United States
Department of
Agriculture

National
Agricultural
Statistics
Service

Agricultural Chemical Usage 2006 Nursery and Floriculture Summary

December 2007

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Restricted Use:

2006 Nursery and Floriculture Agricultural Chemical Usage

Overview: The agricultural chemical use estimates in this report are based on data compiled from the 2007 Nursery and Floriculture Chemical Use Survey. This report is the third chemical use report based on chemical applications to nursery and floriculture crops. The survey was conducted for nursery and floriculture chemical applications made during calendar year 2006. All results refer to pesticide and integrated pest management (IPM) at nursery and floriculture operations.

There were 1,908 nursery and floriculture reports (201,631 chemical applications) summarized across the 6 Program States. California, Florida, Michigan, Oregon, Pennsylvania, and Texas were the States surveyed. For reference, the number of operations by gross value of sales is reprinted for nursery and floriculture from the September 2007 *Nursery Crops 2006 Summary* and the July 2007 *Floriculture Crops 2006 Summary.*

Nursery and Floriculture:
Number of Usable Reports
Program States and Total, 2006

State	Usable Reports	Chemical Applications Summarized			
		Nursery	Floriculture	Non-production Areas	Total
	Number	*Number*	*Number*	*Number*	*Number*
CA	404	29,283	73,214	6,964	109,461
FL	442	15,043	26,962	1,459	43,464
MI	294	2,957	9,573	220	12,750
OR	357	7,536	5,030	1,678	14,244
PA	248	2,877	5,604	235	8,716
TX	163	7,197	5,165	634	12,996
Total	1,908	64,893	125,548	11,190	201,631

Nursery: Number of Operations
by Gross Value of Sales
Program States and Total, 2006

State	$10,000 to $99,999	$100,000 to $249,999	$250,000 to $499,999	$500,000 to $999,999	$1,000,000 to $1,999,999
	Number	*Number*	*Number*	*Number*	*Number*
CA	250	113	63	79	63
FL	603	227	152	123	101
MI [1]	311	66	34	23	13
OR	447	133	96	80	52
PA [1]	351	71	31	19	11
TX	175	47	34	28	14
Total	2,137	657	410	352	254

See footnote(s) at end of table. --continued

Nursery: Number of Operations
by Gross Value of Sales
Program States and Total, 2006 - Continued

State	$2,000,000 to $4,999,999	$5,000,000 to $9,999,999	$10,000,000 or More	Total Producers
	Number	*Number*	*Number*	*Number*
CA	46	28	27	669
FL	73	18	10	1,307
MI [1]	15	4	*	466
OR	37	15	18	878
PA [1]	11	4	*	498
TX	17	5	5	325
Total	199	74	60	4,143

* Less than 0.5 percent.
[1] The highest published sales range includes operations from higher ranges to avoid disclosure of individual operations.

Floriculture: Number of Operations
by Gross Value of Sales
Program States and Total, 2006

State	$10,000 to $19,999	$20,000 to $39,999	$40,000 to $49,000	$50,000 to $99,999
	Number	*Number*	*Number*	*Number*
CA	54	75	26	128
FL	57	75	38	132
MI	53	76	42	152
OR	24	51	22	61
PA	91	128	50	244
TX	29	35	23	82
Total	308	440	201	799

See footnote(s) at end of table. --continued

Floriculture: Number of Operations
by Gross Value of Sales
Program States and Total, 2006 - Continued

State	$100,000 to $499,999	$500,000 or more	Total	Expanded Wholesale Value [1]
	Number	*Number*	*Number*	*1.000 Dollars*
CA	207	242	732	1,020,453
FL	274	256	832	800,399
MI	194	142	659	378,893
OR	48	38	244	95,526
PA	165	52	730	170,706
TX	99	85	353	265,350
Total	987	815	3,550	2,731,327

[1] Wholesale value of sales as reported by operations with $100,000 or more in sales of floriculture crops plus a calculated wholesale value of sales for operations with sales below $100,000. The value of sales for producers below the $100,000 level was estimated by multiplying the number of producers in each size group by the mid-point of the sales range.

Highlights

In 2006, there were 374 unique active ingredients reported by nursery and floriculture operations in the six Program States: California, Florida, Michigan, Oregon, Pennsylvania, and Texas. A total of 5.59 million pounds of active ingredients were applied to nursery and floriculture crops in the Program States. This was up 17 percent from the 4.77 million pounds applied in 2003.

Of the total active ingredients applied, herbicides accounted for 929,600 pounds, a decrease from 983,700 pounds in 2003. **Glyphosate isopropylamine salt**, at 236,600 pounds, **Napropamide**, at 134,100 pounds, and **Oxyfluorfen** at 127,900 pounds, were the top 3 active ingredients used on nursery and floriculture crops. These three active ingredients accounted for 54 percent of the total pounds of herbicides applied to nursery and floriculture crops.

A total of 988,600 pounds of insecticides was applied to nursery and floriculture crops in the Program States in 2006. The three insecticides most commonly used during 2006, based on total amount applied, were **Petroleum distillate**, at 313,600 pounds; **Acephate**, at 156,500 pounds; and **Chlorpyrifos,** at 99,900 pounds. These three active ingredients accounted for 58 percent of the total pounds of insecticides applied to nursery and floriculture crops.

Fungicides accounted for 34 percent (1.89 million pounds) of the total pounds of active ingredients applied to nursery and floriculture crops in the Program States in 2006. This was an increase from 856,500 pounds in 2003. The top 2 active ingredients, in terms of total pounds applied, were **Mancozeb** and **Chlorothalonil,** with a total of 623,000 and 335,000 pounds, respectively.

In 2006, the remainder of the 5.59 million pounds applied to nursery and floriculture crops were other chemicals, at 1.78 million pounds. Other chemicals include active ingredients which were used as growth regulators, rodenticides, other animal repellents, soil fumigants, biologicals/pheromones, disinfectants, and slug/snail baits. In terms of total amount applied, the top 3 active ingredients were **Metaldehyde**, at 992,100 pounds; **Methyl bromide**, at 363,600 pounds; and **Chloropicrin**, at 253,600 pounds.

Of all nursery and floriculture operations, 76 percent used licensed operator/employee applicators to apply pesticides to nursery and floriculture crops. The second most commonly used applicator was unlicensed operators/employee, at 27 percent. Hired custom applicators and other types of applicators were used by 4 and 2 percent of the operations, respectively. Some operations used applicators of more than one type.

The most widely used application method by nursery and floriculture operations was hand-held power hydraulic sprayers, at 45 percent of the operations sampled. This was followed by hand-held backpack sprayers, at 36 percent. Of the sampled operations, 17 percent used tractor powered air blasts or misters, 16 percent used tractor power boom sprayers, and 12 percent used drenching.

Pesticides Total Applied
by Production Category and Class
Program States and Total, 2006 [1] [2]

State	Herbicides	Insecticides	Fungicides	Other	All
			Pesticide Class		
All Nursery and Floriculture					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	141.1	236.6	381.0	1,655.1	2,413.8
FL	84.7	354.3	1,012.0	21.6	1,472.6
MI	65.1	45.9	54.5	9.2	174.6
OR	541.6	260.9	285.7	85.0	1,173.2
PA	42.3	52.8	33.3	2.4	130.8
TX	54.9	38.2	120.9	8.8	222.8
Total	929.6	988.6	1,887.5	1,782.0	5,587.7
All Nursery					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	118.9	174.8	280.0	1,234.0	1,807.7
FL	77.6	142.5	261.7	19.8	501.6
MI	62.6	40.1	39.6	5.8	148.1
OR	537.0	248.8	276.0	80.8	1,142.6
PA	40.6	51.5	31.3	0.4	123.8
TX	28.4	31.8	108.9	4.8	173.9
Total	865.0	689.5	997.5	1,345.7	3,897.7
Transplants for Commercial Vegetable & Strawberry Production					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	0.6	5.8	23.2	32.2	61.8
FL		0.5	3.1	*	3.6
MI		*	0.2	0.1	0.3
OR	0.2	*	19.8	*	20.0
PA	0.2	0.5	1.0	*	1.6
TX	*	*	*	*	0.1
Total	0.9	6.7	47.2	32.4	87.3
Nursery Propagation or Lining-out Stock					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	4.0	3.4	17.6	23.3	48.3
FL	0.2	1.1	0.9	0.1	2.2
MI	1.0	1.3	4.2	*	6.4
OR	5.4	14.1	131.4	17.0	167.9
PA	0.8	0.2	0.5		1.4
TX	1.3	1.0	3.3	1.2	6.8
Total	12.6	21.0	157.9	41.5	233.0
Broadleaf Evergreens					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	6.4	5.5	2.1	0.8	14.9
FL	5.3	19.7	17.5	*	42.5
MI	0.1	0.9	0.1		1.1
OR	13.5	33.4	24.3	16.2	87.5
PA	0.1	0.3	0.4	*	0.8
TX	7.5	9.4	49.2	0.1	66.2
Total	32.9	69.2	93.6	17.2	213.0

See footnote(s) at end of table.

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Pesticides Total Applied
by Production Category and Class
Program States and Total, 2006 [1] [2] - continued

State	Herbicides	Insecticides	Fungicides	Other	All
			Pesticide Class		
			Coniferous Evergreens		
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	1.3	2.2	1.2	0.4	5.1
FL	0.4	2.7	4.8	18.4	26.3
MI	19.2	15.0	12.7	0.2	47.0
OR	401.3	107.3	23.7	26.4	558.8
PA	14.3	6.1	7.0		27.4
TX	3.6	1.3	0.7	2.6	8.2
Total	440.1	134.6	50.1	48.0	672.8
			Deciduous Shade Trees		
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	0.5	2.0	0.3	0.2	3.0
FL	8.2	8.7	29.2		46.1
MI	17.9	3.4	5.9	0.9	28.0
OR	13.8	19.6	30.3	7.2	70.9
PA	2.5	9.2	0.1	*	11.9
TX	4.4	2.7	12.8		19.9
Total	47.3	45.7	78.6	8.4	179.8
			Deciduous Flowering Trees		
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	0.8	12.7	3.9	154.8	172.2
FL	*	4.7	1.3		5.9
MI	0.2	1.0	0.4	*	1.6
OR	16.9	50.6	20.9	13.1	101.5
PA	3.3	1.7	0.1		5.1
TX	1.6	1.4	12.2		15.2
Total	22.9	72.1	38.7	167.9	301.5
			Deciduous Shrubs		
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	86.6	134.6	222.4	1,011.2	1,454.7
FL	0.8	0.4	0.9	0.2	2.3
MI	1.0	0.4	1.1	*	2.5
OR	2.9	1.5	2.4	0.5	7.4
PA	3.8	1.4	0.1	0.3	5.6
TX	4.7	5.6	9.4	0.4	20.1
Total	99.7	143.9	236.3	1,012.6	1,492.5
			Fruit and Nut Plants		
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	6.7	3.2	7.4	9.4	26.7
FL	5.0	13.1	2.8		20.9
MI	0.5	0.2	0.1		0.8
OR	0.3	3.7	0.4		4.4
PA		*	*		*
TX	0.9	5.3	10.0	*	16.2
Total	13.4	25.4	20.7	9.4	69.0

See footnote(s) at end of table.

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Pesticides Total Applied
by Production Category and Class
Program States and Total, 2006 [1] [2] - continued

State	Herbicides	Insecticides	Fungicides	Other	All
	Pesticide Class				
Christmas Trees					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	9.0	1.3	*	0.1	10.5
FL	*	0.1	0.5		0.7
MI	22.7	17.5	15.0	4.6	59.8
OR	82.3	18.0	22.4	*	122.7
PA	14.3	32.0	21.9		68.2
TX	0.4	0.8	0.9	*	2.2
Total	128.8	69.8	60.8	4.7	264.1
Palms					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	0.7	3.0	1.0	1.0	5.6
FL	52.0	43.4	138.5	*	233.9
OR		0.1	*		0.1
TX	0.3	1.3	0.2		1.7
Total	52.9	47.7	139.6	1.0	241.3
Ornamental Grasses					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	0.2	0.3	0.1	*	0.6
FL	0.6	0.1	0.3		1.0
MI	*	*		*	*
OR	*	*	*	*	*
PA		*	*		*
TX	3.0	0.2	6.9	0.5	10.6
Total	3.8	0.6	7.3	0.5	12.2
Other Woody Ornamentals and Vines					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	2.0	0.8	0.9	0.6	4.2
FL	5.1	48.0	62.1	1.2	116.4
MI	*	0.5	*	*	0.6
OR	0.4	0.6	0.5	0.2	1.7
PA	1.4	0.1	0.1	*	1.6
TX	0.7	2.9	3.1	0.1	6.8
Total	9.6	52.8	66.8	2.0	131.2
All Floriculture					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	22.3	61.8	101.0	421.1	606.1
FL	7.1	211.8	750.3	1.8	971.0
MI	2.5	5.7	14.8	3.4	26.5
OR	4.5	12.1	9.8	4.2	30.6
PA	1.7	1.2	2.1	2.0	7.0
TX	26.5	6.4	12.0	3.9	48.8
Total	64.6	299.1	890.0	436.4	1,690.0

See footnote(s) at end of table.

