AGRICULTURAL CHEMICAL USE

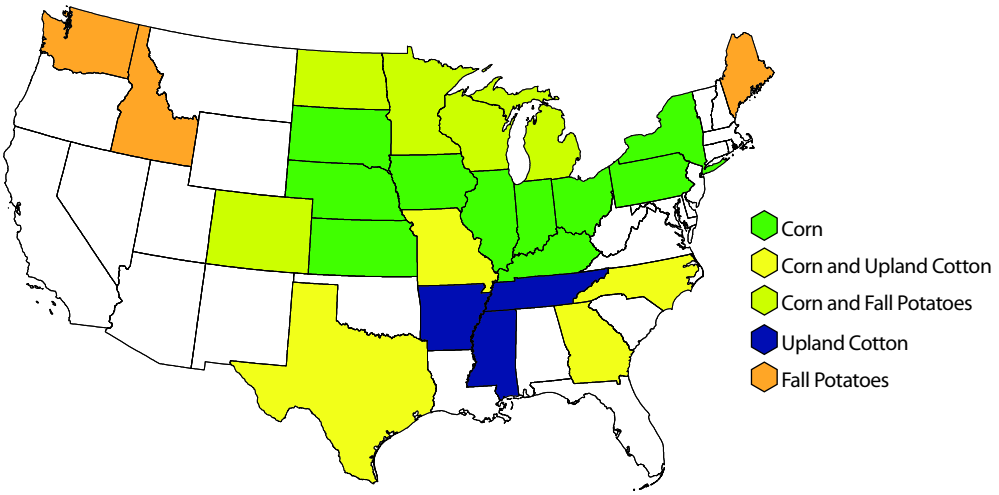
Corn, Upland Cotton and Fall Potatoes 2010 (May 25, 2011)

Overview

The National Agricultural Statistics Service (NASS) Agricultural Chemical Use Program 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.

In the fall of 2010, NASS collected data about chemical use and pest management on acres of conventional and organic corn as well as upland cotton and fall potatoes that were planted for the 2010 crop year. These data were collected as part of the Agricultural Resource Management Survey, and results were based on 4,893 individual responses from producers in 25 program states: Arkansas, Colorado, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New York, North Carolina, North Dakota, Ohio, Pennsylvania, South Dakota, Tennessee, Texas, Washington and Wisconsin. These states accounted for 94 percent of corn acres, 85 percent of the upland cotton acres, and 87 percent of the fall potato acres planted nationwide in the 2010 crop year.

Agricultural Chemical Use on Corn, Upland Cotton, Fall Potatoes: Program States by Crop, 2010



Data Summary Published to Quick Stats 2.0 on May 25, 2011

The 2010 agricultural chemical use data for corn, organic corn, upland cotton and fall potatoes are available through the Quick Stats 2.0 database on the NASS website: www.nass.usda.gov. To access the database, go to 'quickstats.nass.usda.gov' and select the following options:

Commodity	Search			
Corn and Organic Corn	Program: Survey	Sector: Environmental	Group: Field Crops	Commodity: Corn
Upland Cotton	Program: Survey	Sector: Environmental	Group: Field Crops	Commodity: Cotton
Fall Potatoes	Program: Survey	Sector: Environmental	Group: Vegetables	Commodity: Potatoes

USDA United States Department of Agriculture
National Agricultural Statistics Service

(800) 727-9540
www.nass.usda.gov

Corn Highlights*

Fertilizers

Of the three primary macronutrients, nitrogen (N) was the most widely used on corn. Farmers applied nitrogen to 97 percent of planted acres at an average rate of 140 pounds per acre for the 2010 crop year. Macronutrients phosphate (P) and potash (K) were also applied to the majority of acres, but less extensively used. The secondary macronutrient, sulfur (S), was applied to 15 percent of acres planted to corn.

Pesticides

Herbicide active ingredients were applied to 98 percent of acres planted to corn, and almost two-thirds of all active ingredients used on corn were herbicides. Glyphosate isopropylamine salt was the most widely used pesticide overall, and the active ingredient used in the greatest total amount. Fungicide and insecticide active ingredients were applied to 8 percent and 12 percent of acres planted to corn, respectively.

