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Overview

As determined by the U.S. Environmental Protection Agency (EPA), a restricted use pesticide is a pesticide which is available for purchase and use only by certified pesticide applicators or persons under their direct supervision, and only for the uses covered by the applicator's certification. This group of pesticides is not available for use by the general public because of the very high toxicities or due to the environmental hazards associated with the materials.

The agricultural chemical usage data in this report were derived from pesticide products reported in the Agricultural Chemical Usage 2006 Field Crops Summary published in May 2007, Agricultural Chemical Usage 2006 Vegetable Summary published in July 2007, and in the Agricultural Chemical Usage 2005 Swine and Swine Facilities Summary published in December 2006 that are labeled as restricted use pesticides by the EPA. This report contains statistics for on-farm use of agricultural chemicals listed by active ingredient.

The agricultural chemical usage data in this year's Restricted Use Summary are summarized by product. Only application data for active ingredients which were part of a restricted use pesticide are included. The Agricultural Chemical Application tables displayed in this publication show all active ingredients reported at the Program State level. In order to publish data for an active ingredient, there must be a minimum of 5 reports for the specific active ingredient at the summary level (by crop at the Program State level).

Highlights

Field Crops: The data were compiled from 2 surveys, the Agricultural Resources Management Survey (ARMS) and Conservation Effects Assessment Project (CEAP). Data collection occurred primarily during the months of September to December of 2006. Targeted crops included rice, soybeans, durum wheat, other spring wheat, and winter wheat. The Program States accounted for 87 to 100 percent of the U.S. acreage for these crops. There were insufficient reports to publish any restricted use chemical data for durum wheat.

A limited number of restricted use herbicides were applied to field crops in 2006. **Paraquat** was used on 1 percent of the soybean acres. **Alachlor** and **Atrazine** were both applied to less than 1 percent of the soybeans and winter wheat acreage, respectively.

A wide range of restricted use insecticides was used on rice, soybeans, and wheat. **Lambda-cyhalothrin** was used on 9 percent of the rice acres; **Zeta-cypermethrin** and **Lambda-cyhalothrin** were applied to 6 percent of the rice and soybean acreage, respectively. **Chlorpyrifos** was applied to 5 percent of the soybean acreage in the Program States.

Vegetable Crops: Growers in 19 Program States were surveyed to obtain restricted chemical use data on 23 selected vegetable crops in 2006. The targeted crops were: asparagus, snap beans, broccoli, cabbage, cantaloupes, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, garlic, honeydews, lettuce, onions, green peas, bell peppers, pumpkins, spinach, squash, strawberries, tomatoes, and watermelons. The data on restricted use applications cover the period immediately following harvest of the 2005 crop through harvest of the 2006 crop. There was not enough application coverage to publish any restricted use chemical data for honeydews.

A limited number of restricted use herbicides were applied to vegetable crops in 2006. **Atrazine** was used on 61 percent of the fresh market sweet corn acreage and on 50 percent of the processed sweet corn acreage. **Pronamide** was applied to 44 percent of the other lettuce acreage and 38 percent of the head lettuce acreage. **Bentazon** was applied to 18 percent of the processed sweet corn acres, followed by **Paraquat**, which was applied to 17 percent of the fresh market tomato acres.

Several restricted use insecticides were used extensively on vegetable crops in the Program States. **Zeta-cypermethrin** was applied to 74 percent of head lettuce, 66 percent of other lettuce, and 47 percent of celery, while 39 percent of the fresh spinach, 28 percent of garlic, and 24 percent of the onion acreage were also reported as treated with restricted formulations of this active ingredient. **Esfenvalerate** was used on 66 percent of the processed carrot acres, as well as on 31 percent of the fresh market tomato acres, 26 percent of the fresh market cucumbers, 25 percent of the squash acres, and 22 percent of the fresh market sweet corn acres. **Permethrin** was applied to 59 percent of the celery acreage, 50 percent of the head lettuce acres, and 46 percent of the fresh spinach acreage.

Restricted use pesticides used as "Other Chemicals" included **Chloropicrin** and **Dichloropropene**. **Chloropicrin** was used on 43 percent of the strawberry acreage, 25 percent of the fresh tomato acres, and 17 percent of the bell pepper acreage. **Dichloropropene** was used on 20 percent of the fresh market cucumber acreage, 10 percent of the squash acres, and 6 percent of the onion acreage.

Swine and Swine Facilities: The 2006 Swine and Swine Facilities Chemical Use Study collected information concerning chemicals applied to swine and swine facilities to control flies, mange/mites, lice, and other external pests. All data refer to the on-farm use of chemical active ingredients contained in insecticides. The two major restricted active ingredients reported as being used on swine facilities were **Diazinon** and **Permethrin**; a total of 1,702 and 353 pounds, respectively of these active ingredients were applied to the Program States swine facilities. There were insufficient reports to publish any active ingredient's data for all swine.