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Pesticides Total Applied
by Production Category and Class
Program States and Total, 2006 [1] [2] - continued

State	Herbicides	Insecticides	Fungicides	Other	All
	Pesticide Class				
Cut Flowers					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	4.4	16.7	51.3	253.0	325.5
FL		0.1	0.3		0.3
MI	2.1	2.5	5.7	*	10.2
OR	2.9	0.3	2.1	0.6	6.0
PA	*	*	0.3	*	0.4
TX	0.2	0.1	0.1	*	0.5
Total	9.7	19.7	59.9	253.7	343.0
Flowering Plants					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	10.7	29.3	28.5	7.6	76.1
FL	0.6	10.4	8.1	1.0	20.1
MI	0.1	1.4	1.4	1.2	4.1
OR	0.1	2.3	1.6	2.5	6.6
PA	0.1	0.2	0.5	0.2	0.9
TX	6.9	1.5	3.1	2.4	13.8
Total	18.5	45.2	43.2	14.9	121.8
Bedding Plants					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	7.0	10.4	15.1	5.2	37.8
FL		0.4	0.9	0.1	1.4
MI	0.1	1.3	3.0	1.6	5.9
OR	0.3	1.2	4.4	0.7	6.6
PA	1.2	0.5	1.0	1.5	4.2
TX	16.6	4.2	6.2	1.3	28.2
Total	25.1	18.0	30.6	10.4	84.2
Foliage Plants					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	0.1	4.2	0.6	2.0	6.8
FL	5.4	120.3	295.4	0.6	421.7
MI		0.1	3.6	0.4	4.1
OR		*	*	*	0.1
PA	0.4	0.1	0.1	*	0.5
TX	2.2	0.1	1.3	*	3.7
Total	7.9	124.9	301.1	3.0	436.9
Floriculture Propagation Material					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	*	*	3.6	151.5	155.2
FL		0.2	0.3	*	0.5
MI	*	0.3	0.6	0.1	0.9
OR	0.5	*	1.3	*	1.8
PA		*	*	0.3	0.3
TX	0.2	*	0.9		1.1
Total	0.8	0.5	6.6	151.9	159.8

See footnote(s) at end of table.

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Pesticides Total Applied
by Production Category and Class
Program States and Total, 2006 [1] [2] - continued

State	Herbicides	Insecticides	Fungicides	Other	All
	Pesticide Class				
Cut Cultivated Greens					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	*	0.1	1.0	1.5	2.6
FL	1.1	80.3	445.2	*	526.6
MI		*	*		*
OR	0.6	8.0	*		8.6
PA		*			*
TX	*	0.2		*	0.2
Total	1.7	88.5	446.3	1.5	538.0
Herbaceous Perennials					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	0.1	1.0	0.9	0.3	2.2
FL		0.1	0.2		0.3
MI	0.3	0.3	0.5	0.1	1.2
OR	0.1	0.3	0.3	0.3	0.9
PA	*	0.3	0.2	*	0.5
TX	0.5	0.2	0.4	0.2	1.3
Total	0.9	2.2	2.3	0.9	6.4
Non-production Areas					
	1,000 Pounds	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*	*1,000 Pounds*
CA	377.9	3.5	36.2	254.4	672.0
FL	27.6	1.1	2.7	0.7	32.2
MI	4.0	*		7.9	12.0
OR	30.3	2.6	0.6	70.4	103.9
PA	2.1	*	*	*	2.1
TX	3.7	1.5	*	*	5.2
Total	445.6	8.7	39.6	333.5	827.3

* Total applied is less than 50 pounds.
[1] May not add due to rounding.
[2] Total Applied excludes (Bacillus thuringiensis) and other biologicals. Quantities are not available because amounts of active ingredient are not comparable between products.

Active Ingredient Publication Status
by Production Category
Program States, 2006

Active Ingredient	All Nursery and Floriculture	All Nursery	Transplants for Commercial Vegetable & Strawberry Production	Nursery Propagation or Lining-out Stock
Herbicides				
(Meth)propionic acid	*	*		
2,4-D	*	*		
2,4-D, 2-EHE	P	P		*
2,4-D, BEE	*	P		
2,4-D, dieth. salt	*	*		*
2,4-D, dimeth. salt	*	P		*
2,4-D, triiso. salt	*	*		
2,4-DP, dimeth. salt	*	*		
Acifluorfen, sodium	*	*		
Alachlor	*	*		
Amitrole	*	*		
Ammonium benzadox	*	*		
Asulam, sodium salt	*	*		
Atrazine	*	P	*	*
Benefin	*	P		*
Bensulide	*			
Bentazon	*	*		*
Bromacil	*	*		
Bromoxynil	*	*		
Bromoxynil heptan.	P	P		
Bromoxynil octanoate	P	P		
Butoxyethyl triclopy	*	P		
Carfentrazone-ethyl	*	*		
Chlorimuron-ethyl	*	*		
Chlorsulfuron	*	*		
Clethodim	P	P		P
Clomazone	*	*		
Clopyralid	*	P		*
DCPA	*	*		
Dicamba	*	*		
Dicamba, dimet. salt	*	*		
Dicamba, sodium salt	*	*		
Dichlobenil	*	P		*
Diflufenzopyr-sodium	*			
Diquat dibromide	P	P	*	*
Dithiopyr	*	*		
Diuron	P	P		*
Ethalfluralin	*	*		
Fluazifop-P-butyl	*	P		*
Flufenacet	P	P		
Flumetsulam	*	*		
Flumioxazin	P	P	*	P

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	All Nursery and Floriculture	All Nursery	Transplants for Commercial Vegetable & Strawberry Production	Nursery Propagation or Lining-out Stock
Herbicides (continued)				
Fomesafen	*	*		
Glufosinate-ammonium	P	P		*
Glyphosate	*	*		
Glyphosate iso. salt	P	P	P	P
Glyphosate pot. salt	*	*	*	
Halosulfuron	P	P	*	*
Hexazinone	P	P		*
Imazamethabenz	*			
Imazapyr, iso. salt	*	*		
Imazethapyr	*			
Imazethapyr, ammon.	*			
Isoxaben	P	P		P
Lactofen	*	*		
Linuron	*	*	*	*
MCPA, 2-ethylhexyl	*	*		
MCPA, dimethyl. salt	*	*		
MCPP, DMA salt	*	*		
MCPP-P, DMA Salt	*	*		
MCPP-P-potassium	*	*		
MSMA	*	*		*
Metolachlor	*	P		*
Metribuzin	P	P		
Napropamide	P	P		*
Norflurazon	*	P		*
Oryzalin	P	P	*	P
Oxadiazon	P	P	*	P
Oxyfluorfen	P	P	*	P
Paraquat	P	P		*
Pebulate	*	*		
Pendimethalin	P	P	*	P
Prodiamine	P	P		P
Prometryn	*			
Pronamide	*	*		
Propanil	*	*		
Propazine	*	*		
S-Metolachlor	P	P	*	P
Sethoxydim	*	P		
Simazine	P	P	*	P
Sulfentrazone	*	*	*	
Sulfometuron methyl	P	P		
Sulfosate	*	*		*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	All Nursery and Floriculture	All Nursery	Transplants for Commercial Vegetable & Strawberry Production	Nursery Propagation or Lining-out Stock
Herbicides (continued)				
Sulfosulfuron	*	*		
Tebuthiuron	*	*		
Terbacil	*	*		*
Thiazopyr	*	*		*
Thifensulfuron	*	*		
Triasulfuron	*	*		
Tribenuron-methyl	*	*		
Triclopyr	*	P		
Triethylamine triclo	*			
Trifluralin	P	P		*
Vernolate	*			
Insecticides				
Abamectin	P	P	P	P
Acephate	P	P	P	P
Acetamiprid	P	P	P	P
Aldicarb	*	*		
Aluminum phosphide	P	*		
Azadirachtin	P	P	P	P
Azinphos-methyl	*	P		*
Beauveria bassiana	P	P	*	*
Bendiocarb	*	*		
Benzoic acid	P	*	*	
Beta-cyfluthrin	*	*		
Bifenazate	P	P	P	P
Bifenthrin	P	P	P	P
Bt subsp israelensis [1]	*	*	*	*
Bt subsp. aizawai [1]	*	*	*	*
Bt subsp. kurstaki [1]	*	*	*	*
Buprofezin	P	P	*	*
Cacodylic acid, sodi	*	*		
Canola oil	*	*		*
Carbaryl	P	P	*	*
Carbofuran	*	*		*
Chitin	*			
Chlorfenapyr	P	P	*	*
Chlorpyrifos	P	P	*	P
Cinnamaldehyde	*	*		
Clofentezine	P	P	*	*
Clothianidin	P			
Cryolite	*	*		*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	All Nursery and Floriculture	All Nursery	Transplants for Commercial Vegetable & Strawberry Production	Nursery Propagation or Lining-out Stock
Insecticides (continued)				
Cyfluthrin	P	P	*	P
Cypermethrin	*	*		
Cyromazine	P	P	*	*
Deltamethrin	P	P		
Diazinon	P	P	*	P
Dichlorvos	P	*		
Dicofol	P	P	*	
Dicrotophos	*	*		
Dienochlor	*	*	*	
Diflubenzuron	P	P	*	P
Dimethoate	P	P		P
Dinotefuran	P	P		P
Disulfoton	*	P		*
Emamectin benzoate	*			
Endosulfan	P	P	*	*
Esfenvalerate	P	P	*	P
Ethoprop	P	*		
Ethoxy sec. alcohols	*			
Ethyl parathion	*	*		
Etoxazole	P	P	*	*
Fenamiphos	*	*		*
Fenbutatin-oxide	P	P		*
Fenitrothion	*	*		
Fenoxycarb	P	P		*
Fenpropathrin	P	P	*	*
Fenpyroximate	P	P	*	*
Fenvalerate	*	*		
Fipronil	*	*		
Fluvalinate	P	P	*	*
Hexythiazonx	P	P	*	P
Hydramethylnon	P	P		*
Imidacloprid	P	P	P	P
Indoxacarb	*	*	*	
Isofenphos	*			
Jojoba oil	*	*		*
Kaolin	P	P		*
Kinoprene	*	*	*	*
Lambda-cyhalothrin	P	P	*	*
Lindane	P	*		
Malathion	P	P	*	P
Methidathion	P	P		

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	All Nursery and Floriculture	All Nursery	Transplants for Commercial Vegetable & Strawberry Production	Nursery Propagation or Lining-out Stock
Insecticides (continued)				
Methiocarb	P	P	*	*
Methomyl	P	P	*	*
Methoxychlor	*	*		
Methyl parathion	*	*		
Mevinphos	*	*		*
Myrothecium verruc. [1]	*			
Naled	*	*	*	
Neem oil, clar. hyd.	P	P	*	*
Nicotine	*			
Novaluron	P	P	*	*
Octacide-264	*	*		*
Oxamyl	*	*		*
Oxydemeton-methyl	P	P		*
Oxythioquinox	P	*		
Permethrin	P	P	P	P
Petroleum distillate	P	P	*	P
Petroleum oil	*	P		*
Phenothrin	*			
Phorate	*			
Phosmet	P	P		*
Piperonyl butoxide	P	P	*	*
Potassium salts	P	P	P	P
Propargite	*	P	*	
Pymetrozine	P	P	P	P
Pyrethrins	P	P	P	*
Pyridaben	P	P	*	P
Pyridine	P	P	*	*
Resmethrin	*	*		
Rosemary oil	*	*		
Rotenone	*	*	*	
S-Kinoprene	P	P	*	P
S-Methoprene	*	*		
Sabadilla	*	*		
Sesame Oil	*			
Silicon dioxide	*			
Soybean oil	*	*		
Spinosad	P	P	P	P
Spiromesifen	P	P	*	*
Sulfotepp	*			
Tebufenozide	P	P		*
Thiamethoxam	P	P	*	*
Thiodicarb	*			
Trichlorfon	*	*		
Zeta-cypermethrin	*	*	*	

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	All Nursery and Floriculture	All Nursery	Transplants for Commercial Vegetable & Strawberry Production	Nursery Propagation or Lining-out Stock
Fungicides				
AQ-10 Biofungicide [1]	*	*		
Anilazine	*	*		
Azoxystrobin	P	P	P	P
Bacillus pumilus [1]	*	*		
Bacillus subtilis [1]	*	*	*	
Bacillus subtilus [1]	*	*	*	*
Bas copper zinc sulf	*			
Basic copper sulfate	P	*	*	*
Benomyl	*	P	*	*
Borax decahydrate	*			
Boscalid	*	P	P	P
Butanone	P	P		
Calcium polysulfide	P	P		*
Captan	P	P	*	P
Chloroneb	*	*		
Chlorothalonil	P	P	P	P
Copper (metallic)	*	*		
Copper amm. complex	*	*		
Copper chloride hyd.	*	*		
Copper hydroxide	P	P	P	P
Copper octanoate	*			
Copper oxide	*	*	*	
Copper oxychlo. sul.	*	*	*	
Copper oxychloride	P	*	*	*
Copper resinate	P	P	*	*
Copper sulfate	P	P	*	P
Cymoxanil	*	P	*	
Cyprodinil	*	P	P	*
Dicloran	P	*	*	
Dimethomorph	P	P	P	*
Dinocap	*	*		
Dodine	P	*		*
Etridiazole	P	P	*	P
Famoxadone	*	P	*	
Fenamidone	*	*	*	
Fenarimol	P	P		*
Fenbuconazole	*	*		*
Fenhexamid	P	P	P	P
Ferbam	*			
Fludioxonil	P	P	P	P
Flutolanil	P	P		*
Fosetyl-al	P	P	P	P

