United States Department of Agriculture
National Agricultural Statistics Service

Wisconsin Ag News – Chemical Use
Barley: Fall 2023

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fax (855) 271-9802 · www.nass.usda.gov/wi
Cooperating with Wisconsin Department of Agriculture, Trade and Consumer Protection

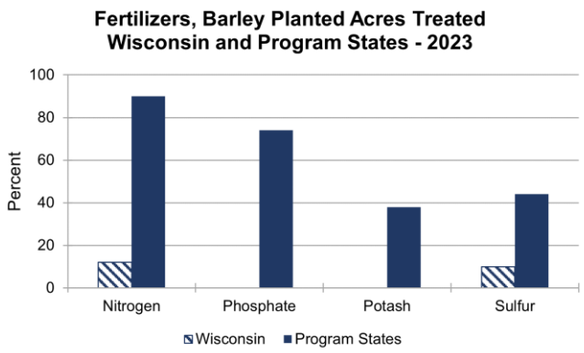
May 13, 2024 - For Immediate Release *Media Contact: Greg Bussler*

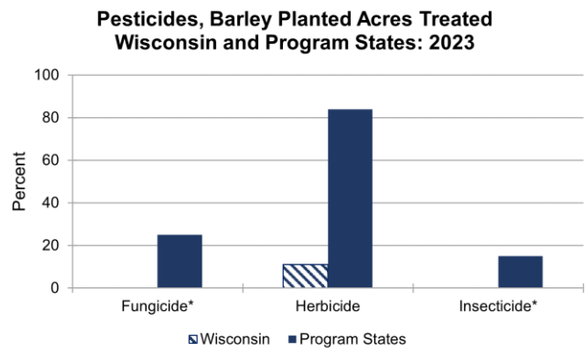
The National Agricultural Statistics Service (NASS) Agricultural Chemical Use Program is the U.S. Department of Agriculture's official source of statistics about on-farm and post-harvest fertilizer and pesticide use and pest management practices.

In the fall of 2023, NASS collected data for the 2023 crop year, the one-year period beginning after the 2022 harvest and ending with the 2023 harvest, about chemical use and pest management practices used on barley 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 was the most widely used on barley acres planted in Wisconsin. Farmers applied nitrogen to 12 percent of planted acres at an average rate of 46 pounds per acre per year. The secondary macronutrient, sulfur, was applied to 10 percent of acres planted to barley.

Pesticide Use: Herbicide active ingredients were applied to 11 percent of the barley acres planted.





Pesticide Use on Barley - Wisconsin and Program States: 2023

Active ingredient	Wisconsin			Program states [1]		
	Planted acres treated [2]	Yearly rate	Total applied	Planted acres treated [2]	Yearly rate	Total applied
	(percent)	(lbs per acre)	(1,000 lbs)	(percent)	(lbs per acre)	(1,000 lbs)
Fungicide						
Total [3]	(D)		(D)	25		173
Herbicide						
Total [3]	11		(Z)	84		1,880
Insecticide						
Total [3]	(D)		(D)	15		15

(Z) Less than half of the unit shown.
[1] The 14 program states surveyed about barley in the 2023 ARMS were California, Colorado, Idaho, Minnesota, Montana, North Carolina, North Dakota, Oregon, Pennsylvania, South Dakota, Virginia, Washington, Wisconsin, and Wyoming.
[2] Acres with multiple nutrients are counted in each category.
[3] Total Fungicide, Herbicide, and Insecticide include pesticides not listed in the table.

Fertilizer Use on Barley – Wisconsin and Program States: 2023

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	12	46	100	90	68	182,400
Phosphate	(D)	(D)	(D)	74	36	78,600
Potash	(D)	(D)	(D)	38	26	29,000
Sulfur	10	25	(Z)	44	16	20,500

(D) Withheld to avoid disclosing data for individual operations.
(Z) Less than half of the unit shown.
[1] The 14 program states surveyed about barley in the 2023 ARMS were California, Colorado, Idaho, Minnesota, Montana, North Carolina, North Dakota, Oregon, Pennsylvania, South Dakota, Virginia, Washington, Wisconsin, and Wyoming.