Dairy Cattle and Dairy Cattle Facilities: The 2006 Dairy Cattle and Dairy Cattle Facilities Chemical Use Study collected information concerning chemicals applied to dairy cattle and dairy cattle facilities to control flies, mange/mites, lice, grubs, and other external pests. There were insufficient reports to publish any active ingredient's data for dairy cattle and dairy cattle facilities.

**Rice: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Gamma-cyhalothrin	1	1.4	0.015	0.021	1
Lambda-cyhalothrin	9	1.1	0.023	0.025	7
Methyl parathion	4	1.9	0.467	0.908	97
Zeta-cypermethrin	6	1.2	0.024	0.029	5

¹ Planted acreage in 2006 for the 6 Program States was 2.8 million acres.
States included are AR, CA, LA, MS, MO, and TX.

**Soybeans: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Alachlor	*	1.0	1.931	1.931	485
Paraquat	1	1.0	0.492	0.511	335
Insecticides					
Chlorpyrifos	5	1.1	0.454	0.480	1,663
Cyfluthrin	*	1.1	0.028	0.030	10
Diflubenzuron	*	1.7	0.037	0.062	10
Esfenvalerate	3	1.1	0.035	0.037	70
Gamma-cyhalothrin	*	1.0	0.011	0.011	3
Lambda-cyhalothrin	6	1.1	0.020	0.022	97
Methyl parathion	*	1.1	0.529	0.565	66
Permethrin	*	1.0	0.065	0.065	12
Thiodicarb	*	1.0	0.320	0.320	39
Zeta-cypermethrin	1	1.0	0.022	0.022	14

* Area applied is less than 0.5 percent.

¹ Planted acreage in 2006 for the 19 Program States was 72.9 million acres.
States included are AR, IL, IN, IA, KS, KY, LA, MI, MN, MS, MO, NE, NC, ND, OH, SD, TN, VA, and WI.

**Other Spring Wheat: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Lambda-cyhalothrin	*	1.0	0.023	0.023	1

* Area applied is less than 0.5 percent.

¹ Planted acreage in 2006 for the 6 Program States was 14.7 million acres.
States included are ID, MN, MT, ND, SD, and WA.

**Winter Wheat: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Atrazine	*	1.0	0.676	0.676	55
Insecticides					
Chlorpyrifos	2	1.0	0.380	0.380	204
Lambda-cyhalothrin	*	1.0	0.017	0.017	2
Zeta-cypermethrin	*	1.0	0.022	0.022	1

* Area applied is less than 0.5 percent.

¹ Planted acreage in 2006 for the 14 Program States was 35.3 million acres.
States included are CO, ID, IL, KS, MI, MO, MT, NE, OH, OK, OR, SD, TX, and WA.

**Asparagus: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006 ¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Paraquat	6	1.3	0.646	0.848	2.3
Insecticides					
Chlorpyrifos	24	1.2	0.923	1.118	12.2
Disulfoton	32	1.1	1.001	1.114	16.5
Permethrin	16	2.8	0.105	0.291	2.1

¹ Planted acreage in 2006 for the 3 Program States was 46,200 acres.
States included are CA, MI, and WA.

**Snap Beans, Fresh: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006 ¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Paraquat	2	1.0	0.990	0.990	1.5
Insecticides					
Bifenthrin	10	2.1	0.071	0.148	1.3
Esfenvalerate	18	1.6	0.031	0.049	0.8
Lambda-cyhalothrin	*	1.4	0.027	0.036	(²)
Methomyl	10	2.4	0.329	0.786	6.9
Permethrin	*	1.1	0.095	0.101	(²)
Zeta-cypermethrin	3	1.0	0.023	0.024	0.1
Other Chemicals					
Dichloropropene	5	1.0	86.830	86.830	409.2

* Area applied is less than 0.5 percent.

¹ Planted acreage in 2006 for the 6 Program States was 88,500 acres.

States included are CA, FL, GA, NY, NC, and TN.

² Total applied is less than 50 lbs.

**Snap Beans, Proc.: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Bifenthrin	40	2.0	0.044	0.090	5.6
Esfenvalerate	9	1.1	0.036	0.040	0.6
Ethoprop	7	1.4	2.379	3.285	37.8
Lambda-cyhalothrin	8	1.3	0.026	0.034	0.4
Permethrin	1	1.0	0.075	0.076	0.1
Zeta-cypermethrin	11	1.3	0.024	0.032	0.5

¹ Planted acreage in 2006 for the 6 Program States was 160,300 acres.
States included are IL, MI, NY, OR, PA, and WI.

**Broccoli: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Pronamide	*	1.0	1.196	1.200	0.2
Insecticides					
Chlorpyrifos	8	1.1	0.955	1.024	11.0
Diazinon	17	1.1	0.909	0.968	21.4
Disulfoton	8	1.0	1.001	1.002	10.2
Emamectin benzoate	17	1.0	0.010	0.010	0.2
Esfenvalerate	19	1.1	0.038	0.044	1.1
Gamma-cyhalothrin	1	1.1	0.015	0.016	(²)
Lambda-cyhalothrin	6	1.2	0.028	0.032	0.3
Methomyl	3	1.0	0.828	0.854	3.6
Permethrin	2	1.2	0.094	0.109	0.3
Zeta-cypermethrin	14	1.1	0.042	0.047	0.8

* Area applied is less than 0.5 percent.