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	All Nursery and Floriculture	All Nursery	Transplants for Commercial Vegetable & Strawberry Production	Nursery Propagation or Lining-out Stock
Fungicides (continued)				
Iprodione	P	P	P	P
Kresoxim-methyl	P	P		*
Mancozeb	P	P	P	P
Maneb	P	P	P	*
Mefenoxam	P	P	P	P
Metalaxyl	P	P	*	P
Metiram	*	*		
Milban	*			
Mono-potassium salt	*	*		
Myclobutanil	P	P	P	P
Oxycarboxin	*	*		
Oxytetracycline	*	*		*
PCNB	P	P	*	P
Phosphorous acid	P	P	*	*
Piperalin	P	P	*	
Potassium bicarbon.	P	P	P	*
Propamocarb hydroch.	P	*	*	
Propiconazole	P	P	P	P
Pseudo. fluores A506	*			
Pyraclostrobin	*	P	P	P
Sodium Percarbonate	*	*		*
Streptomyces gris. [1]	*	*		*
Streptomyces lydicus [1]	*			
Streptomycin	P	P	P	*
Streptomycin sulfate	P	*		*
Sulfur	P	P	*	P
Tebuconazole	*	*	*	
Thiabendazole (TBZ)	P	P		*
Thiophanate	P	P	*	P
Thiophanate-methyl	P	P	P	P
Thiram	*	*		*
Triadimefon	P	P	*	*
Trichoderma harz. [1]	*	*	*	*
Trifloxystrobin	P	P	*	P
Triflumizole	*			
Triforine	P	P		*
Vinclozolin	P	P	*	*
Ziram	*	P	*	*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	All Nursery and Floriculture	All Nursery	Transplants for Commercial Vegetable & Strawberry Production	Nursery Propagation or Lining-out Stock
Other Chemicals				
Acequinocyl	P	P		*
Acibenzolar-S-Methyl	*			
Alk. dim. benzyl 50%	P	P		
Alk. dim. benzyl 60%	P	P	*	*
Alk. dim. eth. benz.	P	P	*	*
Alk. dim. ethbz. am.	*	*	*	
Alkyl. dim. benz. am	*	*		*
Aminopyridine	*			
Amm. Soap Fatty Acid	*			
Ancymidol	*	*		*
Benzyladenine	*	*	*	
Brodifacoum	*	*		*
Bromadiolone	P	*		
Butenoic Acid Hydro.	*			
Cacodylic acid	*	*		
Capsaicin	*	*	*	
Chlormequat chloride	P	P	P	*
Chloropicrin	P	P	*	*
Cyclopropene,1-methy	*			
Cytokinins	*	*		*
Daminozide	P	P	P	P
Dazomet	*	*		
Decenol	*	*		
Decenyl acetate	*	*		
Decyldimethyloctyl	*	*		*
Dialkyl meth. benzy.	*			
Dichloropropene	*	*		
Didecyl dim. ammon.	*	*		*
Dikegulac-sodium	P	*		*
Dimethyldioctyl	*	*		*
Diphacinone	P	P	*	*
Dodecadien-1-ol	*			
E-8-Dodecenyl acetat	*	*		
Ethephon	P	P	*	*
Farnesol	*	*	*	*
Fatty acids	*			
Flurprimidol	*	*		
Forchlorfenuron	*			
Garlic oil	*	*		
Gibberellic acid	P	P		*
Gibberellins A4A7	*	*	*	
Harpin protein	P	*	*	

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	All Nursery and Floriculture	All Nursery	Transplants for Commercial Vegetable & Strawberry Production	Nursery Propagation or Lining-out Stock
Other Chemicals (continued)				
Hexadecenal	*			
Hexadecenyl acetate	*			
Hydantoin, dimethyl	*			
Hydantoin, methyl	*			
Hydrogen peroxide	P	P	*	P
Indolebutyric acid	P	P		P
Iron phosphate	P	P	*	*
Maleic hydrazide	*			
Mepiquat chloride	*	*		
Metaldehyde	P	P	P	P
Metam-potassium	*			
Metam-sodium	P	*		*
Methyl bromide	P	P	*	*
Mineral oil	*	*		
Monocarbamide dihyd.	*			
NAA	*	P		*
NAA, Ammonium salt	*	*		
NAD	*			
Nerolidol	*	*	*	*
PT807-HCl	*			
Paclobutrazol	P	P	*	*
Pelargonic acid	P	P	*	*
Prohexadione calcium	*	*		*
Silicic acid	*	*		
Sodium chlorate	*			
Sodium hypochlorite	P	*		*
Spirodiclofen	*	*		*
Strychnine	*	P		
Sulfaquinoxaline	*			
Tetrasodium salt	*	*		
Thidiazuron	*			
Trinexapac-ethyl	*	*		
Uniconazole	P	P		*
Warfarin	*			
Z-8-Dodecanol	*	*		
Z-8-Dodecen acetate	*	*		
Zinc phosphide	P	*		

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Broadleaf Evergreens	Coniferous Evergreens	Deciduous Shade Trees	Deciduous Flowering Trees
Herbicides				
(Meth)propionic acid		*		
2,4-D		*	*	
2,4-D, 2-EHE		*		
2,4-D, BEE		*	*	*
2,4-D, dimeth. salt		*	*	*
2,4-DP, dimeth. salt		*		
Alachlor	*			
Amitrole				*
Atrazine	*	P	*	
Benefin	*	*		
Bromoxynil heptan.	*			
Bromoxynil octanoate	*			
Butoxyethyl triclopy		*	*	*
Carfentrazone-ethyl				*
Clethodim	*	P	P	
Clomazone				*
Clopyralid	*	P	*	
DCPA				*
Dicamba		*	*	
Dicamba, sodium salt		*		
Dichlobenil	*	P	*	*
Diquat dibromide	P	*	*	*
Diuron	*	*		
Ethalfluralin				*
Fluazifop-P-butyl	*	*	*	
Flufenacet	*			
Flumetsulam			*	
Flumioxazin	P	P	P	*
Fomesafen		*		
Glufosinate-ammonium	*		*	
Glyphosate iso. salt	P	P	P	P
Halosulfuron	*	*		
Hexazinone		*		
Isoxaben	P	P	P	P
Lactofen		*		
MCPA, 2-ethylhexyl	*		*	
MSMA		*		
Metolachlor		*	*	*
Metribuzin	*			
Napropamide	*	*	*	*
Norflurazon	*	*		
Oryzalin	P	P	P	P

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Broadleaf Evergreens	Coniferous Evergreens	Deciduous Shade Trees	Deciduous Flowering Trees
Herbicides (continued)				
Oxadiazon	P	P	P	*
Oxyfluorfen	P	P	P	P
Paraquat		*	*	*
Pebulate	*			
Pendimethalin	P	P	P	P
Prodiamine	P	P	P	P
Propanil			*	
Propazine	*	*		
S-Metolachlor		P	*	
Sethoxydim	*	P	*	*
Simazine	*	P	P	*
Sulfometuron methyl		*		
Sulfosate		*	*	
Sulfosulfuron	*	*		
Tebuthiuron	*	*		
Thifensulfuron		*		
Triasulfuron		*		
Tribenuron-methyl		*		
Triclopyr		*	*	
Trifluralin	P	P	P	P
Insecticides				
Abamectin	P	P	P	P
Acephate	P	P	P	P
Acetamiprid	P	*	P	*
Aldicarb			*	
Azadirachtin	P	*		*
Azinphos-methyl		*	*	*
Beauveria bassiana	*	*	*	
Bendiocarb	*	*	*	*
Benzoic acid				*
Beta-cyfluthrin				*
Bifenazate	P	P	P	P
Bifenthrin	P	P	P	P
Bt subsp israelensis [1]	*	*		
Bt subsp. aizawai [1]	*		*	
Bt subsp. kurstaki [1]	*	*	*	*
Buprofezin		*	*	
Cacodylic acid, sodi		*		
Carbaryl	P	P	P	P
Carbofuran		*		

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Broadleaf Evergreens	Coniferous Evergreens	Deciduous Shade Trees	Deciduous Flowering Trees
Insecticides (continued)				
Chlorfenapyr	*		*	
Chlorpyrifos	P	P	P	P
Clofentezine	*	P	*	*
Cyfluthrin	P	P	P	P
Cyromazine	*			
Deltamethrin	P	*	*	*
Diazinon	P	P	P	P
Dichlorvos		*		
Dicofol	*	P	*	*
Dienochlor	*	*		
Diflubenzuron	*	P	*	*
Dimethoate	P	P	P	*
Dinotefuran	P	P	*	*
Disulfoton	*	*	*	*
Endosulfan	P	P	*	P
Esfenvalerate	*	P		*
Ethoprop		*	*	*
Ethyl parathion		*		
Etoxazole	P	P	*	P
Fenbutatin-oxide	*	*	*	*
Fenitrothion			*	
Fenoxycarb	P	*	P	
Fenpropathrin	P	*	*	*
Fenpyroximate	*		*	*
Fenvalerate		*	*	
Fluvalinate	P	P	*	*
Hexythiazonx	P	P	P	*
Hydramethylnon	*	*	*	*
Imidacloprid	P	P	P	P
Jojoba oil		*	*	
Kaolin	*			*
Kinoprene	*	*		
Lambda-cyhalothrin	P	P	*	*
Lindane		*	*	
Malathion	P	P	P	P
Methidathion	*		*	*
Methiocarb	P	*	*	
Methomyl				*
Methyl parathion	*	*		
Neem oil, clar. hyd.	*	*	*	*
Octacide-264			*	

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Broadleaf Evergreens	Coniferous Evergreens	Deciduous Shade Trees	Deciduous Flowering Trees
Insecticides (continued)				
Oxamyl		*		
Oxydemeton-methyl		P	*	*
Oxythioquinox	*	*		*
Permethrin	*	P	P	*
Petroleum distillate	P	P	P	P
Petroleum oil	*	*	P	*
Phosmet		*		*
Piperonyl butoxide	*	*	*	*
Potassium salts	P	*	P	*
Propargite	*	*		
Pymetrozine	*	*	*	*
Pyrethrins	*	*	*	*
Pyridaben	*	*	*	
Pyridine	P	P	*	*
Rosemary oil		*		
S-Kinoprene	*	*		
Spinosad	P	*	P	P
Spiromesifen	P	P	*	*
Tebufenozide		*		
Thiamethoxam	*	*	*	*
Trichlorfon		*		
Fungicides				
AQ-10 Biofungicide [1]				*
Anilazine			*	
Azoxystrobin	P	P	P	P
Bacillus pumilus [1]		*		
Bacillus subtilus [1]	*	*	*	*
Basic copper sulfate	*	*	*	*
Benomyl	*		*	*
Boscalid				*
Butanone	*	*	*	*
Calcium polysulfide	*	*	*	
Captan	*	P	*	*
Chloroneb				*
Chlorothalonil	P	P	P	P
Copper amm. complex			*	
Copper chloride hyd.			*	
Copper hydroxide	P	P	P	P
Copper oxide			*	
Copper oxychloride	*	*	*	*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Broadleaf Evergreens	Coniferous Evergreens	Deciduous Shade Trees	Deciduous Flowering Trees
Fungicides (continued)				
Copper resinate	P	P	*	*
Copper sulfate	P	*	P	*
Cymoxanil		*		
Cyprodinil				*
Dimethomorph	*	*		*
Dinocap	*			
Dodine	*			*
Etridiazole	*	P	*	
Famoxadone		*		
Fenarimol		*	*	*
Fenbuconazole			*	
Fenhexamid		P	*	*
Fludioxonil	P	P	*	*
Flutolanil	*	*	*	
Fosetyl-al	P	P	P	*
Iprodione	P	P	P	P
Kresoxim-methyl			*	*
Mancozeb	P	P	P	P
Maneb		*	*	*
Mefenoxam	P	P	P	P
Metalaxyl	*	*	*	*
Mono-potassium salt	*			
Myclobutanil	*	P	P	P
Oxycarboxin		*		
Oxytetracycline				*
PCNB	*	*		*
Phosphorous acid	*	*	*	*
Potassium bicarbon.	*	*	*	*
Propiconazole	P	P	P	P
Pyraclostrobin				*
Sodium Percarbonate		*		*
Streptomycin	P	*	P	*
Streptomycin sulfate	*			
Sulfur	*	*	*	*
Tebuconazole				*
Thiabendazole (TBZ)	*	*	*	*
Thiophanate	P	P	P	P
Thiophanate-methyl	P	P	P	P
Triadimefon	P	P	*	P
Trichoderma harz. [1]		*		
Trifloxystrobin	P	*	*	*
Triforine	*	*		
Ziram				*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Broadleaf Evergreens	Coniferous Evergreens	Deciduous Shade Trees	Deciduous Flowering Trees
Other Chemicals				
Acequinocyl	*	*		*
Alk. dim. benzyl 50%		*		
Alk. dim. benzyl 60%	*	*		*
Alk. dim. eth. benz.	*	*		
Alk. dim. ethbz. am.				*
Ancymidol			*	
Brodifacoum		*	*	
Bromadiolone	*	*		
Cacodylic acid		*		
Capsaicin	*	*	*	*
Chlormequat chloride	*		*	
Chloropicrin		*	*	*
Daminozide	*	*	*	
Dazomet	*	*	*	*
Decenol				*
Decenyl acetate				*
Dikegulac-sodium	*			
Diphacinone	*	*	*	*
E-8-Dodecenyl acetat				*
Ethephon		*	*	
Farnesol	*	*		
Garlic oil				*
Gibberellic acid	*		*	
Hydrogen peroxide	*	P	*	
Indolebutyric acid	*			
Iron phosphate	*	*	*	*
Metaldehyde	P	P	*	*
Metam-sodium	*		*	
Methyl bromide		*	*	*
Mineral oil		*		
Nerolidol	*	*		
Paclobutrazol	*	*	*	*
Pelargonic acid	*	*	*	*
Prohexadione calcium		*		
Sodium hypochlorite	*			
Uniconazole	*	*	*	
Z-8-Dodecanol				*
Z-8-Dodecen acetate				*
Zinc phosphide		*	*	