Pest Management Practices on Corn – Wisconsin and Program States: 2023

	Wisconsin		Program states [1]	
	% of area planted	% of operations	% of area planted	% of operations
Avoidance				
Crop or plant variety chosen for specific pest resistance	4	3	26	23
Planting locations planned to avoid cross infestation of pests	11	15	28	26
Planting or harvesting dates adjusted	28	13	23	22
Rotated crops during past 3 years	99	95	84	84
Row spacing, plant density, or row directions adjusted	22	6	31	23
Monitoring				
Diagnostic laboratory services used for pest detection via soil or plant tissue analysis	21	5	11	7
Field mapping data used to assist decisions	21	6	21	17
Scouted -				
established process used	23	7	13	10
for pests due to a pest advisory warning	3	2	8	6
for pests due to a pest development model	4	3	6	7
for pests or beneficial organisms-not scouted	29	24	6	12
for pests or beneficial organism by conducting general observations while performing routine tasks	26	51	23	31
for pests or beneficial organism by deliberately going to the crop acres or growing areas	45	24	71	57
Scouted for diseases	18	17	79	67
Scouted for insects and mites	24	16	79	68
Scouted for weeds	55	52	92	84
Weather data used to assist decisions	5	5	62	50
Written or electronic records kept to track pest activity	9	8	41	34
Prevention				
Beneficial insect or vertebrate habitat maintained	9	7	17	17
Crop residues removed or burned down	26	19	11	13
Equipment and implements cleaned after field work to reduce spread of pests	44	33	65	55
Field edges, ditches, or fence lines chopped, sprayed, mowed, plowed, or burned	28	30	41	43
Field left fallow previous year to manage insects	0	0	10	7
Flamer used to kill weeds	0	0	2	2
No-till or minimum-till used	38	44	59	54
Plowed down crop residue using conventional tillage	50	47	26	32
Seed treated for insect or disease control after purchase	1	1	53	39
Water management practices used	3	4	16	19
Suppression				
Beneficial organisms applied or released	0	0	3	2
Biological pesticides applied	0	0	5	3
Buffer strips or border rows maintained to isolate organic from non-organic crops	18	19	10	12
Floral lures, attractants, repellants, pheromone traps, or biological pest controls used	0	0	2	1
Ground covers, mulches, or other physical barriers maintained	36	46	54	54
Pesticides with different mechanisms of action to keep pest from becoming resistant to pesticides	3	3	35	26
Scouting data compared to published information to assist decisions	0	0	0	0
Trap crop grown to manage insects	0	0	1	1

[1] The 14 program states surveyed about barley in the 2023 ARMS were California, Colorado, Idaho, Minnesota, Montana, North Carolina, North Dakota, Oregon, Pennsylvania, South Dakota, Virginia, Washington, Wisconsin, and Wyoming.

More information and data for the USDA NASS Chemical Use Program can be found at:
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Wisconsin Ag News – Chemical Use
Oats: Fall 2023

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In the fall of 2023, NASS collected data for the 2023 crop year, the one-year period beginning after the 2022 harvest and ending with the 2023 harvest, about chemical use and pest management practices used on oat 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 and potash were the most widely used on oat acres planted in Wisconsin. Farmers applied these fertilizers to 46 percent of planted acres at an average rate of 91 pounds per acre per year for potash, and 42 pounds per acre for nitrogen. Macronutrient phosphate was applied at an average rate of 38 pounds per acre per year. The secondary macronutrient, sulfur, was applied to 17 percent of acres planted to oats.

Pesticide Use: Herbicide active ingredients were applied to 43 percent of the oat acres planted. 2, 4-D, 2-EHE was the most widely used pesticide on oat acres and was also the active ingredient with the greatest total amount applied. Fungicides were applied to 15 percent of oat acres planted in Wisconsin.