¹ Planted acreage in 2006 for California was 128,500 acres.

² Total applied is less than 50 lbs.

**Cabbage, Fresh: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Paraquat	1	1.2	0.591	0.683	0.3
Insecticides					
Bifenthrin	14	2.6	0.078	0.202	1.8
Chlorpyrifos	3	1.0	0.925	0.940	1.9
Diazinon	6	1.1	1.056	1.117	4.5
Disulfoton	2	1.0	1.904	1.937	2.2
Emamectin benzoate	13	1.3	0.010	0.013	0.1
Esfenvalerate	15	2.1	0.039	0.080	0.8
Lambda-cyhalothrin	22	1.9	0.026	0.048	0.7
Methomyl	11	1.7	0.544	0.914	6.4
Permethrin	19	1.4	0.126	0.181	2.2
Thiodicarb	4	1.4	0.351	0.505	1.2
Zeta-cypermethrin	16	1.7	0.032	0.054	0.5

¹ Planted acreage in 2006 for the 7 Program States was 63,800 acres.
States included are CA, FL, GA, NY, NC, TX, and WI.

**Cantaloupes: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Bifenthrin	19	1.3	0.081	0.102	1.5
Diazinon	11	1.2	0.521	0.605	5.1
Esfenvalerate	4	1.0	0.040	0.042	0.1
Methomyl	11	1.2	0.554	0.681	5.7
Permethrin	35	1.0	0.131	0.132	3.6

¹ Planted acreage in 2006 for the 3 Program States was 77,300 acres.
States included are AZ, CA, and TX.

**Carrots, Fresh: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Diazinon	10	1.2	1.056	1.244	8.8
Esfenvalerate	13	1.5	0.041	0.060	0.6
Methomyl	2	1.2	0.596	0.730	1.0

¹ Planted acreage in 2006 for the 3 Program States was 74,500 acres.
States included are CA, MI, and TX.

**Carrots, Proc.: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Diazinon	27	1.8	0.520	0.948	3.6
Esfenvalerate	66	2.1	0.024	0.051	0.5

¹ Planted acreage in 2006 for the 4 Program States was 14,100 acres.
States included are CA, MI, WA, and WI.

**Cauliflower: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Chlorpyrifos	11	1.0	0.792	0.793	3.5
Diazinon	14	1.0	0.865	0.882	4.9
Emamectin benzoate	5	1.4	0.010	0.014	(²)
Esfenvalerate	15	1.4	0.041	0.056	0.3
Lambda-cyhalothrin	14	2.2	0.024	0.051	0.3
Methomyl	3	1.1	0.733	0.826	1.0
Permethrin	1	1.1	0.093	0.099	(²)
Zeta-cypermethrin	13	1.6	0.043	0.070	0.4

¹ Planted acreage in 2006 for California was 38,300 acres.

² Total applied is less than 50 lbs.

**Celery: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Abamectin	34	1.8	0.011	0.020	0.2
Emamectin benzoate	14	1.1	0.010	0.011	(²)
Methomyl	25	1.3	0.791	0.996	6.1
Oxamyl	35	1.2	0.750	0.894	7.7
Permethrin	59	1.6	0.163	0.259	3.7
Zeta-cypermethrin	47	2.0	0.047	0.094	1.1

¹ Planted acreage in 2006 for California was 24,500 acres.

² Total applied is less than 50 lbs.

**Sweet Corn, Fresh: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Acetochlor	*	1.0	1.735	1.735	0.5
Alachlor	12	1.0	1.876	1.906	47.4
Atrazine	61	1.0	1.100	1.149	153.4
Bentazon	2	1.0	0.435	0.454	2.3
Dimethenamid-P	1	1.0	0.761	0.761	1.1
Paraquat	*	1.1	0.415	0.437	0.4
Insecticides					
Bifenthrin	6	1.5	0.085	0.131	1.6
Carbofuran	3	1.1	0.831	0.904	5.7
Chlorpyrifos	21	2.5	0.820	2.036	89.4
Cyfluthrin	15	2.8	0.034	0.093	3.0
Diazinon	3	1.2	0.892	1.050	7.6
Esfenvalerate	22	5.9	0.037	0.215	10.0
Lambda-cyhalothrin	52	3.6	0.028	0.102	11.4
Methomyl	54	7.2	0.341	2.467	285.4
Methyl parathion	1	1.3	0.545	0.723	1.7
Permethrin	14	1.7	0.126	0.210	6.5
Phorate	12	1.0	1.216	1.235	30.6
Tebupirimphos	1	1.0	0.173	0.173	0.3
Tefluthrin	1	1.0	0.086	0.089	0.1
Terbufos	1	1.0	1.061	1.061	1.1
Thiodicarb	23	2.9	0.477	1.393	69.3
Zeta-cypermethrin	13	2.3	0.038	0.086	2.3

* Area applied is less than 0.5 percent.

