NASS *Highlights*

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2023 AGRICULTURAL CHEMICAL USE SURVEY

Oats

Seventeen states. . .

. . . accounted for 89.9% of U.S. acres planted to oats in 2023.

About the Survey

The Agricultural Chemical Use Program of USDA's National Agricultural Statistics Service (NASS) is the federal government's official source of statistics about on-farm and post-harvest commercial fertilizer and pesticide use and pest management practices. NASS conducts field crop agricultural chemical use surveys as part of the Agricultural Resource Management Survey. NASS conducted the oat chemical use survey in the fall of 2023.

Access the Data

Access 2023 and earlier oat chemical use data through the Quick Stats database (http://quickstats.nass.usda.gov).

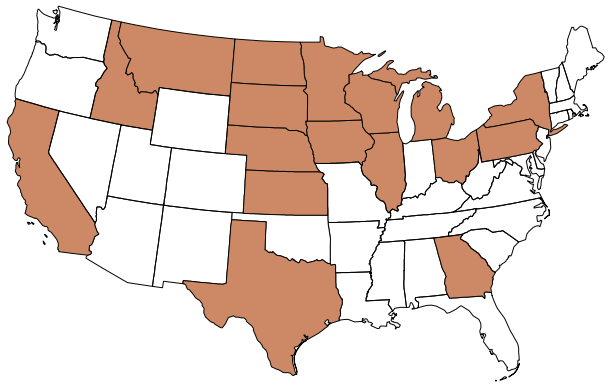
- In Program, select "Survey"
- In Sector, select "Environmental"
- In Group, select "Field Crops"
- In Commodity, select "Oats"
- Select your category, data item, geographic level, and year

For pre-defined Quick Stats queries, go to http://bit.ly/AgChem and click "Data Tables" under the 2023 Barley, Oats, Peanuts, and Soybeans heading. For methodology information, go to http://bit.ly/AgChem and click "Methodology."

The 2023 Agricultural Chemical Use Survey of oat producers collected data about fertilizer and pesticide use as well as pest management practices in growing oats. NASS conducted the survey among oat producers in 17 states that together accounted for 89.9% of the 2.6 million acres planted to oats in the United States in 2023: California, Georgia, Idaho, Illinois, Iowa, Kansas, Michigan, Minnesota, Montana, Nebraska, New York, North Dakota, Ohio, Pennsylvania, South Dakota, Texas, and Wisconsin. (Fig. 1 and Table 4)

The data are for the 2023 crop year, the one-year period beginning after the 2022 harvest and ending with the 2023 harvest.

Fig. 1. States in the 2023 Oats Chemical Use Survey



Fertilizer Use

Fertilizer refers to a soil-enriching input that contains one or more plant nutrients. For the 2023 crop year, farmers applied nitrogen to 55% of planted acres, at an average rate of 54 pounds per acre, for a total of 68.6 million pounds. They applied phosphate to 38% of oats planted acres and potash to 25% of acres. (Table 1)

Table 1. Fertilizer Applied to Oat Planted Acres, 2023 Crop Year

	% of Acres with Nutrient [a]	Avg. Rate for Year (lbs/acre)	Total Applied (mil lbs)
Nitrogen (N)	55	54	68.6
Phosphate (P_2O_5)	38	35	30.6
Potash (K_2O)	25	45	25.7
Sulfur (S)	13	13	3.8

[a] *Acres with multiple nutrients are counted in each category.*

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). Herbicides were used most extensively, applied to 35% of planted acres. Fungicides and insecticides were applied to 5% and 3% of planted acres, respectively. (Fig. 2)

Among herbicides, glyphosate isopropylamine salt was the most widely used active ingredient (applied to 9% of planted acres), followed by glyphosate dimethylamine salt (8%). (Table 2)

Fig. 2. Pesticides Applied to Oat Planted Acres, 2023 Crop Year
(% of planted acres)

Table 2. Top Herbicides Applied to Oat Planted Acres, 2023 Crop Year

Active Ingredient	% of Acres with Ingredient	Avg. Rate for Year (lbs/acre)	Total Applied (lbs)
Glyphosate isopropylamine salt	9	0.757[a]	160,000[a]
Glyphosate dimethylamine salt	8	0.650[a]	127,000[a]
Fluroxypyr 1-MHE	7	0.091	14,000
2;4-D; 2-EHE	6	0.535	73,000
Clopyralid monoethanolamine salt	4	0.094	8,000[a]

[a] *Expressed in acid equivalent.*

Pest Management Practices

The survey asked growers to report on the practices they used to manage pests, defined as weeds, insects, or diseases. Oat growers reported practices in four categories: prevention, avoidance, monitoring, and suppression.

- *Prevention* practices involve actions to keep a pest population from infesting a crop or field.
- *Avoidance* practices use cultural measures to mitigate or eliminate the detrimental effects of pests.
- *Monitoring* practices observe or detect pests by systematic sampling, counting, or other forms of scouting.
- *Suppression* practices involve controlling or reducing existing pest populations to mitigate crop damage.

The most widely used pest prevention practice in growing oats was no-till or minimum till to reduce the spread of pests (44%). The top avoidance practice was rotating crops, used on 59% of planted acres. Scouting for pests was the most widely used monitoring practices (37%), and maintaining ground cover, mulching, or using other physical barriers was the top suppression practice (32%). (Table 3)

Table 3. Top Practice in Pest Management Category, 2023
(% of oat planted acres)

Prevention: Used no-till or minimum till	44
Avoidance: Rotated crops during last three years	59
Monitoring: Scouted for weeds (deliberately, or by general observations while performing tasks)	37
Suppression: Maintained ground covers, mulches, or other physical barriers	32

Table 4. Surveyed States: Acres of Oats Planted, 2023

U.S. Total	thousands of acres 2,555.0	% of U.S. 100
Texas	390	15.3
North Dakota	280	11.0
South Dakota	265	10.4
Iowa	190	7.4
Kansas	185	7.2
Minnesota	165	6.5
Nebraska	155	6.1
Wisconsin	135	5.3
California	90	3.5
Pennsylvania	70	2.7
Montana	65	2.5
New York	61	2.4
Georgia	55	2.2
Illinois	55	2.2
Michigan	50	2.0
Idaho	45	1.8
Ohio	40	1.6
Total, Surveyed States	**2,296**	**89.9**

Numbers may not add due to rounding.