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Deciduous Shrubs	Fruit and Nut Plants	Christmas Trees	Palms
Herbicides				
2,4-D, 2-EHE			*	
2,4-D, BEE			*	
2,4-D, dimeth. salt			P	*
2,4-D, triiso. salt			*	
2,4-DP, dimeth. salt			*	
Ammonium benzadox	*			
Asulam, sodium salt			*	
Atrazine	*		P	
Benefin	*			
Bromacil			*	
Bromoxynil	*			
Bromoxynil heptan.	*			
Bromoxynil octanoate	*			
Butoxyethyl triclopy			*	
Carfentrazone-ethyl	*			
Chlorimuron-ethyl				*
Chlorsulfuron			*	
Clethodim	*	*	*	
Clopyralid			P	
Dicamba, dimet. salt			*	
Dicamba, sodium salt				*
Dichlobenil	P	*		
Diquat dibromide	P	*	*	*
Dithiopyr	*		*	
Diuron	*		*	
Fluazifop-P-butyl	*		P	
Flufenacet		*	P	
Flumioxazin	P	*	P	*
Glufosinate-ammonium	*			
Glyphosate			*	
Glyphosate iso. salt	P	P	P	P
Glyphosate pot. salt	*			
Halosulfuron			*	
Hexazinone			P	
Imazapyr, iso. salt			*	
Isoxaben	P	*	*	P
MCPP, DMA salt			*	
MCPP-P, DMA Salt			*	
MCPP-P-potassium			*	
Metolachlor			*	
Metribuzin		*	P	
Napropamide	P	*		*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Deciduous Shrubs	Fruit and Nut Plants	Christmas Trees	Palms
Herbicides (continued)				
Norflurazon		*	*	
Oryzalin	P	P	P	*
Oxadiazon	P	P	*	P
Oxyfluorfen	P	P	P	*
Paraquat	*	*		
Pendimethalin	P	*	P	*
Prodiamine	P	*	*	P
Pronamide			*	
S-Metolachlor	*		*	
Sethoxydim	*	*	*	
Simazine	*	*	P	
Sulfometuron methyl			*	
Sulfosate	*		*	
Sulfosulfuron	*			*
Tebuthiuron	*			
Thifensulfuron				*
Triasulfuron				*
Triclopyr			P	
Trifluralin	P	*	*	*
Insecticides				
Abamectin	P	P	*	P
Acephate	P	P	P	P
Acetamiprid	P	*	*	*
Aldicarb		*		
Aluminum phosphide			*	
Azadirachtin	P	*		*
Azinphos-methyl	*	*		
Beauveria bassiana	*			*
Benzoic acid			*	
Bifenazate	P	*	*	P
Bifenthrin	P	*	P	P
Bt subsp israelensis [1]	*			
Bt subsp. aizawai [1]	*		*	
Bt subsp. kurstaki [1]	*	*	*	*
Buprofezin	*	*		*
Canola oil	*			
Carbaryl	P	P	P	P
Chlorfenapyr	P			*
Chlorpyrifos	P	P	P	P
Clofentezine	*	*		*

See footnote(s) at end of table. --continued

Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Deciduous Shrubs	Fruit and Nut Plants	Christmas Trees	Palms
Insecticides (continued)				
Cryolite	*	*		
Cyfluthrin	P	*	P	P
Cypermethrin			*	
Deltamethrin	*	*	*	*
Diazinon	*	*	P	P
Dicofol		*	*	
Dicrotophos			*	
Diflubenzuron	*	*	P	*
Dimethoate	*		P	P
Dinotefuran	P	*		P
Endosulfan	P	*	P	
Esfenvalerate		*	P	
Etoxazole	P	*	*	*
Fenbutatin-oxide	*	*		*
Fenitrothion			*	
Fenoxycarb	*			
Fenpropathrin	P	*		*
Fenpyroximate	*			*
Fipronil			*	
Flonicamid	*			
Fluvalinate	P	*		*
Hexythiazonx	P	*	P	P
Hydramethylnon	*			*
Imidacloprid	P	P	*	P
Indoxacarb			*	
Kaolin	*	*		
Kinoprene	*			
Lambda-cyhalothrin	P	*	*	*
Lindane			*	
Malathion	P	P	P	P
Methidathion	*	*		*
Methiocarb	P	*		P
Methomyl		*		
Methoxychlor		*		
Methyl parathion			*	
Naled		*		
Neem oil, clar. hyd.	*	*		*
Novaluron	*			
Octacide-264	*			
Oxydemeton-methyl		*	P	
Permethrin	*	*	*	*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Deciduous Shrubs	Fruit and Nut Plants	Christmas Trees	Palms
Insecticides (continued)				
Petroleum distillate	P	P	P	P
Petroleum oil		*	*	
Phosmet	*	P		
Piperonyl butoxide	P			*
Potassium salts	P	*	*	P
Propargite	*			
Pymetrozine	P	*		
Pyrethrins	P			*
Pyridaben	P	*		*
Pyridine	P			P
Resmethrin		*		
Rosemary oil	*			
S-Kinoprene	*			*
S-Methoprene			*	
Sabadilla		*		
Spinosad	P	P		P
Spiromesifen	P			*
Tebufenozide			P	
Thiamethoxam	P	*		*
Fungicides				
Azoxystrobin	P	*	*	P
Bacillus subtilus [1]	*			
Benomyl	*			
Boscalid		*		
Butanone	*			
Captan	*	P	*	
Chlorothalonil	P	P	P	P
Copper (metallic)		*		
Copper hydroxide	P	P	*	P
Copper resinate	P			*
Copper sulfate	P	*		*
Dimethomorph	P			*
Etridiazole	*	*		*
Fenarimol	*			
Fenbuconazole		*		
Fenhexamid	*	*		
Fludioxonil	P			*
Flutolanil				*
Fosetyl-al	P	P		P
Iprodione	P	*		P

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Deciduous Shrubs	Fruit and Nut Plants	Christmas Trees	Palms
Fungicides (continued)				
Kresoxim-methyl	*			
Mancozeb	P	*	P	P
Maneb	*	*	*	
Mefenoxam	P	*	*	P
Metalaxyl	*	*	*	
Metiram				*
Mono-potassium salt	*			
Myclobutanil	P	*		*
PCNB	P			*
Phosphorous acid	*			*
Piperalin	*			
Potassium bicarbon.	*			
Propiconazole	P	*	*	P
Pyraclostrobin		*		
Streptomycin	*	*		*
Sulfur	*	P		*
Thiabendazole (TBZ)	*			*
Thiophanate	P	*	*	P
Thiophanate-methyl	P	*	*	P
Triadimefon	*		*	*
Trichoderma harz. [1]	*			
Trifloxystrobin	P	*		*
Triforine	*	*		
Vinclozolin	*			
Ziram		*		
Other Chemicals				
Acequinocyl	*	*		*
Alk. dim. benzyl 60%	*	*		
Alk. dim. eth. benz.	*			
Alk. dim. ethbz. am.		*		
Ancymidol	*			
Brodifacoum	*			
Bromadiolone	*			
Capsaicin	*			*
Chlormequat chloride	*			
Chloropicrin	*	*	*	
Daminozide	*			
Dazomet	*			*
Dichloropropene	*			
Diphacinone	*		*	*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Deciduous Shrubs	Fruit and Nut Plants	Christmas Trees	Palms
Other Chemicals (continued)				
Ethephon	*		*	
Farnesol	*			*
Hydrogen peroxide	P	*		
Indolebutyric acid	*			*
Iron phosphate	P	*		*
Mepiquat chloride	*			
Metaldehyde	P	P	*	P
Methyl bromide	*	*	*	
NAA, Ammonium salt		*		
Nerolidol	*			*
Pelargonic acid	*			
Silicic acid		*		
Strychnine	*	*	*	
Tetrasodium salt		*		
Uniconazole	*			*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Ornamental Grasses	Other Woody Ornamentals and Vines	All Floriculture	Cut Flowers
Herbicides				
2,4-D, 2-EHE	*			
2,4-D, BEE		*	*	*
2,4-D, dimeth. salt	*	*	*	
2,4-DP, dimeth. salt			*	
Acifluorfen, sodium		*		
Alachlor			*	
Ammonium benzadox		*	*	
Atrazine		*	*	
Benefin	*	*	*	
Bensulide			*	*
Bentazon		*		
Bromoxynil			*	*
Butoxyethyl triclopy		*	*	*
Chlorsulfuron			*	
Clethodim	*		P	*
Clopyralid	*		*	
DCPA			P	*
Dicamba			*	
Dicamba, dimet. salt	*		*	
Dicamba, sodium salt			*	
Dichlobenil			*	
Diflufenzopyr-sodium			*	
Diquat dibromide	*	*	P	P
Dithiopyr		*	*	
Diuron		*	P	*
Fluazifop-P-butyl	*		*	*
Flumioxazin	*	P	P	*
Glufosinate-ammonium			P	*
Glyphosate			*	*
Glyphosate iso. salt	P	P	P	P
Glyphosate pot. salt			*	
Halosulfuron		*	P	
Imazamethabenz			*	
Imazethapyr			*	
Imazethapyr, ammon.			*	
Isoxaben	P	P	P	P
Linuron			P	P
MCPA, dimethyl. salt	*		*	
MCPP, DMA salt	*		*	
Metolachlor			*	*
Napropamide			P	*
Norflurazon			*	

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Ornamental Grasses	Other Woody Ornamentals and Vines	All Floriculture	Cut Flowers
Herbicides (continued)				
Oryzalin	*	P	P	P
Oxadiazon	P	P	P	P
Oxyfluorfen	*	P	P	*
Paraquat			P	*
Pendimethalin	P	P	P	*
Prodiamine	*	P	P	*
Prometryn			*	*
S-Metolachlor	*		P	*
Sethoxydim		*	*	*
Simazine		*	P	*
Sulfosate			*	
Sulfosulfuron		*	P	*
Tebuthiuron		*		
Triasulfuron			*	
Triclopyr		*	*	
Triethylamine triclo			*	
Trifluralin	*	P	P	P
Vernolate			*	
Insecticides				
Abamectin	*	P	P	P
Acephate	P	P	P	P
Acetamiprid	*	P	P	P
Aldicarb			*	
Aluminum phosphide			*	*
Azadirachtin	*	*	P	P
Azinphos-methyl			*	
Beauveria bassiana			P	P
Bendiocarb		*	P	*
Benzoic acid		*	*	
Beta-cyfluthrin	*			
Bifenazate	*	P	P	P
Bifenthrin	*	P	P	P
Bt subsp israelensis [1]		*	*	*
Bt subsp. aizawai [1]			*	*
Bt subsp. kurstaki [1]	*	*	*	*
Buprofezin		*	P	P
Canola oil		*	*	
Carbaryl		P	P	*
Carbofuran			*	
Chitin			*	

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Ornamental Grasses	Other Woody Ornamentals and Vines	All Floriculture	Cut Flowers
Insecticides (continued)				
Chlorfenapyr	*	*	P	P
Chlorpyrifos	*	P	P	P
Cinnamaldehyde		*	P	*
Clofentezine		*	P	*
Clothianidin			P	*
Cryolite			*	*
Cyfluthrin		P	P	P
Cypermethrin			*	
Cyromazine			P	P
Deltamethrin		*	P	
Diazinon	*	P	P	P
Dichlorvos	*	*	*	
Dicofol		*	P	*
Dicrotophos			*	
Dienochlor			P	*
Diflubenzuron			P	P
Dimethoate		P	P	P
Dinotefuran	*	P	P	P
Disulfoton			*	*
Emamectin benzoate			*	*
Endosulfan	*	P	P	*
Esfenvalerate		*	P	*
Ethoprop			*	
Ethoxy sec. alcohols			*	
Ethyl parathion			*	*
Etoxazole	*	P	P	P
Fenamiphos			*	
Fenbutatin-oxide		*	P	*
Fenoxycarb			P	*
Fenpropathrin	*	*	P	*
Fenpyroximate	*	*	P	P
Flonicamid			P	P
Fluvalinate	*	P	P	P
Hexythiazonx	*	P	P	P
Hydramethylnon			P	
Imidacloprid	*	P	P	P
Isofenphos			*	
Jojoba oil			P	
Kaolin		*		
Kinoprene		*	P	*
Lambda-cyhalothrin			P	P