¹ Planted acreage in 2006 for the 14 Program States was 214,300 acres.

States included are CA, CO, FL, GA, IL, MI, NJ, NY, NC, OH, OR, PA, TX, and WI.

**Sweet Corn, Proc.: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Alachlor	5	1.1	1.950	2.106	36.0
Atrazine	50	1.0	0.569	0.597	103.7
Bentazon	18	1.0	0.371	0.372	22.8
S-Metolachlor	1	1.0	0.735	0.735	2.6
Insecticides					
Bifenthrin	51	2.6	0.039	0.100	17.6
Chlorpyrifos	2	1.0	0.852	0.864	7.4
Esfenvalerate	1	1.0	0.039	0.040	0.1
Ethoprop	1	1.0	0.710	0.710	2.0
Lambda-cyhalothrin	5	1.4	0.022	0.032	0.5
Tefluthrin	2	1.0	0.135	0.135	0.9
Zeta-cypermethrin	12	1.7	0.031	0.053	2.2

¹ Planted acreage in 2006 for the 5 Program States was 346,100 acres.
States included are MN, NY, OR, WA, and WI.

**Cucumbers, Fresh: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Bifenthrin	19	3.0	0.079	0.233	2.4
Esfenvalerate	26	3.6	0.044	0.157	2.2
Methomyl	21	4.1	0.418	1.705	19.5
Methyl bromide	8	1.0	168.797	168.797	690.6
Permethrin	2	3.1	0.116	0.364	0.4
Zeta-cypermethrin	1	2.1	0.032	0.068	0.1
Other Chemicals					
Chloropicrin	2	1.0	29.143	29.143	27.0
Dichloropropene	20	1.0	92.642	93.655	1,012.3

¹ Planted acreage in 2006 for the 7 Program States was 53,500 acres.
States included are CA, FL, GA, MI, NJ, NY, and NC.

**Cucumbers, Pickles: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Carbofuran	2	1.1	0.899	0.966	1.3
Esfenvalerate	14	1.1	0.032	0.036	0.4
Methomyl	3	1.2	0.375	0.454	1.1
Permethrin	2	2.4	0.139	0.333	0.5

¹ Planted acreage in 2006 for the 7 Program States was 71,400 acres.
States included are FL, MI, NC, OH, SC, TX, and WI.

**Eggplant: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Methomyl	4	1.1	0.352	0.403	(²)
Oxamyl	24	4.8	0.375	1.801	0.4
Permethrin	6	1.7	0.043	0.074	(²)

¹ Planted acreage in 2006 for New Jersey was 800 acres.

² Total applied is less than 50 lbs.

**Garlic: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Zeta-cypermethrin	28	2.0	0.050	0.100	0.7

¹ Planted acreage in 2006 for California was 24,700 acres.

**Head Lettuce: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Paraquat	*	1.1	0.851	0.899	0.6
Pronamide	38	1.1	0.638	0.680	45.3
Insecticides					
Abamectin	18	1.0	0.007	0.007	0.2
Bifenthrin	5	1.0	0.072	0.075	0.6
Cyfluthrin	11	1.2	0.040	0.047	0.9
Cypermethrin	5	1.0	0.093	0.094	0.7
Diazinon	60	1.6	0.639	1.033	107.2
Emamectin benzoate	20	1.2	0.010	0.013	0.4
Esfenvalerate	10	1.1	0.042	0.044	0.8
Gamma-cyhalothrin	1	1.0	0.014	0.015	(²)
Lambda-cyhalothrin	34	1.4	0.028	0.039	2.3
Methomyl	43	1.4	0.583	0.845	62.6
Permethrin	50	1.2	0.147	0.180	15.6
Thiodicarb	1	1.3	0.596	0.758	0.7
Zeta-cypermethrin	74	1.6	0.046	0.075	9.7

* Area applied is less than 0.5 percent.

¹ Planted acreage in 2006 for the 2 Program States was 174,000 acres.
States included are AZ and CA.

² Total applied is less than 50 lbs.

**Other Lettuce: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Pronamide	44	1.0	0.980	0.998	58.4
Insecticides					
Abamectin	6	1.1	0.007	0.008	0.1
Cyfluthrin	9	1.3	0.041	0.053	0.7
Diazinon	52	1.7	0.669	1.133	78.6
Emamectin benzoate	4	1.2	0.009	0.010	(²)
Gamma-cyhalothrin	4	1.0	0.015	0.015	0.1
Lambda-cyhalothrin	36	1.3	0.028	0.037	1.8
Methomyl	40	1.2	0.643	0.746	39.8
Permethrin	43	1.2	0.144	0.176	10.1
Zeta-cypermethrin	66	1.5	0.045	0.068	6.0

¹ Planted acreage in 2006 for the 2 Program States was 133,400 acres.
States included are AZ and CA.

² Total applied is less than 50 lbs.