Fertilizer Use on Oats – Wisconsin and Program States: 2023

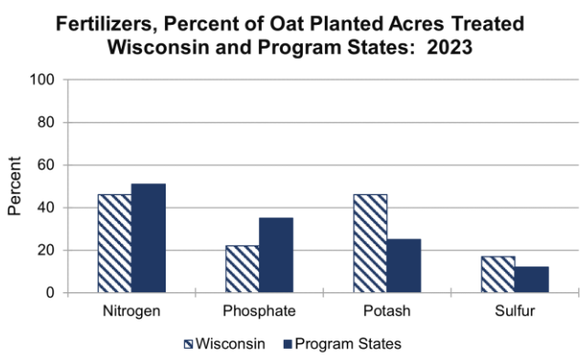
Active ingredient	Wisconsin			Program states [1]		
	Planted acres treated	Yearly rate	Total applied	Planted acres treated	Yearly rate	Total applied
	(percent)	(lbs per acre)	(1,000 lbs)	(percent)	(lbs per acre)	(1,000 lbs)
Nitrogen	46	42	2,600	51	51	49,800
Phosphate	22	38	1,100	35	37	24,700
Potash	46	91	5,700	25	49	23,800
Sulfur	17	20	500	12	13	2,900

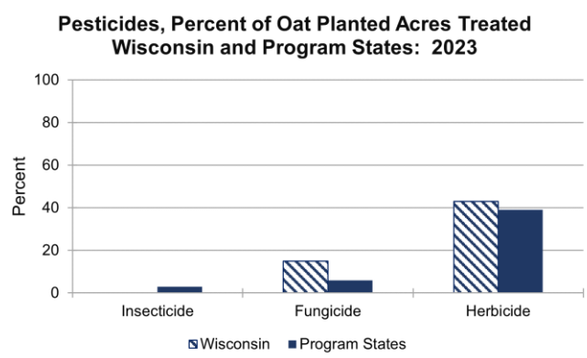
[1] The 17 program states surveyed about oats in the 2023 ARMS were California, Georgia, Idaho, Illinois, Iowa, Kansas, Michigan, Minnesota, Montana, Nebraska, New York, North Dakota, Ohio, Pennsylvania, South Dakota, Texas, and Wisconsin.

Pesticide Use on Oats – Wisconsin and Program States: 2023

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						
Azoxystrobin	11	0.093	1	1	0.086	2
Total [2]	15		3	6		14
Herbicide						
2, 4-D, 2-EHE	15	0.725	15	7	0.532	70
2, 4-D, dimeth. salt	9	0.543	6	9	0.655	118
Bromoxynil octanoate	1	0.198	(Z)	3	0.251	15
Glyphosate iso. Salt	6	0.979	8	11	0.749	152
Kantor	5	0.004	(Z)	1	0.002	(Z)
MCPA, 2 ethylhexyl	6	0.296	2	4	0.346	24
MCPA, dimethyl. salt	9	0.337	4	4	0.382	31
Total [2]	43		42	39		626
Insecticide						
Total [2]	(D)		(D)	3		17

[1] The 17 program states surveyed about oats in the 2023 ARMS were California, Georgia, Idaho, Illinois, Iowa, Kansas, Michigan, Minnesota, Montana, Nebraska, New York, North Dakota, Ohio, Pennsylvania, South Dakota, Texas, and Wisconsin.
[2] Total Fungicide, Herbicide, and Insecticide include pesticides not listed in the table.





Crop rotation was the top pest management practice on Oats acreage in Wisconsin.

Pest Management Practices on Oats – Wisconsin and Program States: 2023

	Wisconsin		Program states [1]	
	% of area planted	% of operations	% of area planted	% of operations
Avoidance				
Crop or plant variety chosen for specific pest resistance	15	9	16	17
Planting locations planned to avoid cross infestation of pests	9	6	9	10
Planting or harvesting dates adjusted	11	8	11	11
Rotated crops during past 3 years	88	85	67	71
Row spacing, plant density, or row directions adjusted	10	6	7	7
Monitoring				
Diagnostic laboratory services used for pest detection via soil or plant tissue analysis	0	0	1	1
Field mapping data used to assist decisions	4	3	5	4
Scouted -				
established process used	12	4	5	4
for pests due to a pest advisory warning	7	1	2	1
for pests due to a pest development model	3	3	4	3
for pests or beneficial organisms-not scouted	22	29	25	32
for pests or beneficial organism by conducting general observations while performing routine tasks	35	48	35	39
for pests or beneficial organism by deliberately going to the crop acres or growing areas	42	23	40	29
Weather data used to assist decisions	30	21	27	22
Written or electronic records kept to track pest activity	23	11	15	12
Prevention				
Beneficial insect or vertebrate habitat maintained	5	4	8	7
Crop residues removed or burned down	9	15	6	8
Equipment and implements cleaned after field work to reduce spread of pests	23	22	41	36
Field edges, ditches, or fence lines chopped, sprayed, mowed, plowed, or burned	22	20	29	27
Field left fallow previous year to manage insects	0	0	2	2
Flamer used to kill weeds	(Z)	(Z)	(Z)	(Z)
No-till or minimum-till used	46	47	48	42
Plowed down crop residue using conventional tillage	31	30	24	27
Seed treated for insect or disease control after purchase	2	1	3	4
Water management practices used	2	1	2	1
Suppression				
Beneficial organisms applied or released	0	0	(Z)	(Z)
Biological pesticides applied	0	0	(Z)	(Z)
Buffer strips or border rows maintained to isolate organic from non-organic crops	9	5	8	6
Floral lures, attractants, repellants, pheromone traps, or biological pest controls used	2	(Z)	1	(Z)
Ground covers, mulches, or other physical barriers maintained	40	31	37	31
Pesticides with different mechanisms of action to keep pest from becoming resistant to pesticides	2	4	8	7
Scouting data compared to published information to assist decisions	18	4	7	5
Trap crop grown to manage insects	0	0	1	1

