

2012 AGRICULTURAL CHEMICAL USE SURVEY

Wheat

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

NASS conducted the wheat 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 crop.

Access the Data

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

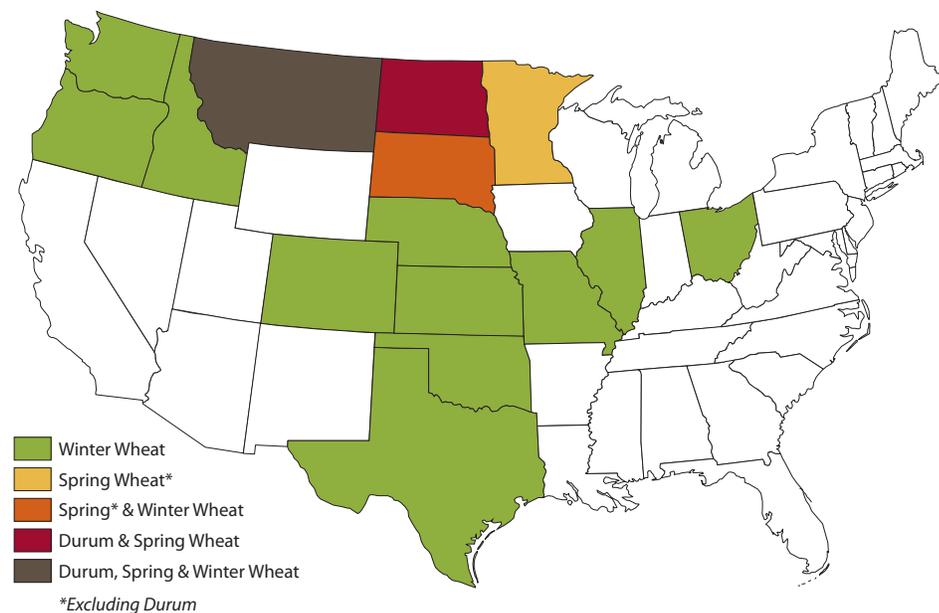
- In Program, select "Survey"
- In Sector, select "Environmental"
- In Group, select "Field Crops"
- In Commodity, select "Wheat"
- Select your category, data item, geographic level, and year

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 wheat producers in 15 states: Colorado, Idaho, Illinois, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, Ohio, Oklahoma, Oregon, South Dakota, Texas, and Washington (Fig.1).

The 13 winter wheat program states accounted for 80 percent of the acreage planted in the United States in the 2012 crop year. The data are based on 1,371 individual questionnaires. The four spring wheat (excl. durum) program states accounted for 91 percent of the U.S. planted acreage in 2012. The data are based on 422 individual questionnaires. The two durum wheat program states accounted for 88 percent of the planted acreage in 2012, and the data are based on 214 questionnaires.

Fig. 1. Wheat Chemical Use Survey: 2012 Program States by Wheat Type



Fertilizer Use

Nitrogen was the most widely used fertilizer material on wheat planted acres, applied to nearly all durum and spring (excl. durum) wheat acres and 85 percent of winter wheat acres. Phosphate (P_2O_5) and potash (K_2O) were the next most widely applied fertilizer materials (Fig. 2). Nitrogen was applied to spring (excl. durum) wheat at an average rate of 84 pounds per acre for the 2012 crop year. Average nitrogen rates for durum and winter wheat were 70 and 62 pounds per acre, respectively (Fig. 3).

Fig. 2. Fertilizer Applied to Wheat Planted Acres, by Type, 2012
(% of planted acres)

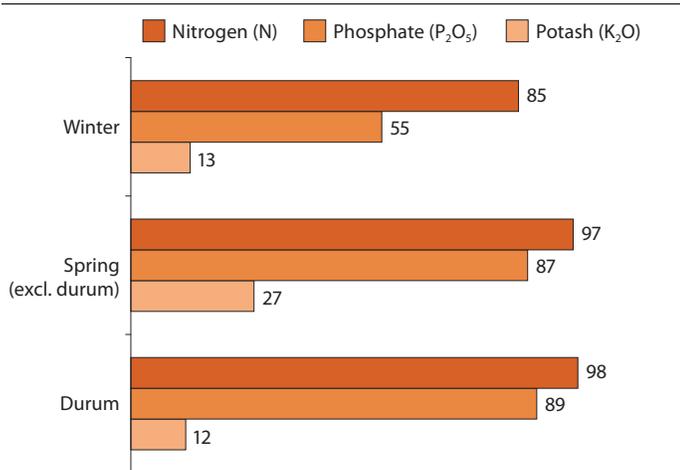
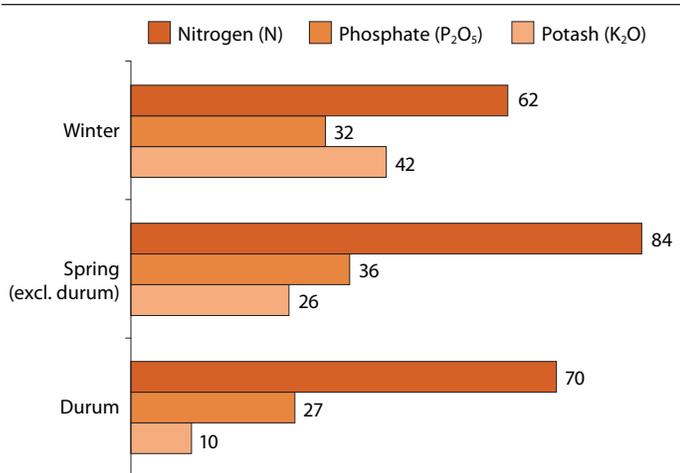