**Onions: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006 ¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Chlorpyrifos	17	1.0	1.656	1.670	39.0
Cypermethrin	3	2.4	0.102	0.249	1.0
Diazinon	16	1.8	1.906	3.416	74.0
Esfenvalerate	*	1.0	0.035	0.035	(²)
Lambda-cyhalothrin	34	2.3	0.026	0.058	2.7
Methomyl	31	2.0	0.656	1.300	57.5
Methyl parathion	11	2.0	0.418	0.830	13.3
Oxamyl	13	3.0	0.476	1.449	25.8
Permethrin	5	1.4	0.154	0.221	1.6
Zeta-cypermethrin	24	2.1	0.042	0.089	3.0
Other Chemicals					
Chloropicrin	6	1.0	32.452	32.844	277.2
Dichloropropene	6	1.0	148.198	149.988	1,276.9

* Area applied is less than 0.5 percent.

¹ Planted acreage in 2006 for the 7 Program States was 141,000 acres.

States included are CA, GA, NY, OR, TX, WA, and WI.

² Total applied is less than 50 lbs.

**Green Peas, Proc.: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006 ¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Bifenthrin	3	1.0	0.033	0.033	0.2
Zeta-cypermethrin	7	1.2	0.025	0.029	0.4

¹ Planted acreage in 2006 for the 5 Program States was 190,000 acres.

States included are MN, NY, OR, WA, and WI.

**Bell Peppers: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Paraquat	3	1.3	0.707	0.894	1.4
Insecticides					
Abamectin	25	2.3	0.008	0.018	0.3
Bifenthrin	8	3.7	0.076	0.280	1.3
Cyfluthrin	10	2.9	0.042	0.122	0.8
Diazinon	5	1.0	0.177	0.177	0.5
Esfenvalerate	15	1.4	0.042	0.060	0.6
Lambda-cyhalothrin	4	2.9	0.029	0.084	0.2
Methomyl	33	2.2	0.618	1.383	27.5
Methyl bromide	17	1.0	111.960	111.960	1,128.8
Oxamyl	38	2.0	0.560	1.124	26.2
Permethrin	3	1.1	0.146	0.159	0.2
Zeta-cypermethrin	13	1.7	0.037	0.065	0.5
Other Chemicals					
Chloropicrin	17	1.0	54.443	54.649	575.8
Dichloropropene	2	1.0	120.156	125.043	183.6

¹ Planted acreage in 2006 for the 5 Program States was 60,900 acres.
States included are CA, FL, GA, NJ, and NC.

**Pumpkins: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Paraquat	5	1.0	0.329	0.331	0.7
Insecticides					
Bifenthrin	40	1.3	0.057	0.075	1.3
Carbofuran	1	1.1	0.681	0.725	0.4
Esfenvalerate	6	2.2	0.037	0.082	0.2
Lambda-cyhalothrin	4	2.3	0.021	0.048	0.1
Methomyl	4	1.8	0.396	0.724	1.3
Permethrin	8	2.5	0.133	0.334	1.1
Zeta-cypermethrin	6	1.9	0.015	0.029	0.1

¹ Planted acreage in 2006 for the 5 Program States was 42,000 acres.
States included are CA, IL, MI, OH, and PA.

**Spinach, Fresh: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006 ¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides					
Abamectin	9	1.0	0.010	0.010	(²)
Diazinon	26	1.1	2.075	2.251	27.3
Methomyl	17	1.0	0.679	0.711	5.6
Permethrin	46	1.4	0.169	0.242	5.2
Zeta-cypermethrin	39	1.2	0.047	0.056	1.0

¹ Planted acreage in 2006 for the 3 Program States was 46,400 acres.

States included are AZ, CA, and TX.

² Total applied is less than 50 lbs.

**Squash: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006 ¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Paraquat	1	1.0	0.781	0.782	0.5
Insecticides					
Bifenthrin	15	2.7	0.068	0.181	1.4
Carbofuran	3	1.0	0.436	0.441	0.8
Cyfluthrin	*	3.0	0.039	0.116	(²)
Diazinon	*	1.1	0.683	0.753	0.1
Esfenvalerate	25	3.1	0.039	0.122	1.6
Lambda-cyhalothrin	1	1.8	0.023	0.043	(²)
Methomyl	3	9.0	0.318	2.856	4.5
Methyl bromide	3	1.0	156.371	156.371	257.9
Permethrin	10	2.5	0.153	0.384	2.0
Zeta-cypermethrin	1	7.7	0.028	0.213	0.2
Other Chemicals					
Chloropicrin	1	1.0	59.438	59.438	21.0
Dichloropropene	10	1.0	79.666	79.666	433.1

* Area applied is less than 0.5 percent.

¹ Planted acreage in 2006 for the 7 Program States was 52,200 acres.

States included are CA, FL, GA, MI, NJ, NY, and NC.

² Total applied is less than 50 lbs.

**Strawberries: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Paraquat	2	1.3	0.447	0.594	0.5
Insecticides					
Abamectin	13	1.4	0.016	0.022	0.1
Bifenthrin	15	1.7	0.310	0.518	3.6
Diazinon	4	1.5	0.867	1.301	2.7
Methomyl	36	2.3	0.797	1.857	32.2
Methyl bromide	39	1.0	186.473	195.700	3,639.6
Other Chemicals					
Chloropicrin	43	1.1	117.797	135.000	2,744.9

¹ Planted acreage in 2006 for the 4 Program States was 47,700 acres.
States included are CA, FL, OR, and WA.

