NASS *Highlights*

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2017 AGRICULTURAL CHEMICAL USE SURVEY

Cotton

Nine states . . .

. . . accounted for 89 percent of U.S. acres planted to cotton in 2017.

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 cotton chemical use survey in the fall of 2017.

Access the Data

Access 2017 cotton chemical use data, as well as results from prior surveys of cotton chemical use, through the Quick Stats 2.0 database (http://quickstats.nass.usda.gov).

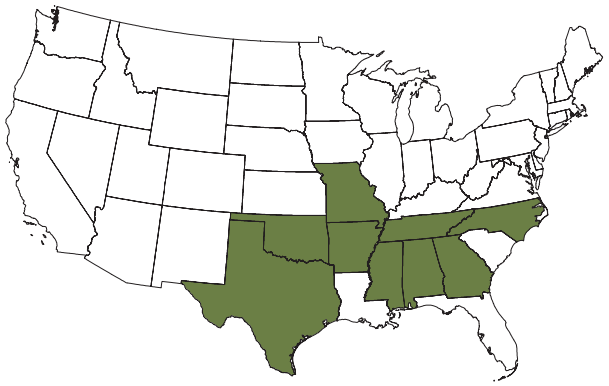
- In Program, select "Survey"
- In Sector, select "Environmental"
- In Group, select "Field Crops"
- In Commodity, select "Cotton"
- Select your category, data item, geographic level, and year

For pre-defined Quick Stats queries, go to http://bit.ly/AgChem and click "Data Tables" under the 2017 Cotton, Soybeans, and Wheat heading. For methodology information, click "Methodology."

The 2017 Agricultural Chemical Use Survey of cotton producers collected data about fertilizer and pesticide use as well as pest management practices in growing cotton. NASS conducted the survey in nine states that together accounted for 89 percent of the 12.6 million acres planted to cotton in the United States in 2017: Alabama, Arkansas, Georgia, Mississippi, Missouri, North Carolina, Oklahoma, Tennessee, and Texas. (Fig. 1 and box on p. 2)

Data are for the 2017 crop year, the one-year period beginning after the 2016 harvest and ending after the 2017 harvest.

Fig. 1. States in the 2017 Cotton Chemical Use Survey



Fertilizer Use

Fertilizer refers to a soil-enriching input that contains one or more plant nutrients. For the 2017 crop year, farmers applied nitrogen to 78 percent of planted acres, at an average rate of 94 pounds per acre, for a total of 821.5 million pounds. They applied phosphate to 59 percent of cotton planted acres and potash to 45 percent of acres. (Table 1)

Table 1. Fertilizer Applied to Cotton Planted Acres, 2017 Crop Year

	% of Planted Acres	Avg. Rate for Year (lbs/acre)	Total Applied (mil lbs)
Nitrogen (N)	78	94	821.5
Phosphate (P_2O_5)	59	45	298.4
Potash (K_2O)	45	64	325.3

Pesticide Use

The pesticide active ingredients used on cotton 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). Herbicides were used most extensively, applied to 91 percent of cotton planted acres. Other chemicals such as desiccants were applied to 69 percent of the acres, insecticides and fungicides to fewer. (Fig. 2)

Among herbicides, glyphosate isopropylamine salt was the most widely applied active ingredients (on 59 percent of planted acres), followed by trifluralin and diuron (each with 23 percent). (Table 2)

Fig. 2. Pesticides Applied to Cotton Planted Acres, 2017 Crop Year
(% of planted acres)

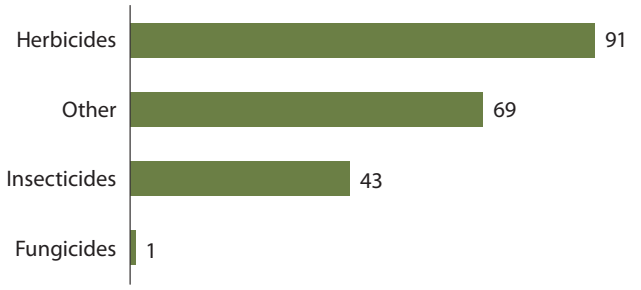


Table 2. Top Herbicides Applied to Cotton Planted Acres, 2017 Crop Year

Active Ingredient	% of Planted Acres	Avg. Rate for Year (lbs/acre)	Total Applied (mil lbs)
Glyphosate isopropylamine salt	59	1.494[a]	10.0[a]
Trifluralin	23	0.885	2.3
Diuron	23	0.417	1.1
Glyphosate potassium salt	18	2.068[a]	4.1[a]
Glufosinate-ammonium	17	0.592	1.2

[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. Cotton growers reported practices in four categories: prevention, avoidance, monitoring, and suppression (PAMS).

- *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 cotton was cleaning equipment and implements after field work, used on 64 percent of planted acres. The top avoidance practice was rotating crops (64 percent). Scouting for weeds was the most widely used monitoring practice (92 percent), and maintaining ground cover, mulching, or using other physical barriers was the top suppression practice (38 percent). (Table 3)

Table 3. Top Practice in Pest Management Category, 2017
(% of cotton planted acres)

Prevention: Cleaned equipment and implements after field work	64
Avoidance: Rotated crops during past three years	64
Monitoring: Scouted for weeds (deliberately, or by general observations while performing other tasks)	92
Suppression: Maintained ground covers, mulches, or other physical barriers	38

Surveyed States: Acres of Cotton Planted, 2017

	millions of acres	% of U.S.
U.S. Total	**12.6**	**100**
Texas	6.9	54.8
Georgia	1.3	10.1
Mississippi	0.6	4.9
Oklahoma	0.6	4.6
Arkansas	0.4	3.5
Alabama	0.4	3.4
North Carolina	0.4	2.9
Tennessee	0.3	2.7
Missouri	0.3	2.4
Total, Surveyed States	**11.2**	**89.3**

Numbers may not add due to rounding.