NASS *Highlights*

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2024 AGRICULTURAL CHEMICAL USE SURVEY

Sorghum

Six states . . .

. . . accounted for 100% of U.S. acres planted to sorghum in 2024.

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 sorghum chemical use survey in the fall of 2024.

Access the Data

Access 2024 and earlier sorghum chemical use data through the Quick Stats database (quickstats.nass.usda.gov).

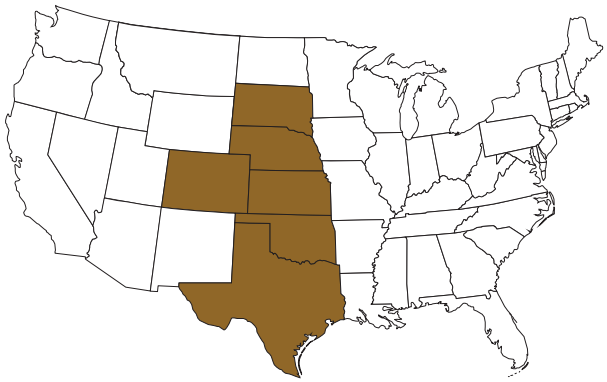
- In Program, select "Survey"
- In Sector, select "Environmental"
- In Group, select "Field Crops"
- In Commodity, select "Sorghum"
- Select your category, data item, geographic level, and year

For pre-defined Quick Stats queries, go to bit.ly/AgChem and click "Data Tables" under the 2024 Sorghum and Wheat heading. For methodology information, go to bit.ly/AgChem and click "Methodology."

The 2024 Agricultural Chemical Use Survey of sorghum producers collected data about fertilizer and pesticide use as well as pest management practices in growing sorghum. NASS conducted the survey among sorghum producers in six states that together accounted for 100% of the 6.3 million acres planted to sorghum in the United States in 2024: Colorado, Kansas, Nebraska, Oklahoma, South Dakota, and Texas. (Fig. 1 and Table 4)

The data are for the 2024 crop year, the one-year period beginning after the 2023 harvest and ending with the 2024 harvest.

Fig. 1. States in the 2024 Sorghum Chemical Use Survey



Fertilizer Use

Fertilizer refers to a soil-enriching input that contains one or more plant nutrients. For the 2024 crop year, farmers applied nitrogen to 84% of planted acres, at an average rate of 72 pounds per acre, for a total of 383.6 million pounds. They applied phosphate to 49% of sorghum planted acres, at an average rate of 25 pounds per acre. (Table 1)

Table 1. Fertilizer Applied to Sorghum Planted Acres, 2024 Crop Year

	% of Acres with Nutrient [a]	Avg. Rate for Year (lbs./acre/year)	Total Applied (mil lbs.)
Nitrogen (N)	84	72	383.6
Phosphate (P_2O_5)	49	25	78.4
Potash (K_2O)	9	13	7.0
Sulfur (S)	20	10	12.5

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

Pesticide Use

The pesticide active ingredients used on sorghum 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 81% of planted acres. Insecticides were applied to 6% of planted acres. (Fig. 2)

Among herbicides, atrazine was the most widely used active ingredient (applied to 63% of planted acres), followed by glyphosate isopropylamine salt (40% of planted acres). S-metolachlor was applied to 21% of planted acres. (Table 2)

Fig. 2. Pesticides Applied to Sorghum Planted Acres, 2024 Crop Year
(% of planted acres)

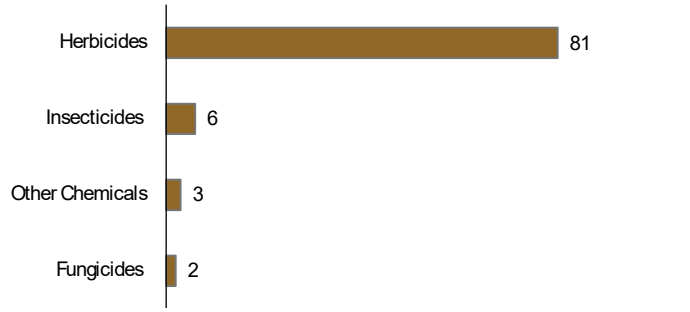


Table 2. Top Herbicides Applied to Sorghum Planted Acres, 2024 Crop Year

Active Ingredient	% of Acres with Ingredient [a]	Avg. Rate for Year (lbs./acre/year)	Total Applied (mil lbs.)
Atrazine	63	1.009	4.0
Glyphosate isopropylamine salt	40	0.833	2.1[b]
S-Metolachlor	21	1.382	1.8
Acetochlor	19	1.891	2.2
Mesotrione	19	0.088	0.1

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

[b] 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. Sorghum growers reported practices in four categories: prevention, avoidance, monitoring, and suppression (PAMS).

- 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 prevention practice in growing sorghum was no till or minimum till, used on 60% of planted acres. The top avoidance practice was rotating crops (89%). Scouting for weeds was the most widely used monitoring practice (81%), and maintaining ground cover, mulching, or using other physical barriers was the top suppression practice (68%). (Table 3)

Table 3. Top Practice in Pest Management Category, 2024
(% of sorghum planted acres)

Prevention: Used no till or minimum till	60
Avoidance: Rotated crops during last three years	89
Monitoring: Scouted for weeds (deliberately, or by general observations while performing tasks)	81
Suppression: Maintained ground covers, mulches, or other physical barriers	68

Table 4. Surveyed States: Acres of Sorghum Planted, 2024

	thousands of acres	% of U.S.
U.S. Total	**6,300**	**100**
Kansas	3,000	47.6
Texas	1,700	27.0
Colorado	520	8.3
South Dakota	420	6.7
Oklahoma	370	5.9
Nebraska	290	4.6
Total, Surveyed States	**6,300**	**100.0**