**Tomatoes, Fresh: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Paraquat	17	1.4	0.522	0.730	13.5
Insecticides					
Abamectin	10	3.3	0.018	0.058	0.6
Bifenthrin	28	5.5	0.064	0.352	10.2
Cyfluthrin	13	3.3	0.036	0.120	1.7
Diazinon	1	1.1	0.600	0.675	0.8
Esfenvalerate	31	4.5	0.030	0.137	4.5
Lambda-cyhalothrin	12	2.3	0.021	0.049	0.6
Methamidophos	10	2.3	0.723	1.645	17.4
Methomyl	10	8.5	0.476	4.045	42.9
Methyl bromide	30	1.2	142.962	176.678	5,642.9
Oxamyl	16	2.1	0.429	0.884	15.0
Permethrin	4	2.5	0.173	0.432	1.8
Zeta-cypermethrin	6	1.5	0.042	0.063	0.4
Other Chemicals					
Chloropicrin	25	1.3	66.651	86.180	2,249.3
Dichloropropene	1	1.1	61.960	69.302	58.4

¹ Planted acreage in 2006 for the 7 Program States was 105,600 acres.
States included are CA, FL, GA, NJ, NC, OH, and TN.

**Tomatoes, Proc.: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006 ¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Paraquat	9	1.1	0.627	0.666	16.5
Insecticides					
Abamectin	3	1.0	0.005	0.005	0.1
Emamectin benzoate	20	1.1	0.010	0.010	0.6
Esfenvalerate	8	1.2	0.047	0.056	1.3
Lambda-cyhalothrin	12	1.3	0.027	0.035	1.2
Methamidophos	1	1.3	0.983	1.249	3.9
Methomyl	5	1.5	0.523	0.766	11.3
Permethrin	5	1.5	0.194	0.294	4.2
Zeta-cypermethrin	4	1.1	0.047	0.053	0.6

¹ Planted acreage in 2006 for California was 283,000 acres.

**Watermelons: Agricultural Chemical Applications,
Restricted Use Pesticides,
Program States, 2006 ¹**

Restricted Use Pesticide	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Paraquat	2	1.2	0.345	0.431	1.1
Insecticides					
Bifenthrin	2	1.8	0.074	0.136	0.3
Chlorpyrifos	1	1.0	0.711	0.711	0.8
Diazinon	2	1.4	3.447	4.811	12.1
Esfenvalerate	9	2.3	0.035	0.082	0.9
Methomyl	6	2.9	0.542	1.550	11.5
Methyl bromide	1	1.0	183.243	183.243	259.0
Oxamyl	2	4.5	0.283	1.264	2.7
Permethrin	3	2.2	0.114	0.248	1.0
Other Chemicals					
Chloropicrin	2	1.0	40.262	40.579	80.7
Dichloropropene	3	1.0	68.612	68.891	262.9

¹ Planted acreage in 2006 for the 7 Program States was 120,200 acres. States included are AZ, CA, FL, GA, NC, SC, and TX.

**All Swine Facilities: Agricultural Chemical Applications,
Restricted Use Pesticides,
Total Applied, Program States, 2006**

Restricted Use Pesticide	Total Applied
	<i>Pounds</i>
Insecticides:	
Diazinon	1,702
Permethrin	353

* Insufficient number of reports to publish data.

Estimation Procedures

The chemical application data, reported by product name or trade name, are reviewed within each State and across States for reasonableness and consistency. This review compares reported data with manufacturer's recommendations and with data from other farm operators using the same product. Following this review, product information are converted to an active ingredient level. The chemical usage estimates in this publication consist of survey estimates of those active ingredients.

For this publication, detailed data within a table may not multiply across or add down due to independent rounding of the published values. Only active ingredients in restricted use products that met NASS publication standards in the "**Agricultural Chemical Usage - 2006 Field Crops Summary**," the "**Agricultural Chemical Usage - 2006 Vegetable Summary**" and the "**Agricultural Chemical Usage - 2006 Swine and Swine Facilities Summary**," publications are included in this report.

Field Crops Chemical Usage: Estimates of the total amount of active ingredient applied to field crops are based on the acreage estimates published in the annual NASS report "**Crop Production - 2006 Summary**" [Cr Pr 2-1(07)] for rice, soybeans, durum wheat, other spring wheat, and winter wheat. Please note that the estimates for total amounts of an active ingredient will not be revised even if there are subsequent revisions to acreage for a given crop.

Vegetable Chemical Usage: Estimates of the total amount of active ingredient applied to vegetable crops are based on the acreage estimates published in the annual NASS report "**Vegetables - 2006 Summary**" [Vg 1-2(07)] released on January 26, 2007. The targeted crops were: asparagus, snap beans, broccoli, cabbage, cantaloupes, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, garlic, honeydews, lettuce, onions, green peas, bell peppers, pumpkins, spinach, squash, strawberries, tomatoes, and watermelons. Please note that the estimates for total amounts will not be revised even if there are subsequent revisions to acreage for a given crop.