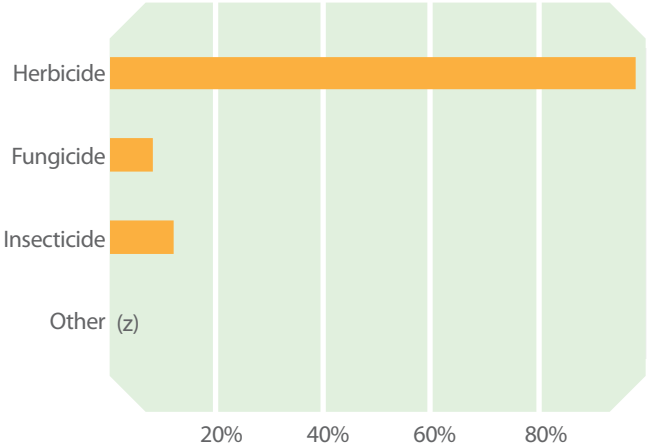
Pest Management Practices

Scouting for weeds was the top pest management practice on corn acreage.

Fertilizers: Applications to Corn Planted Acres, 2010 Program States

Fertilizer		
Acres Treated (%)	Rate per Crop Year (Lbs/Acre)	Total Applied (Lbs)
Nitrogen		
97	140	11,039,700,000
Phosphate		
78	60	3,805,100,000
Potash		
61	79	3,949,200,000
Sulfur		
15	13	166,600,000

Pesticides: Percent of Corn Planted Acres Treated, 2010 Program States



(z) = Less than half a percent

Top Pest Management Practices, by Percent of Planted Corn Acres, 2010 Program States

	Top Practice	%
Prevention	No-till or minimum till used	62
Avoidance	Crop variety chosen for specific pest resistance	60
Monitoring	Scouted for weeds	88
Suppression	Ground covers, mulches, or other physical barriers maintained	34

Top Pesticides Used, by Percent of Corn Planted Acres Treated, 2010 Program States

Pesticide	Active Ingredient		
	Acres Treated (%)	Rate per Crop Year (Lbs/Acre)	Total Applied (Lbs)
Herbicide	Glyphosate isopropylamine salt		
	66	1.064	57,539,000
Herbicide	Atrazine		
	61	1.034	51,212,000
Herbicide	Acetochlor		
	25	1.398	27,954,000

*Information on organic corn chemical usage and pest management practices is included in the organic corn summary available in the Quick Stats 2.0 database.

Upland Cotton Highlights

Fertilizers

Of the three primary macronutrients, nitrogen (N) was the most widely used on upland cotton acres. Farmers applied nitrogen to 90 percent of planted acres at an average rate of 77 pounds per acre for the crop year. Macronutrients phosphate (P) and potash (K) were also applied to the majority of acres, but less extensively used. The secondary macronutrient, sulfur (S), was applied to 42 percent of acres planted to upland cotton.

Pesticides

Herbicide active ingredients were applied to 99 percent of acres planted to upland cotton. Glyphosate isopropylamine salt was the most widely used pesticide overall. Fungicides and insecticides were applied to 1 percent and 54 percent of planted acres, respectively. Other chemicals including defoliants and growth regulators were applied to 87 percent of planted acres. The growth regulator ethephon was the second most widely used active ingredient.

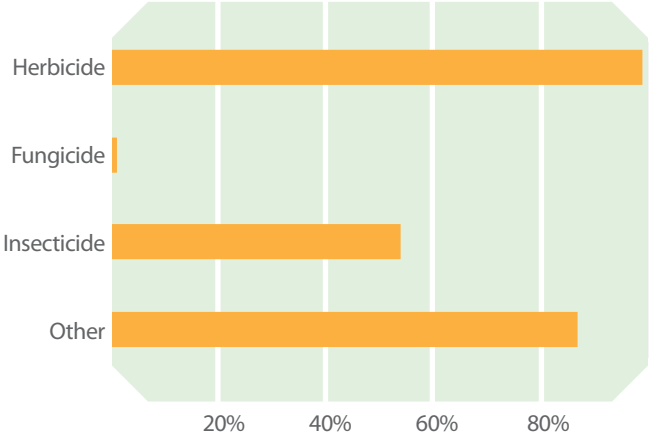
Pest Management Practices

Scouting for weeds was the top pest management practice on upland cotton acreage.

