



AGRICULTURAL CHEMICAL USE

POSTHARVEST WHEAT 2010

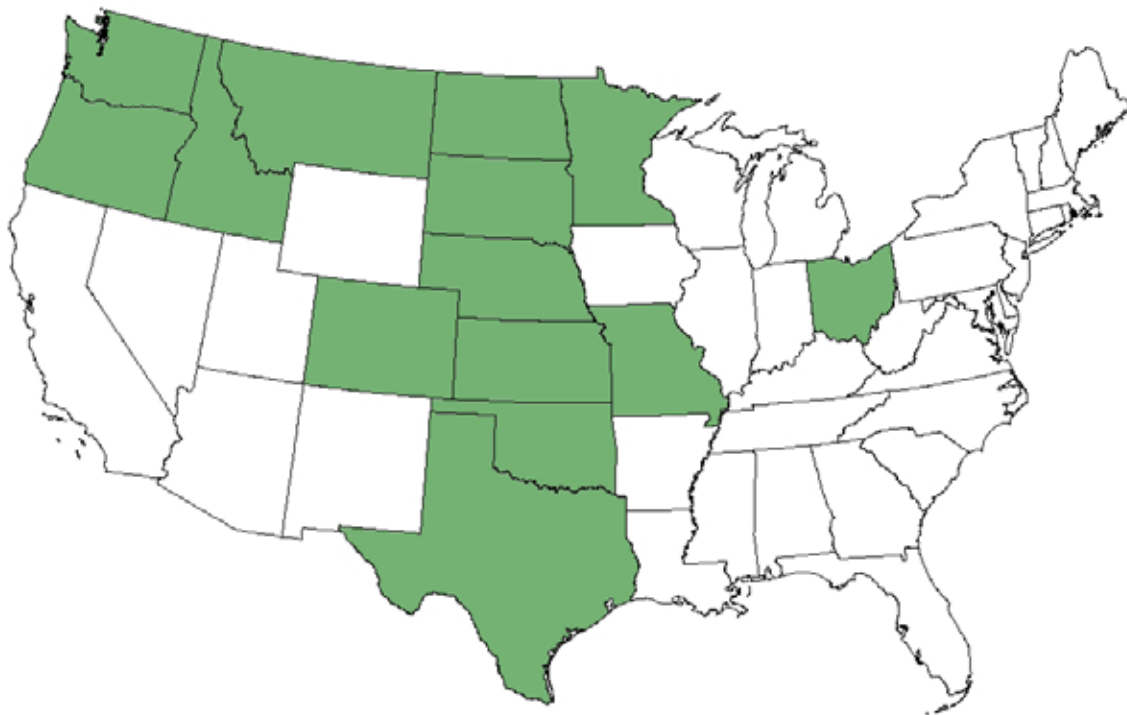
Overview

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 postharvest fertilizer and pesticide use and pest management practices.

In the summer and fall of 2010, NASS collected data about pesticide applications on all wheat and pest management practices for all grains handled

at off-farm storage facilities. This postharvest survey was conducted for wheat marketed from June 1, 2009 through May 31, 2010. These results are based on 1,634 reports from operators in 14 program states: Colorado, Idaho, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, Ohio, Oklahoma, Oregon, South Dakota, Texas and Washington.

Agricultural Postharvest Chemical Use Wheat Program States , 2009-2010



United States Department of Agriculture
National Agricultural Statistics Service

www.nass.usda.gov

Pesticides

In the 2009-2010 marketing year, a total of 24 separate pesticide active ingredients were used on wheat handled by off-farm storage operators in the 14 program states. Insecticide active ingredients were the most widely used pesticide class, accounting for 18.1 percent of the total volume handled. Only 0.1 percent of the volume was treated with fungicides.

Insecticides

A total of 267,700 pounds of insecticides were applied to postharvest wheat in the 14 program states. In terms of total amount applied, silicon dioxide was the most common insecticide.

In terms of percent of volume treated, aluminum phosphide and s-methoprene were the most commonly used insecticides, at 15.5 and 2.0 percent, respectively. Aluminum phosphide is an insecticidal fumigant used to kill insects, insect larvae and mites. S-methoprene is an insect growth regulator.

Bt. Kurstaki ABTS-351, cyfluthrin, imidacloprid, lambda-cyhalothrin, pirimiphos-methyl and thiomethoxam were also applied. Due to the small number of reports of these chemicals, data were withheld to avoid disclosing information for individual operations.

Insecticides Used by Program States

Insecticides	Volume Treated	Rate per Marketing Year	Total Applied
	%	Lbs. per 1,000 Bushels	Lbs.
Aluminum phosphide	15.5	0.236	118,300
Carbon dioxide	0.2	0.389	1,900
Chlorpyrifos-methyl	0.1	0.161	500
Deltamethrin	0.1	0.029	100
Malathion	0.3	0.204	1,700
Phosphine gas	0.2	0.008	(Z)
Silicon dioxide	0.3	15.307	139,100
S-methoprene	2.0	0.072	4,800

(Z) Total applied is less than 50 lbs.

Percent of Volume Treated and Total Applied by Pesticide Class

State	Volume Handled	Insecticides		Fungicides		Other	
	Million Bushels	%	Lbs.	%	Lbs.	%	Lbs.
Colorado	78.3	20.3	10,700				
Idaho	110.8	11.7	3,400	(D)	(D)		
Kansas	758.4	37.3	108,400	(D)	(D)	(D)	(D)
Minnesota	171.0	1.0	2,100				
Missouri	26.5	20.9	1,300	(D)	(D)		
Montana	165.9	1.6	10,400	0.8	9,600		
Nebraska	142.3	23.1	14,300				
North Dakota	428.0	0.1	6,600				
Ohio	106.0	16.2	19,400				
Oklahoma	167.0	63.4	33,400				
Oregon	184.8	6.8	1,200	(D)	(D)		
South Dakota	137.1	4.2	1,300				
Texas	373.3	10.0	16,600	(D)	(D)		
Washington	389.2	14.0	38,600	(D)	(D)		
Total	3,238.7	18.1	267,700	0.1	18,800	(D)	(D)

(D) Insufficient reports to publish data for this pesticide class.