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Ornamental Grasses	Other Woody Ornamentals and Vines	All Floriculture	Cut Flowers
Insecticides (continued)				
Lindane			*	
Malathion	*	P	P	P
Methidathion	*	*	P	
Methiocarb	*	P	P	P
Methomyl		*	P	*
Methoxychlor			*	
Myrothecium verruc. [1]			*	
Naled			P	*
Neem oil, clar. hyd.		*	P	P
Nicotine			*	
Novaluron		*	P	P
Octacide-264			P	
Oxamyl			P	*
Oxythioquinox			*	*
Permethrin	*	*	P	P
Petroleum distillate	*	P	P	P
Petroleum oil			*	*
Phenothrin			*	
Phorate			*	*
Piperonyl butoxide	*	*	P	P
Potassium salts	*	P	P	P
Propargite			*	*
Pymetrozine	*	*	P	P
Pyrethrins	*	*	P	P
Pyridaben	*	P	P	P
Pyridine	*	P	P	P
Resmethrin			*	
Rotenone		*	P	*
S-Kinoprene	*	*	P	*
S-Methoprene			*	
Sesame Oil			*	
Silicon dioxide			*	
Soybean oil		*		
Spinosad	*	P	P	P
Spiromesifen		*	P	P
Sulfotepp			*	
Thiamethoxam	*	P	P	P
Thiodicarb			*	*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Ornamental Grasses	Other Woody Ornamentals and Vines	All Floriculture	Cut Flowers
Fungicides				
Anilazine			*	
Azoxystrobin	*	P	P	P
Bacillus pumilus [1]	*		*	*
Bacillus subtilis [1]			*	*
Bacillus subtilus [1]	*	*	*	*
Bas copper zinc sulf			*	
Basic copper sulfate		*	*	*
Benomyl			*	
Borax decahydrate			*	*
Boscalid			*	
Butanone	*	*	P	*
Calcium polysulfide		*	P	*
Captan		*	P	P
Chloroneb			P	
Chlorothalonil	P	P	P	P
Copper (metallic)			*	
Copper amm. complex			*	*
Copper hydroxide	*	P	P	P
Copper octanoate			*	
Copper oxide		*	*	
Copper oxychlo. sul.			*	
Copper oxychloride		*	*	
Copper resinate	*	P	P	*
Copper sulfate	*	P	P	P
Cymoxanil			*	*
Cyprodinil		*	*	
Dicloran			*	*
Dimethomorph	*	*	P	P
Dinocap			*	*
Dodine			*	
Etridiazole	*	P	P	P
Famoxadone			*	*
Fenarimol		*	P	P
Fenbuconazole			*	
Fenhexamid		*	P	P
Ferbam			*	
Fludioxonil	*	P	P	P
Flutolanil	*	*	P	*
Fosetyl-al	*	P	P	P
Iprodione	*	P	P	P
Kresoxim-methyl			P	P
Mancozeb	*	P	P	P

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Ornamental Grasses	Other Woody Ornamentals and Vines	All Floriculture	Cut Flowers
Fungicides (continued)				
Maneb			P	*
Mefenoxam	P	P	P	P
Metalaxyl		*	P	P
Metiram			*	
Milban			*	*
Mono-potassium salt			*	
Myclobutanil	*	*	P	P
Oxycarboxin			*	
PCNB	*	*	P	P
Phosphorous acid		*	P	*
Piperalin			P	P
Potassium bicarbon.	*	*	P	P
Propamocarb hydroch.			*	*
Propiconazole	*	P	P	P
Pseudo. fluores A506			*	
Pyraclostrobin			*	
Sodium Percarbonate	*		*	
Streptomyces gris. [1]			*	
Streptomyces lydicus [1]			*	*
Streptomycin	*	P	P	*
Streptomycin sulfate		*	*	
Sulfur		*	P	P
Tebuconazole			P	
Thiabendazole (TBZ)	*	*	P	*
Thiophanate	P	P	P	P
Thiophanate-methyl	P	P	P	P
Thiram			*	
Triadimefon	*	*	P	P
Trichoderma harz. [1]	*		*	*
Trifloxystrobin	*	P	P	P
Triflumizole			*	
Triforine			P	*
Vinclozolin		*	P	*
Ziram			*	
Other Chemicals				
Acequinocyl		*	P	P
Acibenzolar-S-Methyl			*	
Alk. dim. benzyl 50%		*	P	
Alk. dim. benzyl 60%		P	P	*
Alk. dim. eth. benz.		P	P	

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Ornamental Grasses	Other Woody Ornamentals and Vines	All Floriculture	Cut Flowers
Other Chemicals (continued)				
Alk. dim. ethbz. am.			P	*
Alkyl. dim. benz. am			*	
Aminopyridine			*	*
Amm. Soap Fatty Acid			*	
Ancymidol			P	*
Benzyladenine	*	*	P	
Bromadiolone	*		*	*
Butenoic Acid Hydro.			*	
Capsaicin	*	*	*	
Chlormequat chloride	*		P	*
Chloropicrin			P	P
Cyclopropene,1-methy			*	
Daminozide	*	P	P	P
Dazomet			*	*
Decenol			*	*
Decenyl acetate			*	*
Decyldimethyloctyl			*	
Dialkyl meth. benzy.			*	
Dichloropropene			*	*
Didecyl dim. ammon.			*	
Dikegulac-sodium	*	*	*	
Dimethyldioctyl			*	
Diphacinone	*	*	P	*
Dodecadien-1-ol			*	*
E-8-Dodecenyl acetat			*	*
Ethephon	*	*	P	*
Farnesol	*	*	P	
Fatty acids			*	
Flurprimidol		*	*	
Forchlorfenuron			*	
Garlic oil			*	
Gibberellic acid		*	P	P
Gibberellins A4A7	*	*	P	
Harpin protein			*	
Hexadecenal			*	*
Hexadecenyl acetate			*	*
Hydantoin, dimethyl			*	
Hydantoin, methyl			*	
Hydrogen peroxide	*	*	P	*
Indolebutyric acid	*	*	P	*
Iron phosphate	*	*	P	*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Ornamental Grasses	Other Woody Ornamentals and Vines	All Floriculture	Cut Flowers
Other Chemicals (continued)				
Maleic hydrazide			*	
Metaldehyde	*	P	P	P
Metam-potassium			*	*
Metam-sodium			*	*
Methyl bromide			P	P
Monocarbamide dihyd.			*	
NAA		*	*	*
NAD			*	
Nerolidol	*	*	P	
PT807-HCl			*	
Paclobutrazol	*	P	P	P
Pelargonic acid		*	P	
Sodium chlorate			*	
Sodium hypochlorite		*	*	*
Spirodiclofen			*	
Strychnine			*	*
Sulfaquinoxaline			*	*
Thidiazuron			*	
Trinexapac-ethyl	*		*	
Uniconazole		*	P	*
Warfarin			*	*
Z-8-Dodecanol			*	*
Z-8-Dodecen acetate			*	*
Zinc phosphide		*	*	

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Flowering Plants	Bedding Plants	Foliage Plants	Floriculture Propagation Material
Herbicides				
2,4-D, dimeth. salt	*			
2,4-DP, dimeth. salt	*			
Alachlor			*	
Ammonium benzadox	*	*		*
Atrazine	*		*	
Benefin	*		*	
Bromoxynil	*			
Chlorsulfuron		*		
Clethodim	*			*
Clopyralid	*			
DCPA	*		*	
Dicamba			*	
Dicamba, dimet. salt		*		
Dicamba, sodium salt	*	*		
Dichlobenil	*	*		
Diflufenzopyr-sodium	*			
Diquat dibromide	P	P	*	
Dithiopyr			*	
Diuron			*	
Fluazifop-P-butyl				*
Flumioxazin	P	*	*	
Glufosinate-ammonium	*	*	*	
Glyphosate	*	*		
Glyphosate iso. salt	P	P	P	*
Glyphosate pot. salt	*			
Halosulfuron	*	*		
Imazamethabenz		*		
Imazethapyr			*	
Imazethapyr, ammon.				*
Isoxaben	P	P	P	*
Linuron	*	*		
MCPA, dimethyl. salt		*		
MCPP, DMA salt	*			
Metolachlor	*			
Napropamide	*	*	*	
Oryzalin	P	P	*	*
Oxadiazon	P	P	*	*
Oxyfluorfen	P	P	P	*
Paraquat	*	*		
Pendimethalin	P	P	*	*
Prodiamine	P	P	*	*
S-Metolachlor			*	*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Flowering Plants	Bedding Plants	Foliage Plants	Floriculture Propagation Material
Herbicides (continued)				
Sethoxydim	*			
Simazine	*			*
Sulfosate		*		
Sulfosulfuron	*	*	*	
Triasulfuron	*	*		
Triclopyr	*			
Triethylamine triclo		*		
Trifluralin	P	P	P	*
Vernolate			*	
Insecticides				
Abamectin	P	P	P	P
Acephate	P	P	P	P
Acetamiprid	P	P	P	*
Aldicarb		*		
Azadirachtin	P	P	P	*
Azinphos-methyl		*		
Beauveria bassiana	P	P	*	*
Bendiocarb	*	*	*	
Benzoic acid	*		*	
Bifenazate	P	P	P	*
Bifenthrin	P	P	P	P
Bt subsp israelensis [1]	*	*	*	*
Bt subsp. aizawai [1]	*	*	*	
Bt subsp. kurstaki [1]	*	*	*	*
Buprofezin	P	P	*	*
Canola oil		*		
Carbaryl	P	P	P	*
Carbofuran	*			
Chitin	*			
Chlorfenapyr	P	P	P	*
Chlorpyrifos	P	P	P	*
Cinnamaldehyde	*	*	*	
Clofentezine	P	P	P	*
Clothianidin	P	P	*	*
Cyfluthrin	P	P	P	P
Cypermethrin	*	*		
Cyromazine	P	P	*	*
Deltamethrin	*	*		
Diazinon	P	*	P	
Dichlorvos	*	*		

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Flowering Plants	Bedding Plants	Foliage Plants	Floriculture Propagation Material
Insecticides (continued)				
Dicofol	*	P	P	*
Dienochlor	P	*	*	
Diflubenzuron	P	P	P	*
Dimethoate	P	*	P	*
Dinotefuran	P	P	P	*
Disulfoton	*	*		
Endosulfan	P	P	P	*
Esfenvalerate	*	*	*	
Ethoprop	*			
Ethyl parathion	*	*		
Etoxazole	P	P	P	*
Fenbutatin-oxide	*	*	P	
Fenoxycarb	P	P		*
Fenpropathrin	P	P	P	*
Fenpyroximate	P	P	P	*
Flonicamid	P	P	*	*
Fluvalinate	P	P	P	*
Hexythiazonx	P	P	P	*
Hydramethylnon	*	*	*	
Imidacloprid	P	P	P	*
Isofenphos			*	
Jojoba oil	*	*		
Kinoprene	*	P	*	
Lambda-cyhalothrin	P	*	*	*
Lindane	*	*		
Malathion	P	P	P	
Methidathion			P	
Methiocarb	P	P	P	P
Methomyl	*	*		
Methoxychlor		*		
Naled	*		P	
Neem oil, clar. hyd.	P	P	P	
Nicotine		*		
Novaluron	P	P	P	*
Octacide-264	*	P	*	
Oxamyl		*		*
Oxythioquinox		*		
Permethrin	P	P	P	*
Petroleum distillate	P	P	P	*
Petroleum oil	*	*		
Phenothrin		*		

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Flowering Plants	Bedding Plants	Foliage Plants	Floriculture Propagation Material
Insecticides (continued)				
Piperonyl butoxide	P	P	*	
Potassium salts	P	P	P	P
Pymetrozine	P	P	P	*
Pyrethrins	P	P	*	
Pyridaben	P	P	P	*
Pyridine	P	P	P	*
Resmethrin		*		*
Rotenone	*	*	*	
S-Kinoprene	P	P	*	*
S-Methoprene			*	
Sesame Oil	*	*		
Silicon dioxide	*	*		
Spinosad	P	P	P	P
Spiromesifen	P	P	P	*
Sulfotepp		*		
Thiamethoxam	P	P	P	*
Fungicides				
Anilazine		*		*
Azoxystrobin	P	P	P	*
Bacillus pumilus [1]	*			
Bacillus subtilis [1]		*		
Bacillus subtilus [1]	*	*	*	*
Bas copper zinc sulf		*		
Basic copper sulfate	*	*		
Benomyl	*	*		
Boscalid	*	*		
Butanone	P	P	*	
Calcium polysulfide		*	*	
Captan	P	P	P	*
Chloroneb	*			
Chlorothalonil	P	P	P	P
Copper (metallic)	*	*		
Copper amm. complex	*		*	
Copper hydroxide	P	P	P	P
Copper octanoate		*		
Copper oxide	*			
Copper oxychlo. sul.	*	*		
Copper oxychloride	*			
Copper resinate	P	P	P	P
Copper sulfate	P	P	P	*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Flowering Plants	Bedding Plants	Foliage Plants	Floriculture Propagation Material
Fungicides (continued)				
Cymoxanil	*			
Cyprodinil		*		
Dicloran	*	*		
Dimethomorph	P	P	*	*
Dodine	*			
Etridiazole	P	P	P	*
Famoxadone	*			
Fenarimol	P	*		*
Fenbuconazole	*			
Fenhexamid	P	P	P	*
Ferbam	*			
Fludioxonil	P	P	P	*
Flutolanil	*	*	*	*
Fosetyl-al	P	P	P	*
Iprodione	P	P	P	P
Kresoxim-methyl	P	*		
Mancozeb	P	P	P	P
Maneb	*	*	*	
Mefenoxam	P	P	P	*
Metalaxyl	P	P	P	*
Metiram	*		*	
Milban	*			
Mono-potassium salt			*	
Myclobutanil	P	P	P	*
Oxycarboxin		*		*
PCNB	P	P	P	*
Phosphorous acid	*	P	*	*
Piperalin	P	P		*
Potassium bicarbon.	P	P	*	*
Propamocarb hydroch.	*	*	*	
Propiconazole	P	P	P	P
Pseudo. fluores A506		*		
Pyraclostrobin	*	*		
Sodium Percarbonate		*	*	
Streptomyces gris. [1]		*		
Streptomyces lydicus [1]	*	*	*	*
Streptomycin	P	P	P	*
Streptomycin sulfate	*	*		
Sulfur	P	*	*	*
Thiabendazole (TBZ)	P	*	P	
Thiophanate	P	P	P	P