Swine and Swine Facilities Chemical Usage: Estimates of total amount of active ingredient applied are based on hog inventory as of June 1, 2006, for operations with 100 or more hogs in the Program States. These operations account for more than 99 percent of the hog inventory. The estimates for total amount applied will not be revised even if there are subsequent inventory revisions. Data in this report are published for the Program States only.

Terms and Definitions

Active ingredient: The specific chemical which kills or controls the target pest(s). Usage data are reported by pesticide product and are converted to an amount of active ingredient. A single method of conversion has been chosen for active ingredients having more than one way of being converted. For example in this report, copper compounds are expressed in their metallic copper equivalent, and others such as 2,4-D and glyphosate are expressed in their salt or acid equivalent form.

Application rates: Refer to the average number of pounds of pesticide active ingredient applied to an acre of land. Rate per application is the average number of pounds applied per acre in one application. Rate per crop year is the average number of pounds applied per acre counting multiple applications. Number of applications is the average number of times a treated acre received a specific active ingredient.

Area applied: Represents the percentage of crop acres receiving one or more applications of a specific active ingredient.

Common name: An officially recognized name for an active ingredient. This report shows active ingredients by common name.

Crop year: The period immediately following harvest of the previous crop through harvest of the current crop.

Pesticides: As defined by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), pesticides include any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant. The four classes of pesticides presented in this report and the pests targeted are: herbicides - weeds, insecticides - insects, fungicides - fungi, and other chemicals - other forms of life. Miticides and nematicides are included as insecticides while soil fumigants, growth regulators, defoliants, and desiccants are included as other chemicals.

Restricted Use Pesticide: A restricted use pesticide is a pesticide which is available for purchase and use only by certified pesticide applicators or persons under their direct supervision, and only for the uses covered by the applicator's certification.

Trade name: A trademark name given to a specific formulation of a pesticide product. A formulation contains a specific concentration of the active ingredient, carrier materials, and other ingredients such as emulsifiers and wetting agents.

Pesticide class, Common name, and Trade name

The following is a list of common name, associated class and trade name of active ingredients in this publication. The classes are herbicides (H), insecticides (I), fungicides (F), and other chemicals (O). This list is provided as an aid in reviewing pesticide data. Pre-mixes are not cataloged. The list is not complete for all pesticides used on vegetable crops and NASS does not mean to promote use of any specific trade name.

Class	Common Name	Trade Name
I	Abamectin	Abba, Agri-Mek 0.15EC, Epi-mek 0.15 EC, Quali-Pro Abamectin 0.15 EC, Zephyr 0.15 EC
H	Acetochlor	Confidence, Degree Xtra, Harness, Harness Xtra (6.0L), Harness Xtra 5.6L, Keystone, TopNotch
H	Alachlor	Alachlor 4 EC, Arena (4EC), Bullet, Intro (4E), Lariat (4F), Lasso, Micro-Tech, Partner WDG, Saddle
I	Aldicarb	Temik 15G
H	Atrazine	AAtrex 4L, AAtrex Nine-O (WP), Atrazine 4L, Atrazine 5L, Atrazine 90DF, Banvel-K + Atrazine, Bicep II Magnum, Bicep Lite II Magnum, Bullet, Cinch ATZ, Cinch ATZ Lite Herbicide, Degree Xtra, G-Max Lite, Guardsman, Guardsman Max, Harness Xtra (6.0L), Harness Xtra 5.6L, Keystone, Laddok, Laddok S-12, Lariat (4F), Lexar, Lumax
I	Azinphos-methyl	Azinphos-M 2 EC, Guthion Solupak 50%, Sniper 2E, Sniper 50W
H	Bentazon	Basagran, Basagran (For Turf & Ornamental), Laddok, Laddok S-12, Rezult B, Storm
I	Beta-cyfluthrin	Baythroid XL
I	Bifenthrin	Bifenthrin 2EC, Bifenture EC, Brigade WSB 10WP, Capture 2EC, Discipline 2EC, Empower 2, Fanfare 2EC, Talstar Nursery Granular, Tundra EC
I	Carbofuran	Furadan 15G, Furadan 4F, Furadan 5G
I	Chlorethoxyfos	Fortress 5G
O	Chloropicrin	Chloropicrin 100, InLine, MBC 67-33, MBC-33, Methyl Bromide 45% & Chloropicrin 55%, Methyl Bromide 50% & Chloropicrin 50%, Methyl Bromide 57% & Chloropicrin 43%, Methyl Bromide 67% & Chloropicrin 33%, Methyl Bromide 75% & Chloropicrin 25%, Pic-Clor 60, TM-442(aka Chloropicrin), Telone C-17, Telone C-35, Tri-Clor Chloropicrin, Tri-Color EC

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Pesticide class, Common name, and Trade name

