



Minnesota Ag News – Chemical Use

Oats: Fall 2015



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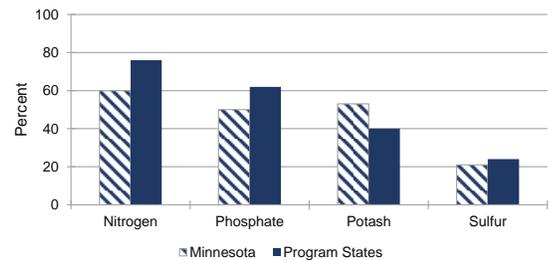
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The 2015 Agricultural Chemical Use Survey of oat producers collected data about fertilizer and pesticide use as well as pest management practices in growing oats.

Fertilizer Use

Fertilizer refers to a soil-enriching input that contains one or more plant nutrients, primarily nitrogen (N), phosphate (P₂O₅), and potash (K₂O). Of the three primary macronutrients, nitrogen was the most widely used on oats planted in Minnesota according to the latest USDA, National Agricultural Statistics Service – *Agricultural Chemical Use* report. Farmers applied nitrogen to 60 percent of planted acres at an average rate of 49 pounds per acre per year. Macronutrients phosphate and potash were applied to 50 and 53 percent of the oat acres, at an average rate of 26 and 45 pounds per acre per year, respectively. The secondary macronutrient, sulfur, was applied to 21 percent of acres planted to oats.

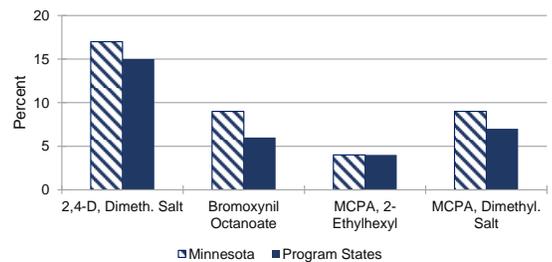
Fertilizers: Percent of Oat Planted Acres Treated - Minnesota



Pesticide Use

The pesticide active ingredients used on oats are classified in this report as herbicides (targeting weeds), insecticides (targeting insects), fungicides (targeting fungal disease) and other chemicals (targeting all other pests and other materials, including extraneous crop foliage). Herbicide active ingredients were applied to 43 percent of the oat acres planted in Minnesota. 2,4-D, dimethylamine salt was the most widely used pesticide overall, and was the active ingredient with the greatest total amount.

Herbicides: Percent of Oat Planted Acres Treated - Minnesota



	Minnesota			Program States ¹		
	Planted acres treated (%)	Rate applied per year (pounds per acre)	Total pounds applied (1,000 pounds)	Planted acres treated (%)	Rate applied per year (pounds per acre)	Total pounds applied (1,000 pounds)
Fertilizer Use on Oats						
Nitrogen	60	49	8,300	76	51	92,500
Phosphate	50	26	3,600	62	33	49,600
Potash	53	45	6,700	40	36	34,200
Sulfur	21	12	700	24	12	6,900
Pesticide Use on Oats						
HERBICIDE:						
2,4-D, Dimeth. Salt	17	0.604	29	15	0.473	166
Bromoxynil Octanoate	9	0.331	8	6	0.226	34
MCPA, 2-Ethylhexyl	4	0.308	4	4	0.329	32
MCPA, Dimethyl. Salt	9	0.408	11	7	0.373	58
TOTAL HERBICIDE	43		66	51		693
INSECTICIDE:						
TOTAL INSECTICIDE	(D)		(D)	4		30

(D) Withheld to avoid disclosing data for individual operations.

¹The 13 program states surveyed about oats in the 2015 ARMS were Illinois, Minnesota, Kansas, Michigan, Minnesota, Nebraska, New York, North Dakota, Ohio, Pennsylvania, South Dakota, Texas and Wisconsin.

Pest Management Practices: Rotating crops during the past 3 years was the top pest management practice for oat acreage in Minnesota.

Pest Management Practices	Minnesota		Program States ¹	
	% of area planted	% of operations	% of area planted	% of operations
Avoidance				
Crop or plant variety chosen for specific pest resistance	18	21	26	22
Planting locations planned to avoid cross infestation of pests	7	7	14	12
Planting or harvesting dates adjusted	11	10	17	15
Rotated crops during past 3 years	87	86	77	76
Row spacing, plant density, or row directions adjusted	14	10	15	13
Monitoring				
Diagnostic laboratory services used for pest detection via soil or plant tissue analysis	0	0	4	2
Field mapping data used to assist decisions	6	1	5	2
Scouted -				
-established process used	20	7	8	5
-for pests due to a pest advisory warning	2	1	3	2
-for pests due to a pest development model	3	2	3	3
-for pests or beneficial organisms-not scouted	29	38	23	33
-for pests or beneficial organism by conducting gen. observations while performing routine tasks	21	30	35	35
-for pests or beneficial organism by deliberately going to the crop acres or growing areas	51	32	42	32
Scouted for diseases	53	39	51	38
-by employee	1	(Z)	2	1
-by farm supply company or chemical dealer	3	4	5	4
-by independent crop consultant or commercial scout	2	3	4	3
-by operator, partner, or family member	93	92	89	93
Scouted for insects & mites	47	35	49	37
-by employee	1	(Z)	2	1
-by farm supply company or chemical dealer	5	8	6	4
-by independent crop consultant or commercial scout	2	3	4	3
-by operator, partner, or family member	91	89	88	92
Scouted for weeds	71	62	76	66
-by employee	1	(Z)	2	1
-by farm supply company or chemical dealer	5	5	5	3
-by independent crop consultant or commercial scout	3	3	3	2
-by operator, partner, employee, or family member	91	91	90	94
Weather data used to assist decisions	28	14	26	20
Written or electronic records kept to track pest activity	17	10	10	6
Prevention				
Beneficial insect or vertebrate habitat maintained	4	4	7	6
Crop residues removed or burned down	3	3	8	8
Equipment & implements cleaned after field work to reduce spread of pests	57	47	43	38
Field edges, ditches, or fence lines were chopped, sprayed, mowed, plowed, or burned	50	44	43	34
Field left fallow previous year to manage insects	1	2	(Z)	(Z)
Flamer used to kill weeds	0	0	(Z)	(Z)
No-till or minimum till used	35	39	48	41
Plowed down crop residue using conventional tillage	53	52	41	47
Seed treated for insect or disease control after purchase	12	10	15	12
Water management practices used	0	0	(Z)	1
Suppression				
Beneficial organisms applied or released	0	0	1	(Z)
Biological pesticides applied	0	0	(Z)	(Z)
Buffer strips or border rows maintained to isolate organic from non-organic crops	4	4	6	6
Floral lures, attractants, repellants, pheromone traps, or biological pest controls used	0	0	1	1
Ground covers, mulches, or other physical barriers maintained	35	31	44	39
Pesticides with different mechanisms of actions to keep pest from becoming resistant to pesticides	0	0	7	3
Scouting data compared to published information to assist decisions	8	3	7	5
Trap crop grown to manage insects	0	0	(Z)	(Z)

(Z) Less than half the rounding unit.

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