NASS *Highlights*

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2015 AGRICULTURAL CHEMICAL USE SURVEY

Wheat

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 wheat chemical use survey in fall 2015.

Access the Data

Access 2015 wheat chemical use data, as well as results from prior surveys of wheat chemical use, through the Quick Stats 2.0 database (http://quickstats.nass.usda.gov).

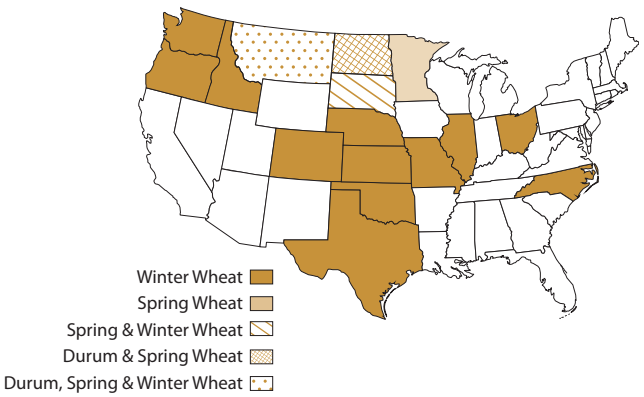
- In Program, select "Survey"
- In Sector, select "Environmental"
- In Group, select "Field Crops"
- In Commodity, select "Wheat"
- Select your category, data item, geographic level, and year

For pre-defined Quick Stats queries, go to http://bit.ly/AgChem and click "Data Tables" under the 2015 Cotton, Oats, Soybeans, and Wheat heading. For methodology information, go to http://bit.ly/AgChem and click "Methodology."

The 2015 Agricultural Chemical Use Survey of wheat producers collected data about fertilizer and pesticide use as well as pest management practices in growing wheat. NASS conducted the survey in 16 states that together accounted for 87 percent of the 54.6 million acres planted to wheat in the United States in 2015, including 86 percent of winter wheat acres, 91 percent of spring wheat acres, and 88 percent of durum wheat acres. (Fig. 1 and box on p. 2)

Data are for the 2015 crop year, the one-year period beginning after the 2014 harvest and ending after the 2015 harvest. "Spring wheat" does not include durum.

Fig. 1. States in the 2015 Wheat Chemical Use Survey



Fertilizer Use

Fertilizer refers to a soil-enriching input that contains one or more plant nutrients, primarily nitrogen (N), phosphate (P_2O_5), and potash (K_2O). For the 2015 crop year, farmers applied nitrogen to nearly all acres planted to durum and spring wheat (Table 1).

Table 1. Fertilizer Applied to Wheat Planted Acres, 2015 Crop Year

	% of Planted Acres	Avg. Rate for Year (lbs/acre)	Total Applied (mil lbs)
Winter			
Nitrogen	88	61	1,826.1
Phosphate	60	31	629.6
Potash	16	39	212.6
Spring			
Nitrogen	97	90	1,056.4
Phosphate	89	37	392.8
Potash	40	22	104.0
Durum			
Nitrogen	98	76	128.6
Phosphate	95	34	54.6
Potash	32	15	7.9

Pesticide Use

In the surveyed states, farmers used 42 different pesticide active ingredients on durum wheat acres, 59 different ingredients on other spring wheat acres, and 96 on winter wheat acres. These pesticide active ingredients are classified as herbicides (targeting weeds), insecticides (targeting insects), fungicides (targeting fungal disease), and other. Herbicides were the most widely used, applied to 61 percent of winter wheat planted acres and nearly all durum and other spring wheat (Fig. 2). Table 2 shows the most widely used herbicides for each wheat type.

Fig. 2. Pesticides Applied to Wheat Planted Acres, 2015 Crop Year
(% of planted acres)

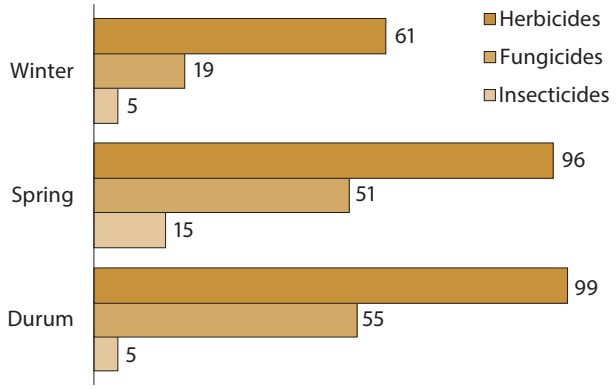


Table 2. Top Herbicides Applied to Wheat Planted Acres, 2015 Crop Year

Active Ingredient	% of Planted Acres	Avg. Rate for Year (lbs/acre)	Total Applied (lbs)
Winter			
Metsulfuron-methyl	16	0.005	25,000
Glyphosate potassium salt	14	0.473[a]	2,253,000[a]
Spring			
Fluroxypyr 1-MHE	43	0.095[a]	494,000[a]
Bromoxynil octanoate	35	0.157	669,000
Durum			
Fluroxypyr 1-MHE	53	0.098[a]	88,000[a]
Glyphosate potassium salt	41	0.843[a]	591,000[a]

[a] *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. Wheat growers reported practices in four categories: prevention, avoidance, monitoring, and suppression (PAMS). Table 3 shows the most widely used practice in each category.

- *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 or other forms of scouting.
- *Suppression* practices involve controlling or reducing existing pest populations to mitigate crop damage.

Table 3. Top Practice in Pest Management Category, 2015
(% of wheat planted acres)

	Winter	Spring	Durum
Prevention: No-till or minimum till	66	80	79
Avoidance: Rotated crops during last three years	65	86	88
Monitoring: Scouted for weeds	84	97	99
Suppression: Maintained ground covers, mulches, or other physical barriers	51	68	55

Surveyed States: Acres of Wheat Planted, 2015

	Winter	Spring	Durum
U.S. Total (thousands of acres)	**39,461.0**	**13,247.0**	**1,936.0**
	(percent of total)		
Colorado	6.1		
Idaho	1.9		
Illinois	1.4		
Kansas	23.3		
Minnesota		11.2	
Missouri	1.9		
Montana	6.0	19.2	32.0
Nebraska	3.8		
North Carolina	1.6		
North Dakota		50.6	56.3
Ohio	1.3		
Oklahoma	13.4		
Oregon	1.9		
South Dakota	3.6	10.0	
Texas	15.2		
Washington	4.2		
Total, Surveyed States (percent of U.S. Total)	**85.6** (14 states)	**91.0** (4 states)	**88.3** (2 states)