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Flowering Plants	Bedding Plants	Foliage Plants	Floriculture Propagation Material
Fungicides (continued)				
Thiophanate-methyl	P	P	P	P
Thiram	*			
Triadimefon	P	P	*	*
Trichoderma harz. [1]	*	*	*	
Trifloxystrobin	P	P	P	*
Triflumizole	*			
Triforine	P	*		
Vinclozolin	*	P	*	
Ziram	*	*		
Other Chemicals				
Acequinocyl	P	*	*	
Acibenzolar-S-Methyl	*			
Alk. dim. benzyl 50%	*	*	*	
Alk. dim. benzyl 60%	P	P	P	*
Alk. dim. eth. benz.	P	*	*	*
Alk. dim. ethbz. am.	*	*	*	
Alkyl. dim. benz. am	*			
Amm. Soap Fatty Acid	*			
Ancymidol	P	P	*	*
Benzyladenine	P	*		
Bromadiolone	*			
Butenoic Acid Hydro.		*		
Capsaicin		*		
Chlormequat chloride	P	P	P	P
Chloropicrin	*	*		*
Cyclopropene,1-methy	*			
Daminozide	P	P	P	*
Decenol		*		
Decenyl acetate		*		
Decyldimethyloctyl	*			
Dialkyl meth. benzy.			*	
Dichloropropene		*		
Didecyl dim. ammon.	*			
Dikegulac-sodium	*			
Dimethyldioctyl	*			
Diphacinone	P	*		
E-8-Dodecenyl acetat		*		
Ethephon	P	P	P	P
Farnesol	*		*	
Fatty acids	*			

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Flowering Plants	Bedding Plants	Foliage Plants	Floriculture Propagation Material
Other Chemicals (continued)				
Flurprimidol	*			
Forchlorfenuron				*
Garlic oil	*			
Gibberellic acid	P	*	P	
Gibberellins A4A7	P	*		
Harpin protein	*		*	
Hydantoin, dimethyl	*			
Hydantoin, methyl	*			
Hydrogen peroxide	P	P	P	*
Indolebutyric acid	*	*		
Iron phosphate	*	*	*	
Maleic hydrazide		*		
Metaldehyde	P	P	P	*
Metam-potassium	*			
Methyl bromide	*	*		*
Monocarbamide dihyd.	*			
Nerolidol	*		*	
Paclobutrazol	P	P	P	P
Pelargonic acid	*	*	*	
Sodium chlorate		*		
Sodium hypochlorite		*		
Strychnine		*		
Thidiazuron		*		
Uniconazole	P	P	*	*
Z-8-Dodecanol		*		
Z-8-Dodecen acetate		*		

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Cut Cultivated Greens	Herbaceous Perennials	Non-production Areas
Herbicides			
2,4-D, 2-EHE			*
2,4-D, BEE	*		P
2,4-D, dimeth. salt			P
2,4-DP, dimeth. salt			*
2,4-DP-p, 2-EH ester			*
Atrazine			P
Benefin		*	*
Bentazon			*
Bromacil			*
Bromoxynil octanoate			*
Butoxyethyl triclopy	*		P
Clethodim		*	P
Clopyralid			P
Copper ethanolamine			*
Dicamba			*
Dicamba, dimet. salt			P
Dichlobenil	*	*	P
Diquat dibromide	*		P
Dithiopyr			*
Diuron	*		P
EPTC			*
Fluazifop-P-butyl		*	
Flumioxazin		*	P
Glufosinate-ammonium		*	P
Glyphosate			*
Glyphosate iso. salt	P	*	P
Halosulfuron	*	*	*
Hexazinone			P
Imazamethabenz			*
Imazaquin			*
Imazethapyr			*
Isoxaben		*	P
Linuron			*
MCPA, dimethyl. salt			*
MCPP, DMA salt			*
Metolachlor			*
Napropamide			*
Norflurazon	*		*
Oryzalin		P	P
Oxadiazon	*	*	P
Oxyfluorfen		P	P
Paraquat		*	P

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Cut Cultivated Greens	Herbaceous Perennials	Non-production Areas
Herbicides (continued)			
Pendimethalin		P	P
Prodiamine	*	*	P
Pronamide			*
Propazine			*
S-Metolachlor		*	*
Sethoxydim		*	*
Simazine	*		P
Sulfometuron methyl			*
Sulfosate			P
Sulfosulfuron		*	
Triclopyr			*
Trifluralin		*	P
Insecticides			
Abamectin	P	P	*
Acephate	P	P	P
Acetamiprid		*	*
Aprocarb			*
Azadirachtin	*	P	*
Beauveria bassiana	*	*	
Bifenazate	P	*	*
Bifenthrin	P	P	P
Bt subsp israelensis [1]		*	
Bt subsp. aizawai [1]	*		
Bt subsp. kurstaki [1]	*	*	
Buprofezin		*	
Carbaryl	P	P	*
Chlorfenapyr	*	P	
Chlorpyrifos	P	*	P
Cinnamaldehyde		*	
Clofentezine		*	*
Clothianidin		*	
Cyfluthrin	P	P	P
Cyromazine	*	P	*
Diazinon		*	P
Dicofol	P	*	
Dicrotophos	*		
Dienochlor		*	
Diflubenzuron	P	*	*
Dimethoate	P	*	*
Dinotefuran	*	P	*

See footnote(s) at end of table. --continued

Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Cut Cultivated Greens	Herbaceous Perennials	Non-production Areas
Insecticides (continued)			
Disulfoton			*
Endosulfan	P	*	
Esfenvalerate			*
Ethoprop	*	*	
Ethoxy sec. alcohols	*	*	*
Etoxazole	*	P	*
Fenamiphos	*	*	
Fenbutatin-oxide	P		*
Fenoxycarb		*	P
Fenpropathrin		*	*
Fenpyroximate		*	
Flonicamid	*		
Fluvalinate	*	P	*
Hexythiazonx	*	P	*
Hydramethylnon			P
Imidacloprid	*	P	P
Kinoprene		*	
Lambda-cyhalothrin		*	*
Malathion	*	*	*
Methiocarb	*	*	*
Methomyl			*
Myrothecium verruc. [1]	*	*	
Neem oil, clar. hyd.	*	*	
Novaluron	*	*	
Octacide-264		*	
Oxythioquinox			*
Permethrin	P	*	*
Petroleum distillate	P	*	*
Petroleum oil		*	
Piperonyl butoxide		*	
Potassium salts		P	
Pymetrozine	*	P	
Pyrethrins		*	*
Pyridaben		*	
Pyridine	*	P	*
Rotenone			*
S-Kinoprene		*	*
S-Methoprene			*
Spinosad	P	P	*
Spiromesifen		*	
Thiamethoxam		*	
Tralomethrin			*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Cut Cultivated Greens	Herbaceous Perennials	Non-production Areas
Fungicides			
Anilazine		*	
Azoxystrobin	*	P	*
Bacillus subtilis [1]		*	
Bacillus subtilus [1]	*	*	
Basic copper sulfate		*	*
Boscalid	*		*
Butanone		P	*
Calcium polysulfide		*	*
Captan	*	*	
Chloroneb	*		
Chlorothalonil	P	P	P
Copper (metallic)		*	
Copper hydroxide	*	*	P
Copper oxychloride		*	
Copper resinate	*	*	
Copper sulfate	*	*	*
Dimethomorph	*	P	
Etridiazole	*	P	*
Fenarimol		*	*
Fenbuconazole		*	
Fenhexamid	*	P	
Fludioxonil	*	P	
Flutolanil	*		
Fosetyl-al	*	P	*
Iprodione	*	*	*
Kresoxim-methyl	*	*	
Mancozeb	P	P	P
Maneb			*
Mefenoxam	*	P	P
Metalaxyl		*	
Metiram	*		
Myclobutanil	*	P	*
PCNB	*	P	*
Phosphorous acid		P	
Piperalin	*	*	
Potassium bicarbon.	*	*	*
Propiconazole	P	P	P
Pyraclostrobin	*	*	*
Streptomyces lydicus [1]		*	
Streptomycin		*	
Streptomycin sulfate	*	*	
Sulfur	*	*	*

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Cut Cultivated Greens	Herbaceous Perennials	Non-production Areas
Fungicides (continued)			
Tebuconazole	P		
Thiabendazole (TBZ)		*	
Thiophanate	P	P	*
Thiophanate-methyl	P	P	*
Thiram		*	
Triadimefon	*	*	*
Trichoderma harz. [1]		*	
Trifloxystrobin	*	P	
Triforine		*	*
Other Chemicals			
Acequinocyl	*	*	
Alk. dim. benzyl 50%			*
Alk. dim. benzyl 60%		*	P
Alk. dim. eth. benz.		*	*
Alk. dim. ethbz. am.		*	*
Ancymidol		*	
Benzyladenine		*	
Brodifacoum			*
Bromadiolone			*
Capsaicin		*	
Chlormequat chloride		*	
Chloropicrin	*		P
Daminozide	*	P	*
Didecyl dim. ammon.			*
Diphacinone		*	P
Ethephon		*	
Gibberellic acid		*	
Gibberellins A4A7		*	
Harpin protein		*	
Hydrogen peroxide	*	P	P
Indolebutyric acid		*	*
Iron phosphate		*	*
Metaldehyde	*	P	P
Methyl bromide	*		P
NAA		*	
NAD		*	
PT807-HCl		*	
Paclobutrazol	*	*	*
Pelargonic acid		*	P
Sodium hypochlorite			P

See footnote(s) at end of table.

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Active Ingredient Publication Status
by Production Category
Program States, 2006 - continued

Active Ingredient	Cut Cultivated Greens	Herbaceous Perennials	Non-production Areas
Other Chemicals (continued)			
Spirodiclofen	*		
Strychnine			*
Trinexapac-ethyl		*	
Uniconazole		*	
Zinc phosphide		*	*

P Usage data are published for this active ingredient.
* Usage data are not published for this active ingredient.
[1] Rates and total applied are not available because amounts of active ingredient are not comparable between products.

Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006

Active Ingredient	All Nursery and Floriculture		All Nursery	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Herbicides				
2,4-D, 2-EHE	1.055	4.6	1.055	4.6
2,4-D, BEE			0.582	0.8
2,4-D, dimeth. salt			0.805	1.9
Atrazine			2.156	14.3
Benefin			1.976	2.0
Bromoxynil heptan.	0.168	0.1	0.168	0.1
Bromoxynil octanoate	0.168	0.1	0.168	0.1
Butoxyethyl triclopy			0.291	0.4
Clethodim	0.159	0.7	0.156	0.7
Clopyralid			0.189	0.6
Dichlobenil			3.358	4.5
Diquat dibromide	0.471	4.3	0.371	1.9
Diuron	0.889	2.3	0.703	2.0
Fluazifop-P-butyl			0.354	1.0
Flufenacet	0.581	5.5	0.581	5.5
Flumioxazin	0.241	6.6	0.241	5.4
Glufosinate-ammonium	0.813	1.1	0.938	0.9
Glyphosate iso. salt	1.282	236.6	1.235	210.4
Halosulfuron	0.048	*	0.078	*
Hexazinone	0.863	21.4	0.863	21.4
Isoxaben	0.675	59.0	0.676	56.3
Metolachlor			3.105	0.9
Metribuzin	0.153	1.4	0.153	1.4
Napropamide	3.760	134.1	3.755	132.0
Norflurazon			3.027	4.2
Oryzalin	2.479	123.8	2.502	119.8
Oxadiazon	1.702	8.8	1.616	4.7
Oxyfluorfen	1.505	127.9	1.509	125.0
Paraquat	0.547	0.3	0.514	0.2
Pendimethalin	1.015	51.4	1.010	49.0
Prodiamine	0.576	16.3	0.573	13.2
S-Metolachlor	2.168	6.8	2.193	6.5
Sethoxydim			0.271	0.2
Simazine	1.487	28.5	1.485	28.1
Sulfometuron methyl	0.089	1.2	0.089	1.2
Triclopyr			0.848	0.8
Trifluralin	2.554	43.4	2.754	35.9

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	All Nursery and Floriculture		All Nursery	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Insecticides				
Abamectin	0.007	0.8	0.006	0.4
Acephate	0.808	156.5	0.902	89.9
Acetamiprid	0.134	0.7	0.080	0.2
Aluminum phosphide	0.135	0.1		
Azadirachtin	0.026	0.3	0.020	0.1
Azinphos-methyl			0.187	0.1
Beauveria bassiana	0.445	0.6	0.272	*
Benzoic acid	0.164	0.1		
Bifenazate	0.155	4.1	0.126	2.6
Bifenthrin	0.066	4.2	0.057	2.9
Buprofezin	0.526	0.2	0.425	0.1
Carbaryl	1.138	93.0	1.129	58.5
Chlorfenapyr	0.104	0.1	0.125	0.1
Chlorpyrifos	0.765	99.9	0.917	65.5
Clofentezine	0.104	0.2	0.108	0.1
Clothianidin	0.295	*		
Cyfluthrin	0.098	4.0	0.040	1.0
Cyromazine	0.262	1.3	0.115	0.2
Deltamethrin	0.066	*	0.050	*
Diazinon	0.582	22.6	0.535	16.2
Dichlorvos	1.041	0.3		
Dicofol	0.448	3.8	0.330	1.2
Diflubenzuron	0.073	1.7	0.076	0.3
Dimethoate	0.887	25.9	0.882	20.3
Dinotefuran	0.135	1.2	0.104	0.5
Disulfoton			1.848	0.5
Endosulfan	0.726	29.4	0.742	11.2
Esfenvalerate	0.036	0.2	0.036	0.2
Ethoprop	4.700	0.9		
Etoxazole	0.064	0.8	0.067	0.8
Fenbutatin-oxide	0.543	3.1	0.843	0.8
Fenoxycarb	0.033	*	0.041	*
Fenpropathrin	0.234	0.5	0.262	0.2
Fenpyroximate	0.081	0.1	0.074	*
Fluvalinate	0.160	1.2	0.167	0.4
Hexythiazonx	0.116	1.5	0.118	1.0
Hydramethylnon	0.006	*	0.006	*
Imidacloprid	0.149	4.7	0.179	3.1
Kaolin	9.678	17.8	9.678	17.8
Lambda-cyhalothrin	0.050	8.5	0.050	8.4
Lindane	0.107	0.1		