(Z) Less than half of the unit shown.
[1] The 17 program states surveyed about oats in the 2023 ARMS were California, Georgia, Idaho, Illinois, Iowa, Kansas, Michigan, Minnesota, Montana, Nebraska, New York, North Dakota, Ohio, Pennsylvania, South Dakota, Texas, and Wisconsin.

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Wisconsin Ag News – Chemical Use
Soybeans: Fall 2023

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In the fall of 2023, NASS collected data for the 2023 crop year, the one-year period beginning after the 2022 harvest and ending with the 2023 harvest, about chemical use and pest management practices used on soybean production. The data was collected as part of the Agricultural Resource Management Survey (ARMS) and the results are presented here.

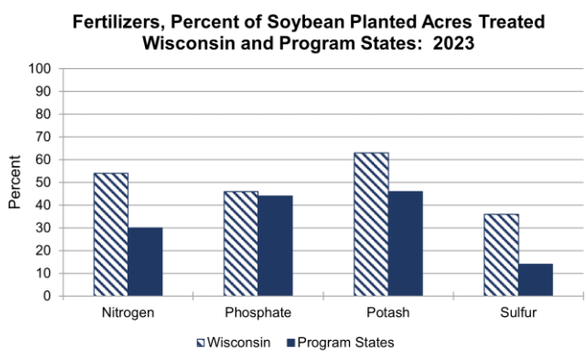
Fertilizer Use: Of the three primary macronutrients, potash was the most widely used on soybean acres planted in Wisconsin. Farmers applied potash to 63 percent of planted acres at an average rate of 107 pounds per acre per year. Macronutrients nitrogen and phosphate were applied at an average rate of 17 and 53 pounds per acre per year, respectively. The secondary macronutrient, sulfur, was applied to 36 percent of acres planted to soybeans.

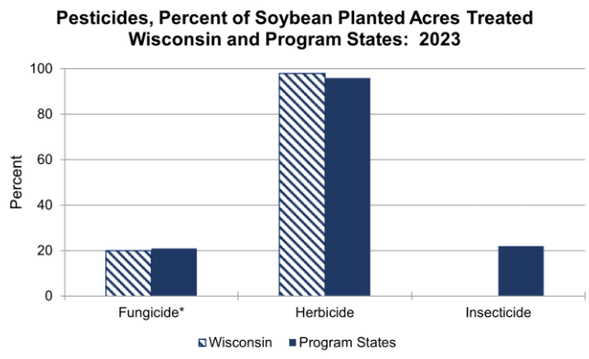
Pesticide Use: Herbicide active ingredients were applied to 98 percent of the soybean acres planted. 2, 4-D, choline salt and glyphosate iso. salt were the most widely used pesticides on soybean acres, but S-metolachlor was the active ingredient with the greatest total amount applied.

