



Wisconsin Ag News – Chemical Use

Corn: Fall 2021

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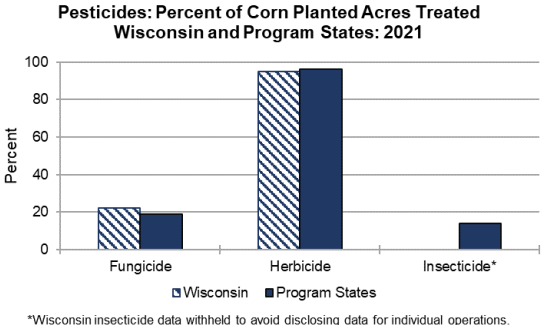
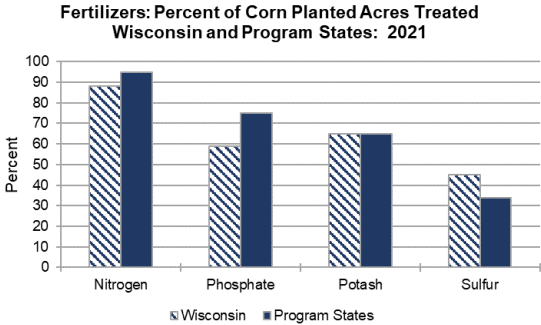
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The National Agricultural Statistics Service (NASS) Agricultural Chemical Use Program is the U.S. Department of Agriculture's official source of statistics about on-farm and post-harvest fertilizer and pesticide use and pest management practices.

In the fall of 2021, NASS collected data for the 2021 crop year, the one-year period beginning after the 2020 harvest and ending after the 2021 harvest, about chemical use and pest management practices used on corn production. The data was collected as part of the Agricultural Resource Management Survey (ARMS) and the results are presented here.

Fertilizer Use: Of the three primary macronutrients, nitrogen (N) was the most widely used on corn. Wisconsin farmers applied nitrogen to 88 percent of planted acres at an average rate of 142 pounds per acre per year. Macronutrients phosphate (P₂O₅) and potash (K₂O) were applied to more than half of corn acres, at an average rate of 39 and 78 pounds per acre per year, respectively. The secondary macronutrient, sulfur (S), was applied to 45 percent of acres planted to corn.

Pesticide Use: Herbicide active ingredients were applied to 95 percent of the corn acres planted in Wisconsin. Atrazine was the most widely used pesticide overall applied to 64 percent of the planted acres. S-Metolachlor was the active ingredient with the greatest total amount applied in Wisconsin. Fungicide active ingredients were applied to 22 percent of corn acres planted.



Pesticide Use on Corn - Wisconsin and Program States: 2021

Active ingredient	Wisconsin			Program states ¹		
	Planted acres treated	Yearly rate	Total applied	Planted acres treated	Yearly rate	Total applied
	(percent)	(lbs per acre)	(1,000 lbs)	(percent)	(lbs per acre)	(1,000 lbs)
Fungicide						
Total ²	22		169	19		3,454
Herbicide ³						
Acetochlor	23	1.144	1,024	34	1.415	41,675
Atrazine	64	0.495	1,248	65	1.054	59,180
Bicyclopyrone	17	0.037	25	9	0.036	278
Clopyralid mono salt	13	0.067	35	3	0.076	214
Dicamba, sodium salt	15	0.076	44	5	0.104	446
Diflufenzopyr-sodium	12	0.029	14	4	0.043	164
Flumetsulam	15	0.026	16	7	0.029	167
Glyphosate iso. salt	52	0.825	1,684	41	0.934	32,934
Glyphosate pot. salt	31	1.018	1,236	25	1.237	26,812
Mesotrione	53	0.108	225	47	0.132	5,343
S-Metolachlor	49	0.978	1,903	27	1.154	27,002
Total ²	95		9,229	96		237,818
Insecticide						
Total ²	(D)		(D)	14		1,099

(D) Withheld to avoid disclosing data for individual operations.
¹ The 19 program states surveyed about corn in the 2021 ARMS were Colorado, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, New York, North Carolina, North Dakota, Ohio, Pennsylvania, South Dakota, Texas, and Wisconsin.
² Total Fungicide, Herbicide, and Insecticide include pesticides not listed in the table.
³ Given the large number of herbicides applied to row crops, active ingredients applied to less than 10 percent of planted acres in Wisconsin are not included in this table but can be found at www.nass.usda.gov.

Fertilizer Use on Corn - Wisconsin and Program States: 2021

Active ingredient	Wisconsin			Program states ¹		
	Planted acres treated	Yearly rate	Total applied	Planted acres treated	Yearly rate	Total applied
	(percent)	(lbs per acre)	(1,000 lbs)	(percent)	(lbs per acre)	(1,000 lbs)
Nitrogen	88	142	492,900	95	150	12,299,300
Phosphate	59	39	90,800	75	64	4,132,400
Potash	65	78	199,600	65	77	4,291,200
Sulfur	45	25	45,000	34	19	537,000

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Plant variety chosen for specific pest resistance was the top pest management practice on corn acreage in Wisconsin.

Pest Management Practices on Corn - Wisconsin and Program States: 2021

	Wisconsin		Program states ¹	
	% of area planted	% of operations	% of area planted	% of operations
Avoidance				
Crop or plant variety chosen for specific pest resistance	66	50	60	54
Planting locations planned to avoid cross infestation of pests	20	17	12	11
Planting or harvesting dates adjusted	7	8	11	10
Rotated crops during past 3 years	62	61	79	77
Row spacing, plant density, or row directions adjusted	8	8	8	8
Monitoring				
Diagnostic laboratory services used for pest detection via soil or plant tissue analysis	4	2	5	4
Field mapping data used to assist decisions	26	12	18	12
Scouted -				
established process used	11	4	17	12
for pests due to a pest advisory warning	14	6	11	11
for pests due to a pest development model	13	6	8	8
for pests or beneficial organisms-not scouted	23	28	11	15
for pests or beneficial organism by conducting general observations while performing routine tasks	22	33	29	33
for pests or beneficial organism by deliberately going to the crop acres or growing areas	55	38	60	53
Weather data used to assist decisions	58	56	58	55
Written or electronic records kept to track pest activity	47	30	36	30
Prevention				
Beneficial insect or vertebrate habitat maintained	10	8	6	7
Crop residues removed or burned down	12	12	7	9
Equipment and implements cleaned after field work to reduce spread of pests	25	20	41	38
Field edges, ditches, or fence lines chopped, sprayed, mowed, plowed, or burned	30	26	42	39
Field left fallow previous year to manage insects	0	0	1	2
Flamer used to kill weeds	3	1	(Z)	1
No-till or minimum-till used	52	49	59	61
Plowed down crop residue using conventional tillage	32	33	27	26
Seed treated for insect or disease control after purchase	10	11	14	12
Water management practices used	0	0	1	1
Suppression				
Beneficial organisms applied or released	0	0	(Z)	(Z)
Biological pesticides applied	4	2	5	5
Buffer strips or border rows maintained to isolate organic from non-organic crops	9	8	2	4
Floral lures, attractants, repellants, pheromone traps, or biological pest controls used	0	0	(Z)	(Z)
Ground covers, mulches, or other physical barriers maintained	39	30	37	33
Pesticides with different mechanisms of action to keep pest from becoming resistant to pesticides	41	37	43	38
Scouting data compared to published information to assist decisions	24	15	23	22
Trap crop grown to manage insects	1	1	1	(Z)

(Z) Less than half of the unit shown.
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