



## 2012 AGRICULTURAL CHEMICAL USE SURVEY

# Soybeans

### About the Survey

The Agricultural Chemical Use Program of the National Agricultural Statistics Service (NASS) 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. NASS conducts field crop agricultural chemical use surveys as part of the Agricultural Resource Management Survey.

NASS conducted the soybean chemical use survey in fall 2012, collecting data about fertilizer and pesticide use, as well as pest management practices, for the 2012 crop year. A crop year is the period beginning immediately after harvest of the previous year's crop and ending at harvest of the current year's crops.

### Access the Data

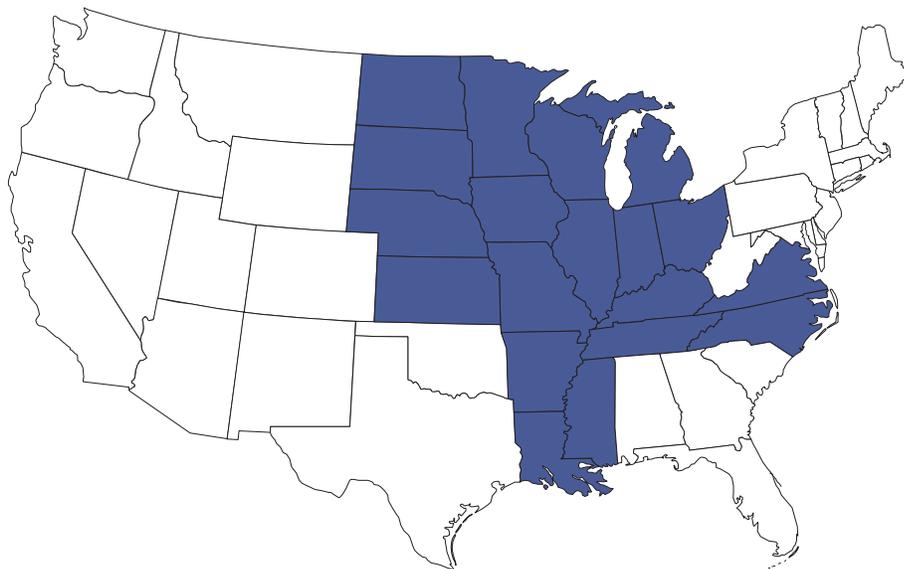
Access soybean chemical use data through the Quick Stats 2.0 database (<http://quickstats.nass.usda.gov>).

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

For methodology information, go to <http://bit.ly/AgChem> and click "Methodology" under the 2012 Soybeans and Wheat heading.

NASS conducted the 2012 Agricultural Chemical Use Survey among soybean producers in 19 states: Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Carolina, North Dakota, Ohio, South Dakota, Tennessee, Virginia, and Wisconsin (Fig. 1). These states accounted for 96 percent of the soybean acreage planted in the United States in the 2012 crop year. All 2012 soybean chemical use data refer to these "program states" and are based on 2,491 individual questionnaires.

**Fig. 1. Soybean Chemical Use Survey: 2012 Program States**



### Fertilizer Use

Nitrogen (N), phosphate ( $P_2O_5$ ), and potash ( $K_2O$ ) are the most widely used fertilizer materials on soybeans. Farmers applied phosphate and potash to 37 percent of acres planted to soybeans, at an average rate of 49 and 80 pounds per acre, respectively, for the 2012 crop year (Table 1). They applied nitrogen to 27 percent of planted acres, at an average rate of 16 pounds per acre.

**Table 1. Fertilizer Applied to Soybean Planted Acres, 2012**

	% of Planted Acres	Crop Year* Average Rate (lbs/acre)	Total Applied (mil lbs)
Nitrogen (N)	27	16	321.1
Phosphate (P <sub>2</sub> O <sub>5</sub> )	37	49	1,329.3
Potash (K <sub>2</sub> O)	37	80	2,214.7

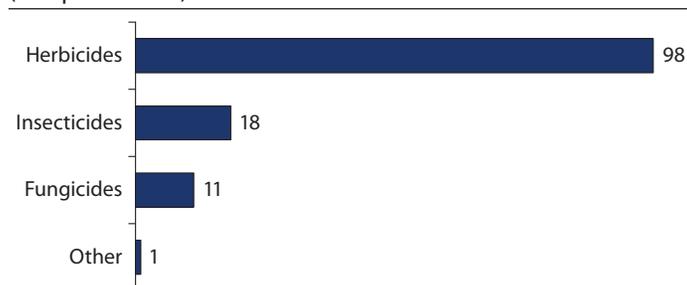
\* The period starting immediately after harvest of the previous year's crop and ending at harvest of the current year's crop.

## Pesticide Use

The pesticide active ingredients used on soybeans are classified in this report as herbicides, insecticides, fungicides, or other chemicals. Herbicides were used most extensively, applied to 98 percent of soybean planted acres (Fig. 2). Insecticides and fungicides were applied to 18 percent and 11 percent of planted acres, respectively. Among herbicides, glyphosate potassium salt was the most widely used (59 percent of planted acres), followed by glyphosate isopropylamine salt (30 percent) (Table 2).

**Fig. 2. Pesticides Applied to Soybean Planted Acres, 2012**

(% of planted acres)

**Table 2. Top Herbicides Applied to Soybean Planted Acres, 2012**

Active Ingredient	% of Planted Acres	Crop Year* Average Rate (lbs/acre)	Total Applied (lbs)
Glyphosate potassium salt	59	1.628	70,826,000
Glyphosate isopropylamine salt	30	1.330	29,550,000
Chlorimuron-ethyl	11	0.023	187,000
2,4-D, 2-EHE	11	0.519	4,098,000
Flumioxazin	11	0.076	602,000

\* The period starting immediately after harvest of the previous year's crop and ending at harvest of the current year's crop.

## Pest Management Practices

The survey asked growers to report on the pest management practices they used on soybeans. Pests are defined as weeds, insects, or diseases. Soybean growers reported practices in four categories of pest management strategy:

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

Scouting for weeds was the most widely reported monitoring practice, used on 94 percent of soybean planted acres. Among avoidance practices, crop rotation was practiced on 84 percent of planted acres. The most widely used pest prevention practice was no-tillage or minimum tillage (67 percent). Maintaining ground covers, mulches, or other physical barriers was the most reported suppression practice (35 percent) (Table 3).

The same practices were also the top practice in their categories in 2006, the last time NASS conducted the soybean chemical use survey.

**Table 3. Top Practice in Pest Management Category, 2012**

	2012 (% of soybean planted acres)	2006 (% of soybean planted acres)
Prevention: Used no-till or minimum till	67	75
Avoidance: Rotated crops during last 3 years	84	86
Monitoring: Scouted for weeds (deliberately, or by general observations while performing other tasks)	94	91
Suppression: Maintained ground covers, mulches, or other physical barriers	35	46