Pesticide Use on Soybeans – Wisconsin and Program States: 2023

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]	20		105	21		3,678
Herbicide [3]						
2, 4-D, choline salt	56	0.881	1,049	37	0.713	21,406
Chlorimuron-ethyl	15	0.016	5	6	0.022	117
Chloransulam-methyl	10	0.013	3	6	0.021	92
Flumioxazin	12	0.067	17	10	0.087	687
Glyphosate	19	1.282	524	10	1.361	10,852
Glyphosate dim. salt	22	0.624	290	25	0.559	11,056
Glyphosate iso. salt	56	0.827	985	46	1.106	41,158
Glyphosate pot. salt	18	0.840	327	22	1.407	24,723
Imazethapyr	22	0.060	27	8	0.054	367
Metribuzin	22	0.302	142	16	0.241	3,135
S-Metolachlor	46	1.287	1,246	20	1.320	20,909
Sulfentrazone	11	0.116	27	19	0.209	3,130
Total [2]	98		5,217	96		196,352
Insecticide						
Total [2]	(D)		(D)	22		1,987

(D) Withheld to avoid disclosing data for individual operations.
[1] The 19 program states surveyed about soybeans in the 2023 ARMS were Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Carolina, North Dakota, Ohio, South Dakota, Tennessee, Virginia, 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 Iowa are not included in this table but can be found at www.nass.usda.gov.





Fertilizer Use on Soybeans – Wisconsin and Program States: 2023

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	54	17	19,100	30	22	537,000
Phosphate	46	53	51,100	44	57	2,041,600
Potash	63	107	142,300	46	88	3,287,000
Sulfur	36	22	16,800	14	20	230,800

[1] The 19 program states surveyed about soybeans in the 2023 ARMS were Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Carolina, North Dakota, Ohio, South Dakota, Tennessee, Virginia, and Wisconsin.

Crop rotation was the top pest management practice on Soybean acreage in Wisconsin.

Pest Management Practices on Soybeans – Wisconsin and Program States: 2023

	Wisconsin		Program states [1]	
	% of area planted	% of operations	% of area planted	% of operations
Avoidance				
Crop or plant variety chosen for specific pest resistance	61	51	54	55
Planting locations planned to avoid cross infestation of pests	22	19	14	13
Planting or harvesting dates adjusted	13	10	13	15
Rotated crops during past 3 years	89	90	81	78
Row spacing, plant density, or row directions adjusted	28	24	19	19
Monitoring				
Diagnostic laboratory services used for pest detection via soil or plant tissue analysis	1	1	7	6
Field mapping data used to assist decisions	6	5	13	11
Scouted -				
established process used	11	9	17	14
for pests due to a pest advisory warning	4	4	11	10
for pests due to a pest development model	9	6	9	7
for pests or beneficial organisms-not scouted	5	8	8	10
for pests or beneficial organism by conducting general observations while performing routine tasks	41	39	30	31
for pests or beneficial organism by deliberately going to the crop acres or growing areas	53	53	62	59
Weather data used to assist decisions	63	70	61	59
Written or electronic records kept to track pest activity	23	15	40	34
Prevention				
Beneficial insect or vertebrate habitat maintained	5	6	8	6
Crop residues removed or burned down	13	16	12	15
Equipment and implements cleaned after field work to reduce spread of pests	32	29	42	39
Field edges, ditches, or fence lines chopped, sprayed, mowed, plowed, or burned	52	48	51	48
Field left fallow previous year to manage insects	0	0	1	1
Flamer used to kill weeds	0	0	1	1
No-till or minimum-till used	55	53	62	61
Plowed down crop residue using conventional tillage	28	24	17	19
Seed treated for insect or disease control after purchase	30	18	32	28
Water management practices used	0	0	3	2
Suppression				
Beneficial organisms applied or released	(Z)	1	1	1
Biological pesticides applied	8	5	3	3
Buffer strips or border rows maintained to isolate organic from non-organic crops	3	2	5	5
Floral lures, attractants, repellants, pheromone traps, or biological pest controls used	0	0	(Z)	(Z)
Ground covers, mulches, or other physical barriers maintained	38	33	37	34
Pesticides with different mechanisms of action to keep pest from becoming resistant to pesticides	38	42	40	38
Scouting data compared to published information to assist decisions	20	11	22	18
Trap crop grown to manage insects	0	0	1	(Z)

(Z) Less than half of the unit shown.

[1] The 19 program states surveyed about Soybeans in the 2023 ARMS were Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Carolina, North Dakota, Ohio, South Dakota, Tennessee, Virginia, and Wisconsin.

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