

## 2014 AGRICULTURAL CHEMICAL USE SURVEY

# Corn

### 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 agricultural chemical use surveys as part of the Agricultural Resource Management Survey.

NASS conducted the corn chemical use survey in fall 2014.

### Access the Data

Access corn chemical use data through the Quick Stats 2.0 database (<http://quickstats.nass.usda.gov>).

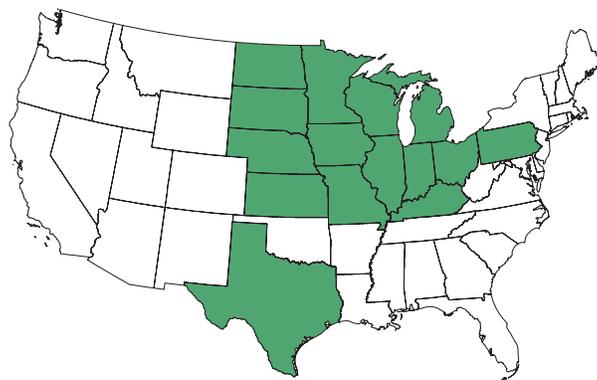
- In Program, select "Survey"
- In Sector, select "Environmental"
- In Group, select "Field Crops"
- In Commodity, select "Corn"
- Select your category, data item, geographic level, and year

For pre-defined Quick Stats queries, go to <http://bit.ly/AgChem> and click "Data Tables" under the 2014 Corn and Potatoes heading. For survey methodology information, click "Methodology."

The 2014 Agricultural Chemical Use Survey collected data about fertilizer and pesticide use as well as pest management practices on acres planted to corn. NASS conducted the survey among corn producers in fifteen states that together accounted for 89 percent of the 90.6 million acres planted to corn in the United States in 2014: Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Pennsylvania, South Dakota, Texas, and Wisconsin (Fig. 1).

Data are for the surveyed states for the 2014 crop year, the one-year period beginning after the 2013 harvest and ending after the 2014 harvest.

**Fig. 1. States in the 2014 Corn Chemical Use Survey**



## Fertilizer Use

Fertilizer refers to a soil-enriching input that contains one or more plant nutrients. The most widely applied nutrients to corn are nitrogen, phosphate, and potash. For the 2014 crop year, farmers applied nitrogen to 97 percent of planted acres, at an average rate of 144 pounds per acre, for a total of 11.2 billion pounds. They applied phosphate to 80 percent of planted acres and potash to 65 percent. (Table 1)

**Table 1. Fertilizer Applied to Corn Planted Acres, 2014 Crop Year**

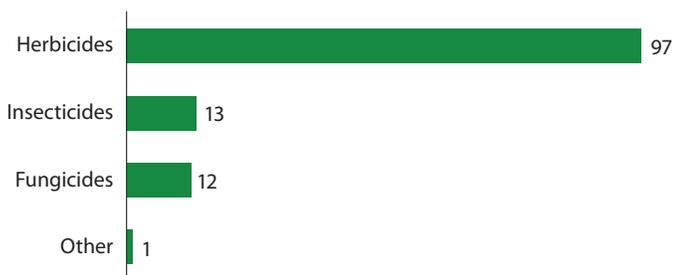
	% of Planted Acres	Avg. Rate for Year (lbs/acre)	Total Applied (bil lbs)
Nitrogen (N)	97	144	11.2
Phosphate (P <sub>2</sub> O <sub>5</sub> )	80	64	4.1
Potash (K <sub>2</sub> O)	65	82	4.3

## Pesticide Use

The pesticide active ingredients used on corn are classified in this report as herbicides (targeting weeds), insecticides (targeting insects), fungicides (targeting fungal disease), or other chemicals (targeting all other pests and other materials). Herbicides were used most extensively, applied to 97 percent of planted acres. Insecticides and fungicides were applied to 13 and 12 percent of planted acres, respectively. (Fig. 2)

Among herbicides, atrazine was the most widely used active ingredient (applied to 55 percent of planted acres), followed by glyphosate isopropylamine salt (38 percent) (Table 2).

**Fig. 2. Pesticides Applied to Corn Planted Acres, 2014 Crop Year**  
(% of planted acres)



**Table 2. Top Herbicides Applied to Corn Planted Acres, 2014 Crop Year**

Active Ingredient	% of Planted Acres	Avg. Rate for Year (lbs/acre)	Total Applied (mil lbs)
Atrazine	55	1.018	45.2
Glyphosate isopropylamine salt	38	0.889 <sup>a</sup>	27.2 <sup>a</sup>
Acetochlor	29	1.256	28.7
Mesotrione	27	0.115	2.5
S-Metolachlor	27	1.106	23.6
Glyphosate potassium salt	24	1.159 <sup>a</sup>	22.6 <sup>a</sup>

<sup>a</sup> Expressed in acid equivalent.

## Pest Management Practices

The survey asked growers to report on the practices they used to manage pests, including weeds, insects, and diseases. Corn 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 detrimental effects of pests.
- *Monitoring* practices observe or detect pests through sampling, counting, or other forms of scouting.
- *Suppression* practices involve controlling or reducing existing pest populations to mitigate crop damage.

Scouting for weeds was the most widely reported monitoring practice, used on 92 percent of corn planted acres. Among avoidance practices, crop rotation was practiced on 84 percent of planted acres. The most widely used prevention practice was no-till or minimum till (67 percent). Maintaining ground cover, mulching, or using other physical barriers was the most reported suppression practice (47 percent). (Table 3) These were also the top practice in each category in 2010, the last time NASS conducted a corn chemical use survey.

**Table 3. Top Practice in Pest Management Category, 2014 Crop Year**  
(% of corn planted acres)

Monitoring: Scouted for weeds (deliberately, or by general observations while performing other tasks)	92
Avoidance: Rotated crops during last three years	84
Prevention: Used no-till or minimum till	67
Suppression: Maintained ground cover, mulched, or used other physical barriers	47

### Top States: Acres of Corn Planted, 2014

	millions of acres	% of U.S.
<b>U.S. Total</b>	<b>90.6</b>	<b>100</b>
Iowa	13.7	15.1
Illinois	11.9	13.1
Nebraska	9.3	10.3
Minnesota	8.2	9.1
Indiana	5.9	6.5
South Dakota	5.8	6.4
Kansas	4.1	4.5
Wisconsin	4.0	4.4
Ohio	3.7	4.1
Missouri	3.5	3.9
North Dakota	2.8	3.1
Michigan	2.6	2.8
Texas	2.3	2.5
Kentucky	1.5	1.7
Pennsylvania	1.5	1.6
<b>Total, Surveyed States</b>	<b>80.6</b>	<b>89.0</b>

Numbers may not add due to rounding.