Fertilizers: Applications to Upland Cotton Planted Acres, 2010 Program States

Fertilizer		
Acres Treated (%)	Rate per Crop Year (Lbs/Acre)	Total Applied (Lbs)
Nitrogen		
90	77	633,500,000
Phosphate		
62	41	234,200,000
Potash		
52	66	312,000,000
Sulfur		
42	13	47,600,000

Pesticides: Percent of Upland Cotton Planted Acres Treated, 2010 Program States



Top Pest Management Practices, by Percent of Upland Cotton Planted Acres, 2010 Program States

	Top Practice	%
Prevention	Equipment and implements cleaned	68
	Field edges, ditches, or fence lines maintained	68
Avoidance	Crop variety chosen for specific pest resistance	64
Monitoring	Scouted for weeds	92
Suppression	Ground covers, mulches, or other physical barriers maintained	40

Top Pesticides Used, by Percent of Upland Cotton Planted Acres Treated, 2010 Program States

Pesticide	Active Ingredient		
	Acres Treated (%)	Rate per Crop Year (Lbs/Acre)	Total Applied (Lbs)
Herbicide	Glyphosate isopropylamine salt		
	68	1.707	10,697,000
Other	Ethephon		
	65	1.357	8,104,000
Herbicide	Trifluralin		
	39	0.859	3,079,000

Fall Potato Highlights

Fertilizers

Of the three primary macronutrients, nitrogen (N) was the most widely used on acres planted to fall potatoes. Farmers applied nitrogen to 99 percent of acres at an average rate of 228 pounds per acre for the crop year. Macronutrients phosphate (P) and potash (K) were also widely used, with just 10 percent or less of planted acreage left untreated. The secondary macronutrient, sulfur (S), a nutrient also used in soil pH management, was applied to 73 percent of acres planted to fall potatoes.

Pesticides

Herbicide active ingredients were applied to 94 percent of acres planted to fall potatoes. Metribuzin was the most widely used pesticide overall. Applied to 96 percent of planted acres, fungicides comprised the most widely used pesticide class. Chlorothalonil and mancozeb were the second and third most widely used pesticides. Insecticides were applied to 83 percent of acres, and other chemicals including dessicants were applied to 69 percent of planted acreage.

Pest Management Practices

Scouting for diseases, insects and mites were the top pest management practices on fall potato acreage.

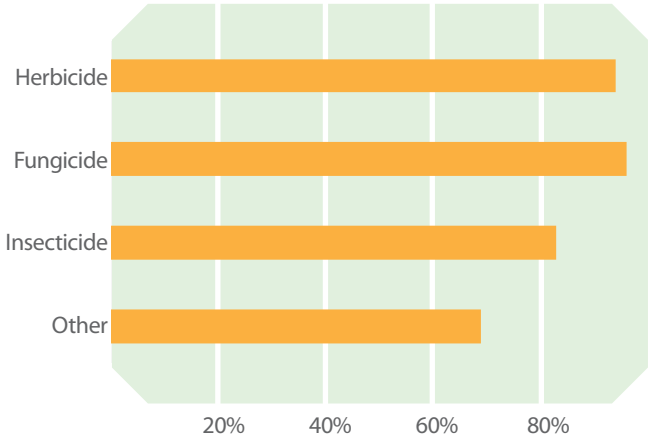
Top Pest Management Practices, by Percent of Fall Potato Planted Acres, 2010 Program States

	Top Practice	%
Prevention	Seed treated for insect or disease control after purchase	83
Avoidance	Rotated crops during past 3 years	92
Monitoring	Scouted for diseases	98
	Scouted for insects and mites	98
Suppression	Pesticides with different mechanisms of action used to keep pest from becoming resistant to pesticides	71

Fertilizers: Applications to Fall Potato Planted Acres, 2010 Program States

Fertilizer		
Acres Treated (%)	Rate per Crop Year (Lbs/Acre)	Total Applied (Lbs)
Nitrogen		
99	228	175,900,000
Phosphate		
96	158	118,200,000
Potash		
90	201	141,200,000
Sulfur		
73	94	53,300,000

Pesticides: Percent of Fall Potato Planted Acres Treated, 2010 Program States



Top Pesticides Used, by Percent of Fall Potato Planted Acres Treated, 2010 Program States

Pesticide	Active Ingredient		
	Acres Treated (%)	Rate per Crop Year (Lbs/Acre)	Total Applied (Lbs)
Herbicide	Metribuzin		
	77	0.450	268,000
Fungicide	Chlorothalonil		
	63	4.414	2,176,000
Fungicide	Mancozeb		
	60	3.257	1,512,000