA, ID, IL, IA, KS, MI, MN, MT, NE, NY, ND, PA, SD, TX, WI.

2005 CORN CHEMICAL USAGE

Nitrogen was applied to 96 percent of the 2005 corn planted acreage in the 19 Program States. 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 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.

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

State	Planted Acreage	Nitrogen		Phosphate		Potash		Sulfur	
		Percent	Mil. Lbs.	Percent	Mil. Lbs.	Percent	Mil. Lbs.	Percent	Mil. Lbs.
	<u>1,000 Acres</u>								
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
MN	7,300	94	953.9	86	378.1	77	400.3	9	8.2
ND	1,410	99	169.3	94	58.8	38	13.3	8	0.9
SD	4,450	95	477.7	79	154.2	37	41.9	13	5.5
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

1/ Refers to the 19 major corn states: CO, GA, IL, IN, IA, KS, KY, MI, MN, MO, NE, NY, NC, ND, OH, PE, SD, TX and WI.

CORN: Frequency and Extent of Usage by Active Ingredient, Minnesota, 2005 1/

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Year	Total Applied
	Percent	Number	Lbs. per Acre	Lbs. per Acre	1,000 Pounds
Herbicides					
Acetochlor	33	1.0	1.271	1.271	3,095
Atrazine	41	1.1	0.490	0.490	1,660
Clopyralid	6	1.0	0.104	0.104	42
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	1.054	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
Glufosinate	5	1.1	0.722	0.722	270
Glyphosate iso. salt	44	1.2	0.738	0.738	2,853
Mesotrione	17	1.0	0.099	0.099	125
Nicosulfuron	12	1.0	0.025	0.025	22
Rimsulfuron	9	1.0	0.011	0.011	7
S-Metolachlor	8	1.0	1.164	1.164	681
Insecticides					
Chlorpyrifos	2	1.0	0.874	0.874	107
Cyfluthrin	5	1.0	0.016	0.016	7
Tebupirimphos	5	1.0	0.112	0.112	43
Tefluthrin	2	1.0	0.109	0.109	16

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

2005 FALL POTATO CHEMICAL USAGE

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 million 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.

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 the most commonly used fungicide. It was applied to 61 percent of the planted acres at a rate of 4.215 pounds per acre per crop year.

FALL POTATOES: Fertilizer Use by State, 2005 Percent of Acres Treated and Total Applied

State	Planted Acreage	Nitrogen		Phosphate		Potash		Sulfur	
		1,000 Acres	Percent	Mil. Lbs.	Percent	Mil. Lbs.	Percent	Mil. Lbs.	Percent
ID	325	100	72.9	99	56.9	92	40.0	82	21.7
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
WI	68	100	17.9	99	9.1	99	20.5	72	4.1
Total 1/	845	99	180.3	98	132.5	92	145.4	72	41.3

1/ Refers to the 8 major potato states: CO, ID, ME, MI, MN, ND, WA, and WI.

FALL POTATOES: Frequency and Extent of Usage by Active Ingredient, Minnesota, 2005 1/

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Year	Total Applied
	Percent	Number	Lbs. per Acre	Lbs. per Acre	1,000 Pounds
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	2/
Imidacloprid	59	1.1	0.201	0.217	6
Thiamethoxam	13	1.3	0.040	0.050	2/
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

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

2/ Total applied is less than 500 lbs.