Fungicides

In the program states, fungicides were the next most common pesticide class applied to wheat after harvest, with a total of 18,800 pounds applied. In terms of total amount applied, the most widely used fungicides were difenoconazole and thiram. The fungicides carboxin, imazalil and ipconazole were also applied. There were an insufficient number of reports to publish data for these fungicides.

Fungicides Used by Program States

Fungicides	Volume Treated	Rate per Marketing Year	Total Applied
	%	Lbs. per 1,000 Bushels	Lbs.
Difenoconazole	(Z)	6.937	8,100
Mefenoxam	(Z)	0.744	900
Metalaxyl	(Z)	1.278	400
Tebuconazole	(Z)	0.835	300
Thiram	(Z)	23.651	6,400
Tritconazole	(Z)	2.042	200

(Z) Percent of volume treated was less than 0.05 percent for all fungicides.

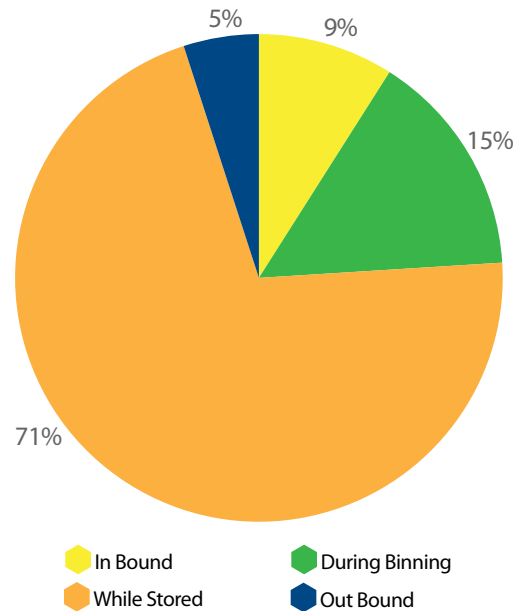
Other

Other chemicals were the less commonly used class of active ingredients. Program states reported using sulfuryl fluoride on postharvest wheat. Due to the small number of reports of these chemicals, data were withheld to avoid disclosing information for individual operations.

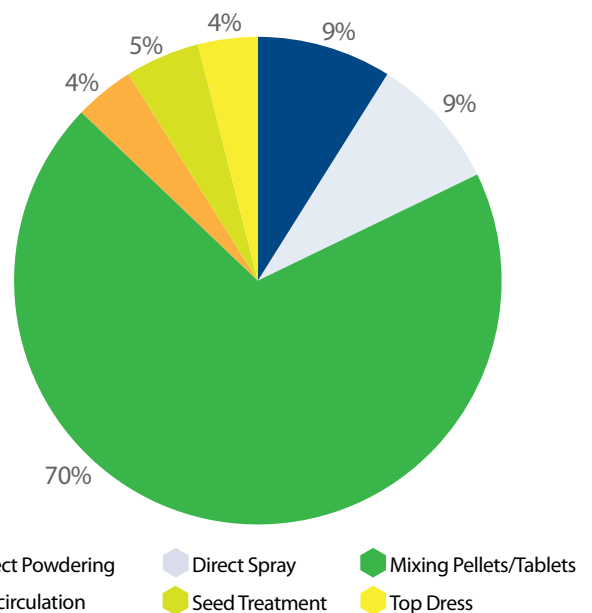
When Applied and Method

Postharvest wheat chemical applications happen at different times in the storage process and are applied by different methods. Of all the postharvest chemical applications made to wheat in 2009-2010, 71 percent was applied during storage. The most common method of application was mixing pellets or tablets, accounting for 70 percent of all applications.

Percent of Applications by When Applied



Percent of Applications by Method*



* May not add to 100 due to rounding.



Pest Management Practices

Grain storage operations used several different mechanical devices and cleaning practices to deter pests. For all grains handled, the most commonly used mechanical device was the aeration controller, 47 percent of the operations used this device. The two most common cleaning practices were controlling vegetation around the bins and picking up spilled grain, 96 percent of the operations engaged in both of these practices.

Most Common Mechanical Devices and Cleaning Practices Used for Pest Management

State	Aeration Controller	Control Vegetation Around Bins	Pick Up Spilled Grain
	Mechanical Device	Cleaning Activity	Cleaning Activity
	Percent of Operations		
Colorado	40	82	84
Idaho	71	94	99
Kansas	45	98	98
Minnesota	51	98	98
Missouri	24	93	96
Montana	24	99	93
Nebraska	39	92	93
North Dakota	48	100	97
Ohio	46	92	93
Oklahoma	56	98	98
Oregon	66	88	86
South Dakota	54	100	100
Texas	43	97	98
Washington	63	92	96
Total (Average)	47	96	96

For More Information

The 2010 agricultural chemical use data for postharvest wheat were published March 16, 2011 and are available on the NASS website: www.nass.usda.gov.

To access the database directly, go to 'quickstats.nass.usda.gov' and under 'Sector,' select 'Environmental!'

For assistance call the Agricultural Statistics Hotline at (800) 727-9540.

NASS will publish additional data from the Agricultural Chemical Use Program through 2011, including:

-  Corn, Organic Corn, Upland Cotton and Fall Potatoes, 2010 Crop Year - May 2011
-  Vegetables, 2010 Crop Year - July 2011