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	All Nursery and Floriculture		All Nursery	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Insecticides (continued)				
Malathion	1.313	27.6	1.275	23.7
Methidathion	0.474	3.7	0.451	1.9
Methiocarb	0.905	3.8	0.622	0.3
Methomyl	0.731	1.0	0.739	0.9
Neem oil, clar. hyd.	4.845	22.1	6.023	14.8
Novaluron	0.060	0.1	0.043	*
Oxydemeton-methyl	0.397	1.9	0.397	1.9
Oxythioquinox	0.216	*		
Permethrin	0.136	7.1	0.170	0.5
Petroleum distillate	11.680	313.6	11.413	262.0
Petroleum oil			8.993	23.4
Phosmet	0.588	1.4	0.588	1.4
Piperonyl butoxide	0.229	0.7	0.147	0.1
Potassium salts	6.278	71.0	14.520	43.8
Propargite			1.509	1.5
Pymetrozine	0.133	1.6	0.102	0.5
Pyrethrins	0.019	0.1	0.038	*
Pyridaben	0.254	0.7	0.233	0.4
Pyridine	0.082	0.7	0.057	0.2
S-Kinoprene	0.444	0.2	0.312	*
Spinosad	0.094	3.9	0.078	1.3
Spiromesifen	0.100	0.6	0.097	0.5
Tebufenozide	0.072	*	0.072	*
Thiamethoxam	0.059	1.0	0.065	0.8
Fungicides				
Azoxystrobin	0.245	10.3	0.283	8.9
Basic copper sulfate	0.471	10.1		
Benomyl			0.597	0.2
Boscalid			0.027	0.1
Butanone	0.098	0.4	0.094	0.3
Calcium polysulfide	3.288	0.6	3.573	0.6
Captan	0.879	20.0	0.750	13.6
Chlorothalonil	2.142	335.0	2.301	266.7
Copper hydroxide	0.756	107.8	0.809	48.3
Copper oxychloride	1.659	35.5		
Copper resinate	0.160	2.2	0.162	1.9
Copper sulfate	0.178	0.7	0.270	0.5
Cymoxanil			0.096	0.1
Cyprodinil			0.299	0.7

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	All Nursery and Floriculture		All Nursery	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Fungicides (continued)				
Dicloran	0.950	*		
Dimethomorph	0.531	10.3	0.556	9.8
Dodine	0.720	*		
Etridiazole	3.482	23.9	2.543	1.8
Famoxadone			0.096	0.1
Fenarimol	0.055	0.1	0.039	*
Fenhexamid	0.491	4.5	0.527	1.4
Fludioxonil	0.881	16.0	0.885	7.8
Flutolanil	0.667	0.2	0.307	0.1
Fosetyl-al	1.866	123.1	1.743	101.1
Iprodione	0.620	15.9	0.482	7.1
Kresoxim-methyl	0.092	*	0.107	*
Mancozeb	1.303	623.0	0.957	145.4
Maneb	1.310	4.3	1.292	3.6
Mefenoxam	0.515	81.0	0.524	76.4
Metalaxyl	0.198	1.0	0.600	0.8
Myclobutanil	0.111	3.3	0.103	2.3
PCNB	2.592	9.1	3.360	2.3
Phosphorous acid	2.362	13.6	2.142	10.7
Piperalin	0.974	2.5	0.843	0.2
Potassium bicarbon.	2.214	3.0	2.112	1.3
Propamocarb hydroch.	16.184	1.5		
Propiconazole	0.100	2.4	0.120	1.6
Pyraclostrobin			0.119	0.5
Streptomycin	0.181	0.8	0.208	0.6
Streptomycin sulfate	0.240	0.2		
Sulfur	2.734	58.1	2.406	30.1
Thiabendazole (TBZ)	1.664	4.0	1.919	3.3
Thiophanate	0.643	86.9	0.714	49.3
Thiophanate-methyl	1.697	122.7	0.756	16.2
Triadimefon	0.262	1.9	0.279	1.8
Trifloxystrobin	0.064	2.9	0.056	2.2
Triforine	0.251	*	0.260	*
Vinclozolin	0.531	0.1	0.661	*
Ziram			0.436	1.0

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	All Nursery and Floriculture		All Nursery	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Other Chemicals				
Acequinocyl	0.193	0.1	0.263	0.1
Alk. dim. benzyl 50%	0.081	*	0.043	*
Alk. dim. benzyl 60%	0.223	0.9	0.195	0.6
Alk. dim. eth. benz.	0.235	0.8	0.214	0.6
Bromadiolone	([1])	*		
Chlormequat chloride	1.566	3.3	0.794	0.3
Chloropicrin	122.900	253.6	61.260	74.7
Daminozide	3.437	16.3	6.962	3.5
Dikegulac-sodium	2.057	0.4		
Diphacinone	([1])	*		
Ethephon	0.521	0.4	0.304	*
Gibberellic acid	0.128	0.1	0.061	*
Harpin protein	0.008	*		
Hydrogen peroxide	1.853	10.3	2.019	7.8
Indolebutyric acid	0.001	0.1		0.1
Iron phosphate	0.340	0.8	0.385	0.7
Metaldehyde	3.790	992.1	3.826	986.3
Metam-sodium	122.345	42.3		
Methyl bromide	161.305	363.6	134.640	186.3
NAA				
Paclobutrazol	0.024	0.3	0.022	*
Pelargonic acid	4.117	47.2	4.106	47.0
Sodium hypochlorite	0.386	*		
Strychnine			0.003	*
Uniconazole	0.010	*	0.003	*
Zinc phosphide	0.114	*		

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Transplants for Commercial Vegetable & Strawberry Production		Nursery Propagation or Lining-out Stock	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Herbicides				
Clethodim			0.181	*
Flumioxazin			0.156	0.1
Glyphosate iso. salt	0.812	0.2	1.229	4.9
Isoxaben			0.439	0.3
Oryzalin			2.257	2.0
Oxadiazon			1.684	0.4
Oxyfluorfen			1.035	1.3
Pendimethalin			2.447	0.3
Prodiamine			0.484	0.2
S-Metolachlor			1.428	0.5
Simazine			1.449	0.3
Insecticides				
Abamectin	0.010	*	0.008	*
Acephate	0.964	0.4	3.020	11.6
Acetamiprid	0.079	*	0.098	*
Azadirachtin	0.027	*	0.032	*
Bifenazate	0.483	0.5	0.164	*
Bifenthrin	0.095	*	0.141	0.5
Chlorpyrifos			0.648	0.9
Cyfluthrin			0.027	0.1
Diazinon			0.622	0.7
Diflubenzuron			0.316	0.1
Dimethoate			0.588	0.2
Dinotefuran			0.115	*
Esfenvalerate			0.034	0.1
Hexythiazonx			0.158	*
Imidacloprid	0.215	0.2	0.122	0.2
Malathion			0.906	0.4
Permethrin	0.118	*	0.215	0.2
Petroleum distillate			5.562	2.8
Potassium salts	10.658	0.4	2.196	0.6
Pymetrozine	0.099	0.1	0.096	*
Pyrethrins	0.013	*		
Pyridaben			0.280	0.1
S-Kinoprene			0.261	*
Spinosad	0.077	*	0.096	0.2

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Transplants for Commercial Vegetable & Strawberry Production		Nursery Propagation or Lining-out Stock	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Fungicides				
Azoxystrobin	0.142	0.1	0.414	1.4
Boscalid	0.042	0.1	0.011	*
Captan			1.020	0.4
Chlorothalonil	1.287	2.9	1.585	6.6
Copper hydroxide	0.611	0.8	0.791	1.1
Copper sulfate			0.142	*
Cyprodinil	0.299	0.7		
Dimethomorph	0.188	0.1		
Etridiazole			2.855	0.1
Fenhexamid	0.599	*	0.586	0.1
Fludioxonil	0.207	0.5	0.197	0.1
Fosetyl-al	2.985	6.3	1.365	1.3
Iprodione	0.821	0.3	0.448	1.0
Mancozeb	0.996	0.7	1.239	1.9
Maneb	1.120	1.5		
Mefenoxam	0.327	1.3	0.519	1.2
Metalaxyl			0.134	*
Myclobutanil	0.072	0.2	0.062	0.1
PCNB			5.964	0.7
Potassium bicarbon.	1.932	0.5		
Propiconazole	0.100	*	0.319	0.1
Pyraclostrobin	0.211	0.5	0.001	*
Streptomycin	0.167	0.1		
Sulfur			3.764	11.3
Thiophanate			0.342	1.7
Thiophanate-methyl	0.895	1.4	0.723	0.8
Trifloxystrobin			0.071	0.1
Other Chemicals				
Chlormequat chloride	0.874	0.1		
Daminozide	1.440	0.1	4.371	1.2
Hydrogen peroxide			2.215	6.6
Indolebutyric acid			0.002	0.1
Metaldehyde	2.074	0.2	1.546	1.2

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Broadleaf Evergreens		Coniferous Evergreens	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Herbicides				
Atrazine			0.891	1.0
Clethodim			0.161	0.6
Clopyralid			0.205	0.2
Dichlobenil			5.067	1.2
Diquat dibromide	0.493	0.2		
Flumioxazin	0.235	0.3	0.182	1.5
Glyphosate iso. salt	1.349	14.9	1.497	40.0
Isoxaben	0.764	1.4	0.761	47.8
Oryzalin	1.349	2.2	2.739	98.1
Oxadiazon	1.179	0.8	1.209	0.7
Oxyfluorfen	1.316	4.3	1.796	55.6
Pendimethalin	0.688	1.6	1.069	17.3
Prodiamine	0.689	3.3	0.759	1.9
S-Metolachlor			2.611	5.2
Sethoxydim			0.087	*
Simazine			1.648	10.9
Trifluralin	2.443	0.6	3.112	30.0
Insecticides				
Abamectin	0.005	*	0.005	0.2
Acephate	1.057	9.3	0.959	23.4
Acetamiprid	0.072	*		
Azadirachtin	0.024	*		
Bifenazate	0.141	0.2	0.067	0.8
Bifenthrin	0.154	0.3	0.081	0.3
Carbaryl	1.846	5.1	1.110	7.5
Chlorpyrifos	1.033	4.3	0.970	28.7
Clofentezine			0.120	*
Cyfluthrin	0.017	*	0.020	0.1
Deltamethrin	0.037	*		
Diazinon	0.510	1.0	0.505	11.8
Dicofol			0.360	0.3
Diflubenzuron			0.061	0.2
Dimethoate	0.864	2.5	0.808	1.5
Dinotefuran	0.141	0.1	0.111	0.2
Endosulfan	0.549	0.2	0.355	1.0
Esfenvalerate			0.031	*
Etoxazole	0.039	*	0.050	0.1
Fenoxycarb	0.049	*		
Fenpropathrin	0.576	*		
Fluvalinate	0.225	0.1	0.187	*

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Broadleaf Evergreens		Coniferous Evergreens	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Insecticides (continued)				
Hexythiazonx	0.112	*	0.119	0.2
Imidacloprid	0.087	*	0.138	0.7
Lambda-cyhalothrin	0.037	*	0.051	8.3
Malathion	3.001	7.9	1.621	0.8
Methiocarb	0.667	*		
Oxydemeton-methyl			0.341	0.1
Permethrin			0.175	0.1
Petroleum distillate	9.933	35.9	13.058	43.1
Potassium salts	4.727	1.0		
Pyridine	0.080	*	0.111	*
Spinosad	0.148	*		
Spiromesifen	0.112	*	0.095	0.4
Fungicides				
Azoxystrobin	0.280	1.1	0.588	2.0
Captan			1.863	0.3
Chlorothalonil	3.042	34.9	1.863	17.7
Copper hydroxide	1.228	7.7	0.992	1.0
Copper resinate	0.142	0.5	0.110	*
Copper sulfate	0.108	*		
Etridiazole			3.403	0.5
Fenhexamid			0.622	*
Fludioxonil	0.578	1.5	3.099	4.2
Fosetyl-al	2.650	6.8	1.874	0.5
Iprodione	0.810	1.3	0.451	0.1
Mancozeb	1.182	6.1	1.642	9.4
Mefenoxam	0.489	3.5	0.377	0.3
Myclobutanil			0.079	*
Propiconazole	0.149	0.3	0.098	0.2
Streptomycin	0.168	*		
Thiophanate	0.672	10.0	0.366	1.7
Thiophanate-methyl	1.822	0.9	1.211	4.4
Triadimefon	0.195	0.3	0.224	*
Trifloxystrobin	0.061	0.1		
Other Chemicals				
Hydrogen peroxide			0.900	0.3
Metaldehyde	1.685	3.2	1.195	0.2

