NASS *Highlights*

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2015 AGRICULTURAL CHEMICAL USE SURVEY

Cotton

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 fall 2015.

Access the Data

Access 2015 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).

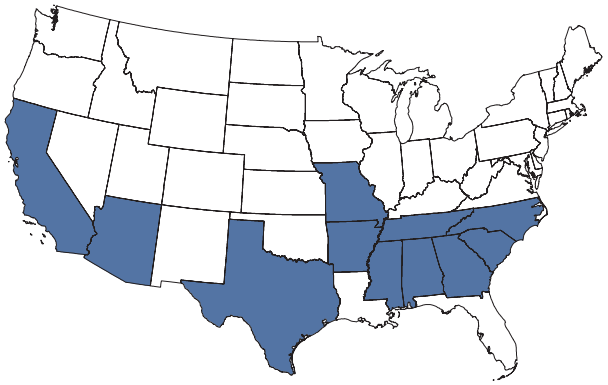
- In Program, select "Survey"
- In Sector, select "Environmental"
- In Group, select "Field Crops"
- In Commodity, select "Cotton"
- Select your category, data item, geographic level, and year

For pre-defined Quick Stats queries, go to http://bit.ly/AgChem and click "Data Tables" under the 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 collected data about fertilizer and pesticide use as well as pest management practices in growing cotton. NASS conducted the survey among cotton producers in 11 states that together accounted for 94 percent of the 8.6 million acres planted to cotton in the United States in 2015: Alabama, Arizona, Arkansas, California, Georgia, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, and Texas (Fig. 1).

Data are for the 2015 crop year, the one-year period beginning after the 2014 harvest and ending after the 2015 harvest.

Fig. 1. States in the 2015 Cotton 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 78 percent of planted acres, at an average rate of 79 pounds per acre, for a total of 503.7 million pounds. They applied phosphate to 56 percent of cotton planted acres and potash to 42 percent of acres. (Table 1)

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

	% of Planted Acres	Avg. Rate for Year (lbs/acre)	Total Applied (mil lbs)
Nitrogen (N)	78	79	503.7
Phosphate (P_2O_5)	56	41	187.7
Potash (K_2O)	42	74	250.3

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 92 percent of planted acres. Other chemicals such as dessicants were applied to 76 percent, insecticides and fungicides to fewer. (Fig. 2)

Among herbicides, two different forms of glyphosate were the most widely applied active ingredients, followed by trifluralin (Table 2).

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

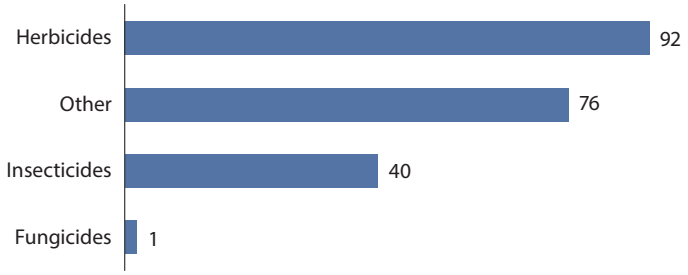


Table 2. Top Herbicides Applied to Cotton Planted Acres, 2015 Crop Year

Active Ingredient	% of Planted Acres	Avg. Rate for Year (lbs/acre)	Total Applied (mil lbs)
Glyphosate potassium salt	47	2.406[a]	9.1[a]
Glyphosate isopropylamine salt	37	1.632[a]	4.9[a]
Trifluralin	32	0.968	2.6
Diuron	23	0.573	1.1
Fomesafen sodium	16	0.237[a]	0.3[a]

[a] *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. 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 detrimental effects of pests.
- *Monitoring* practices involve observing or detecting pests through 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 55 percent of planted acres. The top avoidance practice was choosing crop or plant varieties for their resistance to specific pests (55 percent). Scouting for weeds was the most widely used monitoring practice (87 percent), and using pesticides with different mechanisms of action was the top suppression practice (33 percent). (Table 3)

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

Prevention: Cleaned equipment and implements after field work	55
Avoidance: Chose crop or plant variety for specific pest resistance	55
Monitoring: Scouted for weeds (deliberately, or by general observations while performing other tasks)	87
Suppression: Used pesticides with different mechanisms of action to prevent pests from developing resistance	33

Surveyed States: Acres of Cotton Planted, 2015

U.S. Total	millions of acres 8.6	% of U.S. 100
Texas	4.8	56.1
Georgia	1.1	13.2
North Carolina	0.4	4.5
Mississippi	0.3	3.7
Alabama	0.3	3.7
South Carolina	0.2	2.7
Arkansas	0.2	2.4
Missouri	0.2	2.2
California	0.2	1.9
Tennessee	0.2	1.8
Arizona	0.1	1.2
Total, Surveyed States	**8.0**	**93.5**

Numbers may not add due to rounding.