Class	Common Name	Trade Name
I	Chlorpyrifos	Chlorpyrifos 4E AG, Dursban 1/2G, Govern 4E, Lorsban 15G, Lorsban 4E, Lorsban 50W, Lorsban 75WG, Nufos 15G, Nufos 4E, Pilot 4E, Warhawk, Whirlwind, Yuma 4E
H	Cyanazine	Bladex 4L, Bladex 80WP, Cy-Pro 4L
I	Cyfluthrin	Aztec 2.1% Granular, Aztec 4.67% Granular, Bayer Multi-Insect Killer Concentrate, Baythroid 2 (EC), Renounce 20WP, Tempo 2, Tempo 20 WP, Tombstone
I	Cypermethrin	Ammo 2.5 EC, Ammo WSB (39%), Battery 2.5 EC
I	Deltamethrin	Decis 0.2EC, Decis 1.5EC, Delta Gold
I	Diazinon	D-264 EC500, D-z-n Diazinon 50W, D-z-n Diazinon AG500 (4E), Diazinon 14G, Diazinon 4 Spray, Diazinon 4E, Diazinon 5 Granules, Diazinon 50W, Diazinon AG500 (4E), Diazinon AG600 WBC, Diazinon Ultra, Spectracide 25
H	Dicamba, Pot. Salt	Banvel – K + Atrazine
O	Dichloropropene	InLine, Pic-Clor 60, Telone C-17, Telone C-35, Telone EC, Telone II
H	Diclofop-methyl	Hoelon 3EC
I	Diflubenzuron	Dimilin 25W, Dimilin 2L
H	Dimethenamid	Frontier 6.0, Guardsman
H	Dimethenamid-P	G-Max Lite, Guardsman Max, Outlook
I	Disulfoton	Di-Syston 15% G, Di-Syston 8, Terraclor Super X w/ Di-Syston
H	Emamectin benzoate	Proclaim
I	Esfenvalerate	Asana, Asana XL, Ortho Bug-B-Gon
I	Ethoprop	Mocap 10G, Mocap 15G, Mocap EC
I	Ethyl parathion	Parathion 4-EC, Parathion 4L, Parathion-Methyl Parathion 6-3EC C2002
I	Fenamiphos	Nemacur 3 Turf
I	Fenbutatin-oxide	Othenex Garden Insect & Disease Control, Vendex 50WP
I	Fipronil	Regent 80WG
I	Gamma-cyhalothrin	Proaxis, Prolex
I	Lambda-cyhalothrin	Chemsico Insect Granule LH, Chemsico Insecticide Concentrate 5L, Demand CS, Karate (1EC), Karate Z, Lambda-T, Scimitar GC, Silencer, Taiga Z, Warrior
I	Methamidophos	Monitor 4 Spray, Monitor 4 Spray (For Cotton & Potatoes)
I	Methomyl	Lannate L (1.8 lbs.), Lannate LV (2.4 lbs.), Lannate SP, Nudrin 1.8

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Pesticide class, Common name, and Trade name

Class	Common Name	Trade Name
I	Methyl bromide	MBC 67-33, MBC-33, Methyl Bromide 45% & Chloropicrin 55%, Methyl Bromide 50% & Chloropicrin 50%, Methyl Bromide 57% & Chloropicrin 43%, Methyl Bromide 67% & Chloropicrin 33%, Methyl Bromide 75% & Chloropicrin 25%, Methyl Bromide 98%
I	Methyl parathion	Declare, Methyl Parathion 4EC, Parathion-Methyl Parathion 6-3EC C2002, Penncap-M
I	Mevinphos	Phosdrin 4EC
I	Oxamyl	Vydate L
H	Paraquat	Cyclone, Cyclone Concentrate, Gramoxone Extra, Gramoxone Inteon, Gramoxone Max, Gramoxone Super
I	Permethrin	Ambush, Ambush 0.5% Bait, Ambush 25W, Arctic 3.2 EC, Eight Insect Control, Perm-UP 3.2 EC, Permethrin 3.2 AG, Permethrin 3.2 EC, Pounce 1.5G, Pounce 25WP, Pounce 3.2EC, Pounce WSB, Unicorn .25 Permethrin WB, Waylay 3.2 AG
I	Phorate	Phorate 20G, Thimet 15-G, Thimet 20-G
H	Picloram, K salt	Tordon 22K (2EC)
H	Pronamide	Kerb 50-W (For Reformulation Use ONLY), Kerb 50WP Specialty (Turf & Ornamental)
H	S-Metolachlor	Bicep II Magnum, Bicep Lite II Magnum, Brawl, Brawl II, Camix, Cinch, Cinch ATZ, Cinch ATZ Lite Herbicide, Dual II Magnum, Dual Magnum, Lexar, Lumax, Medal, Medal II
O	Strychnine	Gopher Getter AG Bait
I	Tebupirimphos	Aztec 2.1% Granular, Aztec 4.67% Granular
I	Tefluthrin	Force 3G
I	Terbufos	Counter 15G
I	Thiodicarb	Larvin 3.2
I	Zeta-cypermethrin	Fury 1.5 EC, Mustang, Mustang Max

Report Features

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