Fig. 3. Fertilizer Applied to Wheat Planted Acres, by Type, 2012
Crop Year* Average Rate (lbs/acre)



* 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 wheat are classified in this report as herbicides, insecticides, or fungicides. Herbicides were the most extensively used, applied to nearly all durum and spring (excl. durum), and 61 percent of winter, wheat planted acres (Fig. 4). Fungicides were applied to 49 percent of spring (excl. durum), 39 percent of durum, and 19 percent of winter wheat acres. Insecticides were used less extensively across all three wheat types. The specific herbicides applied varied across wheat types (Table 1).

Fig. 4. Pesticides Applied to Wheat Planted Acres, by Type, 2012
(% of planted acres)

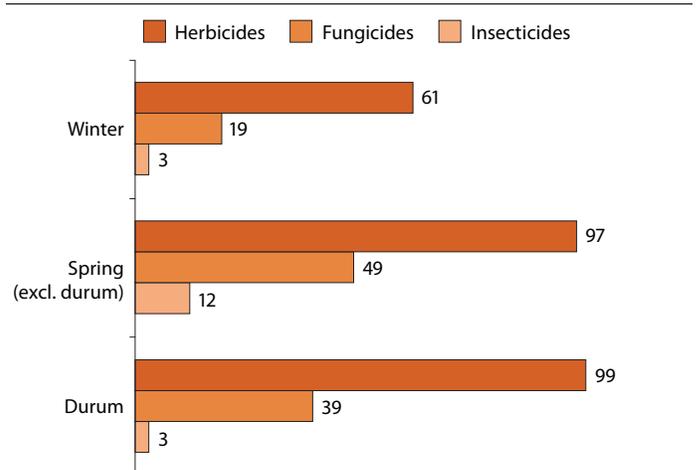


Table 1. Top Herbicides Applied to Wheat Planted Acres, by Type, 2012

Active Ingredient	% of Planted Acres	Crop Year* Average Rate (lbs/acre)	Total Applied (lbs)
Winter			
Thifensulfuron	14	0.009	41,000
Metsulfuron-methyl	13	0.003	15,000
2, 4-D, 2-EHE	13	0.541	2,385,000
Spring (excl. durum)			
Fluroxypyr 1-MHE	45	0.086	429,000
Clopyralid mono salt	32	0.082	296,000
Bromoxynil octanoate	31	0.175	612,000
Durum			
Bromoxynil octanoate	46	0.153	132,000
Glyphosate potassium salt	45	0.852	713,000
Fluroxypyr 1-MHE	31	0.094	55,000

* 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 wheat. Pests are defined as weeds, insects, or diseases.

Table 2. Top Practice in Pest Management Category, by Type, 2012 and 2009^a
(% of planted acres)

	Winter		Spring (excl. durum)		Durum	
	2012	2009	2012	2009	2012	2009
Prevention: Used no-till or minimum till	64	55	71 ^b	65	84	91
Avoidance: Rotated crops during last 3 years	60	36	91	68	84	73
Monitoring: Scouted for weeds (deliberately, or by general observations while performing other tasks)	86	84	97	97	99	97
Suppression: Maintained ground covers, mulches, or other physical barriers	48	39	61	55	52	60

^a 2009 crop year data based on 13 program states for winter, four states for spring (excl. durum), and two states for durum wheat accounting for 80 percent, 91 percent, and 88 percent planted acreage, respectively.

^b Tied with the prevention practice of cleaning equipment after fieldwork.

Wheat 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 in 2012, used on 86, 97, and 99 percent, respectively, of winter, spring (excl. durum), and durum wheat planted acres. In the wheat chemical use survey conducted in 2009, scouting for weeds was also a commonly reported monitoring practice for all three wheat types (Table 2).

Among prevention practices, no-tillage or minimum tillage was the top reported practice in both the 2012 and 2009 chemical use surveys. Among avoidance practices, crop rotation was the top reported practice, although percentages varied across wheat types. The most reported suppression practice was maintaining ground covers, mulches, or other physical barriers.