



2017 AGRICULTURAL CHEMICAL USE

Fruit Crops

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 agricultural chemical use surveys as part of the Agricultural Resource Management Survey. NASS conducted the fruit chemical use survey in fall 2017.

Access the Data

For detailed data on the pesticides applied to each of the 22 fruits surveyed in 2017, go to <http://bit.ly/AgChem>. Under "2017 Fruits – released July 25, 2018," click "Data Tables," then select the fruit for which you want data. For survey methodology information, click "Methodology."

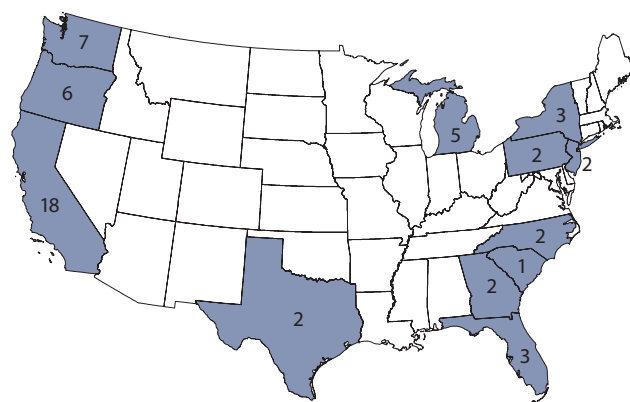
To access fruit chemical use data from this survey and previous years, go to the Quick Stats 2.0 database (<http://quickstats.nass.usda.gov>).

- In Program, select "Survey"
- In Sector, select "Environmental"
- In Group, select "Fruit"
- In Commodity, select the fruit(s) you want data for
- Select your category, data item, geographic level, and year

The 2017 Agricultural Chemical Use Survey of fruit producers collected data about pesticide use and pest management practices on acres planted to 22 different fruit crops. NASS conducted the survey among producers in 12 states, focusing on the states that are major producers for the surveyed crops. (Fig. 1)

Data are for the 2017 crop year, the one-year period beginning after the 2016 harvest and ending after the 2017 harvest. Data are available online for all 22 fruit crops (see sidebar for how to access data for each fruit). This document highlights three fruits – apples, blueberries, and peaches, each produced in at least six geographically diverse states.

Fig. 1. States Included in the 2017 Fruit Chemical Use Survey
(number of crops surveyed in state)

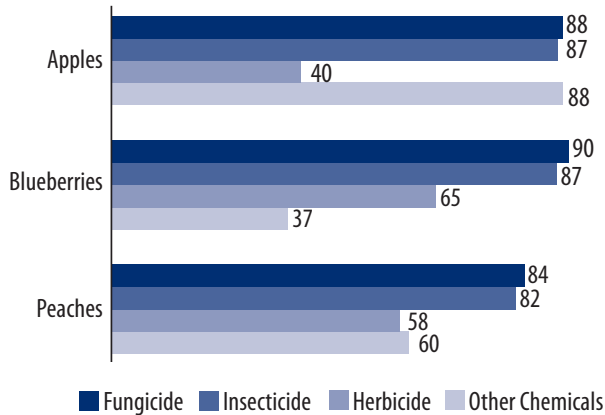


Pesticide Use

The pesticide active ingredients used on fruit are classified 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).

Blueberry and peach growers applied fungicides most widely (to 90 and 84 percent of acres, respectively) followed by insecticides (87 and 82 percent). Apple growers applied fungicides, insecticides, and other chemicals nearly equally (88, 87, and 88 percent, respectively). (Fig. 2) The box on page 2 shows the top pesticides in each category applied to the featured fruits.

Fig. 2. Pesticides Applied to Selected Fruits, 2017 Crop Year
(% of planted acres)



Pest Management Practices

The survey asked growers to report on practices they used to manage pests, including weeds, insects, and diseases. Fruit growers reported practices in three categories. Table 1 shows the most widely applied practices in each category.

- *Prevention* practices involve actions to keep a pest population from infesting a crop or field.
- *Monitoring* practices involve observing or detecting pests through systematic sampling, counting, or other forms of scouting.
- *Suppression* practices involve controlling or reducing existing pest populations to mitigate crop damage.

Table 1. Top Practices in Pest Management Category, 2017 Crop Year
(% of planted acres, 22 fruits)

Prevention	
Irrigated the fruit acres	89
Cleaned equipment and implements after field work	79
Monitoring	
Scouted for insects and mites	99
Monitored weather to assist in decision making	89
Scouted for diseases	89
Suppression	
Used pesticides with different mechanisms of action to keep pest from becoming resistant to pesticide	72
Compared scouting data to published information to assist in decision making	63

Top Pesticides, by percent of planted acres, Selected Fruits, 2017 Crop Year

	% of Planted Acres	Avg. Rate for Year (lbs/acre)	Total Applied (lbs)
Fungicides			
Apples			
Sulfur	42	10.012	1,173,000
Trifloxystrobin	39	0.109	11,900
Blueberries			
Fenbuconazole	56	0.159	6,300
Captan	51	4.998	178,200
Peaches			
Propiconazole	58	0.219	9,600
Captan	38	11.291	327,800
Insecticides			
Apples			
Chlorantranilprole	52	0.130	19,100
Spinetoram	44	0.150	18,500
Blueberries			
Phosmet	49	1.808	62,700
Zeta-cypermethrin	47	0.055	1,800
Peaches			
Lambda-sypermethrin	32	0.099	2,400
Chlorpyrifos	25	1.810	36,300
Herbicides			
Apples			
Glyphosate isopropylamine salt	25	2.059 ^a	145,200 ^a
2,4-D, dimethylamine salt	15	1.297 ^a	52,600 ^a
Blueberries			
Flumioxazin	21	0.254	3,800
Glufosinate-ammonium	21	1.408	20,700
Peaches			
Glyphosate isopropylamine salt	30	2.302 ^a	50,400 ^a
2,4-D, dimethylamine salt	26	1.378 ^a	27,400 ^a
Other Chemicals			
Apples			
Mineral oil	67	31.960	5,977,500
Gibberellins A4A7	34	0.024	2,300
Blueberries			
Cuprammonium acetate	10	0.377	2,500
Hydrogen peroxide	7	1.760	8,900
Peaches			
Mineral oil	51	37.874	1,303,600
Z-8-Dodecen acetate	11	0.113	1,000

^a Expressed in acid equivalent.