NASS *Highlights*

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2022 AGRICULTURAL CHEMICAL USE SURVEY

Potatoes

Nine states . . .

. . . accounted for 92.2% of U.S. acres planted to potatoes in 2022.

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 potato chemical use survey in fall 2022.

Access the Data

Access 2022 and earlier potato chemical use data through the Quick Stats database (quickstats.nass.usda.gov).

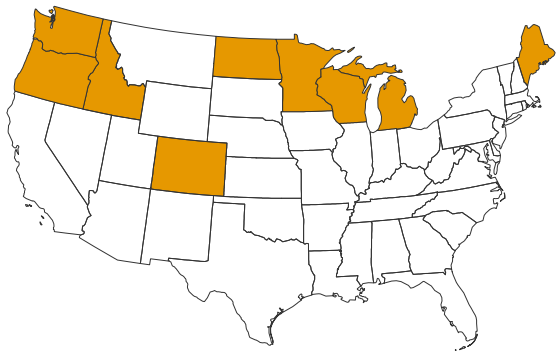
- In Program, select "Survey"
- In Sector, select "Environmental"
- In Group, select "Vegetables"
- In Commodity, select "Potatoes"
- Select your category, data item, domain, geographic level, and year

For pre-defined Quick Stats queries, go to bit.ly/AgChem and click "Data Tables" under the 2022 Potatoes and Wheat heading. For methodology information, click "Methodology."

The 2022 Agricultural Chemical Use Survey of potato producers collected data about fertilizer and pesticide use as well as pest management practices in growing potatoes. NASS conducted the survey in nine states that together accounted for over 92% of the 901,000 acres planted to potatoes in the United States in 2022: Colorado, Idaho, Maine, Michigan, Minnesota, North Dakota, Oregon, Washington, and Wisconsin. (Fig. 1 and Table 4).

The data are for the 2022 crop year, the one-year period beginning after the 2021 harvest and ending with the 2022 harvest.

Fig. 1. States in the 2022 Potatoes Chemical Use Survey



Fertilizer Use

Fertilizer refers to a soil-enriching input that contains one or more plant nutrients. Farmers applied nitrogen to 99% of planted acres, at an average rate of 178 pounds per acre, for a total of 147 million pounds in the 2022 crop year. They applied phosphate to 97% of potato planted acres, potash to 88%, and sulfur to 79%. (Table 1)

Table 1. Fertilizer Applied to Potato Planted Acres, 2022 Crop Year

	% of Planted Acres[a]	Avg. Rate for Year (lbs/acre)	Total Applied (mil lbs)
Nitrogen (N)	99	178	147.4
Phosphate (P_2O_5)	97	132	107.6
Potash (K_2O)	88	215	157.8
Sulfur (S)	79	77	51.0

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

Pesticide Use

The pesticide active ingredients used on potatoes 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). Fungicides were used most extensively, applied to 98% of planted acres. Herbicides and insecticides were applied to 87% and 72% of planted acres, respectively. (Fig. 2)

Among fungicides, chlorothalonil and azoxystrobin were the most widely applied active ingredients (used on 64% and 55% of planted acres, respectively). The most widely used herbicide was metribuzin (63% of planted acres). (Table 2)

Fig. 2. Pesticides Applied to Potato Planted Acres, 2022 Crop Year
(% of planted acres)

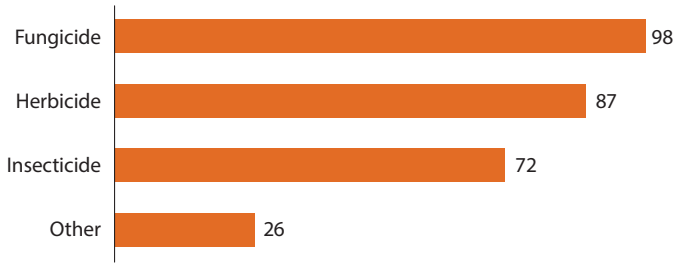


Table 2. Top Pesticides Applied to Potato Planted Acres, 2022 Crop Year

Active Ingredient	% of Planted Acres[a]	Avg. Rate for Year (lbs/acre)	Total Applied (lbs)
Chlorothalonil (fungicide)	64	2.659	1,432,000
Metribuzin (herbicide)	63	0.434	228,000
Azoxystrobin (fungicide)	55	0.174	80,000
Mefenoxam (fungicide)	48	0.264	105,000

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

Pest Management Practices

The survey asked growers to report on the practices they used to manage pests, defined as weeds, insects, or diseases. Potato growers reported practices in four categories:

- *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 potatoes was treating seed for insect or disease control after purchase and cleaning equipment and implements after field work, both were used on 89% of planted acres. The top avoidance practice was rotating crops (99%). Scouting for diseases was the most widely used monitoring practice (99%) and using pesticides with different mechanisms of action was the top suppression practice (79%). (Table 3)

Table 3. Top Practice in Pest Management Category, 2022 Crop Year
(% of planted acres, potatoes)

Prevention: Treated seed for insect or disease control after purchase	89
Prevention: Equipment and implements cleaned after completing field work to reduce spread of pests	89
Avoidance: Rotated crops during last three years	99
Monitoring: Scouting for diseases (deliberately, or by general observations while performing tasks)	99
Suppression: Used pesticides with different mechanisms of action	79

Table 4. Surveyed States: Acres Planted to Potatoes, 2022

	thousands of acres	% of U.S.
U.S. Total	**901.0**	**100**
Idaho	295	32.7
Washington	155	17.2
North Dakota	74	8.2
Wisconsin	67	7.4
Colorado	53	5.9
Maine	52	5.8
Minnesota	47	5.2
Michigan	45	5.0
Oregon	43	4.8
Total, Surveyed States	**831**	**92.2**

Numbers may not add due to rounding.