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Deciduous Shade Trees		Deciduous Flowering Trees	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Herbicides				
Clethodim	0.135	0.1		
Flumioxazin	0.367	1.3		
Glyphosate iso. salt	0.968	25.8	1.612	11.6
Isoxaben	0.363	0.9	0.626	*
Oryzalin	1.503	3.5	1.441	1.6
Oxadiazon	0.916	0.2		
Oxyfluorfen	0.935	4.2	1.725	3.1
Pendimethalin	0.506	1.6	1.051	1.0
Prodiamine	0.611	1.5	0.715	4.0
Simazine	1.144	1.0		
Trifluralin	1.587	1.4	1.552	*
Insecticides				
Abamectin	0.004	*	0.011	*
Acephate	0.485	3.3	0.753	4.8
Acetamiprid	0.080	*		
Bifenazate	0.122	0.1	0.300	0.3
Bifenthrin	0.083	0.7	0.012	0.3
Carbaryl	0.592	3.6	0.776	0.5
Chlorpyrifos	0.459	1.8	1.019	2.4
Cyfluthrin	0.055	0.2	0.044	0.1
Diazinon	0.577	1.5	0.485	*
Dimethoate	1.407	6.3		
Endosulfan			0.135	*
Etoxazole			0.103	*
Fenoxycarb	0.085	*		
Hexythiazonx	0.159	0.1		
Imidacloprid	0.368	1.0	0.136	*
Malathion	0.625	2.3	1.111	0.5
Permethrin	0.141	*		
Petroleum distillate	10.636	13.1	13.278	58.3
Petroleum oil	6.299	7.5		
Potassium salts	3.347	0.4		
Spinosad	0.128	*	0.089	0.1

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Deciduous Shade Trees		Deciduous Flowering Trees	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Fungicides				
Azoxystrobin	0.480	0.4	0.170	0.1
Chlorothalonil	4.066	39.8	5.959	10.1
Copper hydroxide	0.686	2.2	1.892	3.2
Copper sulfate	0.412	0.2		
Fosetyl-al	1.486	0.1		
Iprodione	3.187	0.1	0.507	0.1
Mancozeb	0.934	2.2	1.738	2.3
Mefenoxam	0.390	0.1	0.460	3.7
Myclobutanil	0.377	0.1	0.254	0.1
Propiconazole	0.049	0.1	0.117	0.1
Streptomycin	0.201	0.1		
Thiophanate	0.923	9.9	0.621	2.8
Thiophanate-methyl	0.500	1.2	0.502	0.2
Triadimefon			0.561	0.3

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Deciduous Shrubs		Fruit and Nut Plants	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Herbicides				
Dichlobenil	1.936	0.7		
Diquat dibromide	0.509	0.5		
Flumioxazin	0.252	0.8		
Glyphosate iso. salt	0.671	4.9	0.710	3.9
Isoxaben	0.360	5.0		
Napropamide	2.095	3.3		
Oryzalin	1.872	7.5	2.562	2.5
Oxadiazon	2.339	1.8	2.893	0.2
Oxyfluorfen	1.916	44.7	0.654	1.1
Pendimethalin	1.027	23.3		
Prodiamine	0.216	1.2		
Trifluralin	1.493	2.5		
Insecticides				
Abamectin	0.010	0.1	0.009	*
Acephate	0.516	3.9	0.464	0.3
Acetamiprid	0.059	*		
Azadirachtin	0.024	*		
Bifenazate	0.146	0.4		
Bifenthrin	0.082	0.3		
Carbaryl	0.896	0.6	1.249	1.0
Chlorfenapyr	0.253	*		
Chlorpyrifos	1.569	1.5	0.855	1.0
Cyfluthrin	0.047	*		
Dinotefuran	0.055	0.1		
Endosulfan	1.635	0.7		
Etoxazole	0.072	0.6		
Fenpropathrin	0.172	*		
Fluvalinate	0.338	*		
Hexythiazonx	0.132	0.4		
Imidacloprid	0.207	0.2	0.139	0.5
Lambda-cyhalothrin	0.019	*		
Malathion	0.656	0.8	0.984	0.1
Methiocarb	0.949	*		
Petroleum distillate	10.688	80.0	16.710	13.8
Phosmet			0.194	0.3
Piperonyl butoxide	0.121	0.1		
Potassium salts	25.075	39.2		
Pymetrozine	0.097	0.4		
Pyrethrins	0.052	*		
Pyridaben	0.179	0.2		
Pyridine	0.037	0.1		

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Deciduous Shrubs		Fruit and Nut Plants	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Insecticides (continued)				
Spinosad	0.070	*	0.119	0.3
Spiromesifen	0.090	*		
Thiamethoxam	0.081	0.1		
Fungicides				
Azoxystrobin	0.201	3.5		
Captan			0.633	5.8
Chlorothalonil	3.561	25.1	3.080	0.6
Copper hydroxide	1.045	1.4	1.054	1.4
Copper resinate	0.135	0.5		
Copper sulfate	0.129	0.1		
Dimethomorph	0.593	9.5		
Fludioxonil	2.236	0.9		
Fosetyl-al	1.388	62.9	4.325	8.4
Iprodione	0.267	1.6		
Mancozeb	0.688	63.1		
Mefenoxam	0.510	58.8		
Myclobutanil	0.087	1.4		
PCNB	4.795	0.3		
Propiconazole	0.146	0.7		
Sulfur			5.028	0.2
Thiophanate	1.551	1.6		
Thiophanate-methyl	0.705	1.4		
Trifloxystrobin	0.055	2.0		
Other Chemicals				
Hydrogen peroxide	1.572	0.2		
Iron phosphate	0.221	*		
Metaldehyde	3.867	979.8	0.379	*

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Christmas Trees		Palms	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Herbicides				
2,4-D, dimeth. salt	1.071	1.7		
Atrazine	2.451	12.7		
Clopyralid	0.147	0.3		
Fluazifop-P-butyl	0.369	0.5		
Flufenacet	0.578	5.4		
Flumioxazin	0.260	1.1		
Glyphosate iso. salt	0.903	48.8	2.000	51.8
Hexazinone	0.828	19.5		
Isoxaben			0.611	0.2
Metribuzin	0.144	1.3		
Oryzalin	1.470	0.4		
Oxadiazon			1.046	0.1
Oxyfluorfen	0.566	8.2		
Pendimethalin	1.587	2.4		
Prodiamine			0.940	0.4
Simazine	1.408	14.7		
Triclopyr	0.606	0.4		
Insecticides				
Abamectin			0.009	0.1
Acephate	0.609	1.5	0.927	13.6
Bifenazate			0.250	0.1
Bifenthrin	0.063	0.1	0.111	*
Carbaryl	0.966	15.2	1.993	18.0
Chlorpyrifos	0.920	21.1	0.620	1.9
Cyfluthrin	0.049	0.4	0.036	*
Diazinon	0.807	0.6	2.002	0.2
Diflubenzuron	0.037	*		
Dimethoate	0.804	6.3	0.490	0.2
Dinotefuran			0.163	0.1
Endosulfan	0.708	3.4		
Esfenvalerate	0.034	*		
Hexythiazonx	0.102	0.1	0.077	0.1
Imidacloprid			0.153	0.1
Malathion	1.187	6.1	1.103	1.2
Methiocarb			0.574	*
Oxydemeton-methyl	0.455	1.4		
Petroleum distillate	6.850	3.6	11.573	8.6
Potassium salts			4.155	1.0
Pyridine			0.083	*
Spinosad			0.048	0.4
Tebufenozide	0.086	*		

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Christmas Trees		Palms	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Fungicides				
Azoxystrobin			0.283	0.1
Chlorothalonil	1.615	53.3	2.414	60.2
Copper hydroxide			0.985	12.8
Fosetyl-al			3.828	10.8
Iprodione			0.338	0.9
Mancozeb	1.380	5.5	1.467	32.1
Mefenoxam			1.369	6.2
Propiconazole			0.119	0.1
Thiophanate			0.774	16.1
Thiophanate-methyl			0.350	0.1
Other Chemicals				
Metaldehyde			1.409	0.1

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Ornamental Grasses		Other Woody Ornamentals and Vines	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Herbicides				
Flumioxazin			0.247	0.2
Glyphosate iso. salt	2.052	1.2	1.427	2.3
Isoxaben	0.775	0.4	0.661	0.1
Oryzalin			2.472	1.1
Oxadiazon	1.841	0.1	2.438	0.3
Oxyfluorfen			1.538	2.1
Pendimethalin	1.035	0.1	0.907	1.5
Prodiamine			0.769	0.1
Trifluralin			2.686	0.3
Insecticides				
Abamectin			0.006	*
Acephate	1.228	0.2	0.750	17.7
Acetamiprid			0.108	*
Bifenazate			0.254	0.2
Bifenthrin			0.087	0.4
Carbaryl			0.728	6.5
Chlorpyrifos			0.906	0.7
Cyfluthrin			0.041	*
Diazinon			1.487	0.2
Dimethoate			0.559	2.1
Dinotefuran			0.133	0.1
Endosulfan			0.972	1.2
Etoxazole			0.049	*
Fluvalinate			0.143	0.1
Hexythiazonx			0.080	*
Imidacloprid			0.131	0.1
Malathion			1.092	3.5
Methiocarb			0.625	*
Petroleum distillate			7.669	2.7
Potassium salts			3.262	0.8
Pyridaben			0.322	*
Pyridine			0.080	*
Spinosad			0.134	0.2
Thiamethoxam			0.063	0.6

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Ornamental Grasses		Other Woody Ornamentals and Vines	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Fungicides				
Azoxystrobin			0.256	0.1
Chlorothalonil	1.479	0.8	1.304	14.6
Copper hydroxide			0.585	16.3
Copper resinate			0.183	0.2
Copper sulfate			0.072	*
Etridiazole			3.605	0.2
Fludioxonil			0.623	0.4
Fosetyl-al			2.065	3.6
Iprodione			1.134	1.2
Mancozeb			1.207	19.7
Mefenoxam	0.458	0.1	0.275	0.7
Propiconazole			0.188	*
Streptomycin			0.290	0.2
Thiophanate	14.855	2.3	0.425	2.9
Thiophanate-methyl	2.586	0.8	0.610	4.6
Trifloxystrobin			0.062	*
Other Chemicals				
Alk. dim. benzyl 60%			0.190	*
Alk. dim. eth. benz.			0.190	*
Daminozide			4.523	*
Metaldehyde			1.148	1.4
Paclobutrazol			0.388	*

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	All Floriculture		Cut Flowers	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Herbicides				
Clethodim	0.227	*		
DCPA	6.226	2.6		
Diquat dibromide	0.588	2.4	0.622	*
Diuron	5.749	0.3		
Flumioxazin	0.240	1.1		
Glufosinate-ammonium	0.585	0.3		
Glyphosate iso. salt	1.841	26.3	0.687	1.9
Halosulfuron	0.034	*		
Isoxaben	0.657	2.7	0.854	0.4
Linuron	0.672	*	0.733	*
Napropamide	4.109	2.1		
Oryzalin	1.944	4.0	2.942	1.5
Oxadiazon	1.816	4.1	1.512	0.1
Oxyfluorfen	1.339	2.9		
Paraquat	0.898	*		
Pendimethalin	1.168	2.3		
Prodiamine	0.591	3.2		
S-Metolachlor	1.736	0.3		
Simazine	1.663	0.3		
Sulfosulfuron	0.060	0.1		
Trifluralin	1.896	7.6	0.820	1.3
Insecticides				
Abamectin	0.009	0.4	0.012	*
Acephate	0.708	66.6	0.805	5.2
Acetamiprid	0.201	0.5	0.152	0.1
Azadirachtin	0.030	0.2	0.033	0.1
Beauveria bassiana	0.453	0.6	0.393	0.3
Bendiocarb	0.581	*		
Bifenazate	0.265	1.4	0.482	0.4
Bifenthrin	0.096	1.4	0.142	*
Buprofezin	0.567	0.2	0.661	0.1
Carbaryl	1.154	34.4		
Chlorfenapyr	0.095	0.1	0.082	*
Chlorpyrifos	0.581	34.5	0.584	2.1
Cinnamaldehyde	0.891	*		
Clofentezine	0.097	0.1		
Clothianidin	0.295	*		
Cyfluthrin	0.202	3.0	0.013	*
Cyromazine	0.326	1.1	0.262	0.7
Deltamethrin	0.075	*		

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	All Floriculture		Cut Flowers	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Insecticides (continued)				
Diazinon	0.753	6.4	0.950	0.3
Dicofol	0.539	2.6		
Dienochlor	0.484	0.1		
Diflubenzuron	0.072	1.3	0.166	*
Dimethoate	0.906	5.6	0.411	0.2
Dinotefuran	0.178	0.7	0.128	0.1
Endosulfan	0.717	18.2		
Esfenvalerate	0.029	*		
Etoxazole	0.047	0.1	0.091	*
Fenbutatin-oxide	0.481	2.2		
Fenoxycarb	0.023	*		
Fenpropathrin	0.222	0.3		
Fenpyroximate	0.089	*	0.072	*
Flonicamid	0.073	*	0.072	*
Fluvalinate	0.156	0.8	0.131	0.1
Hexythiazonx	0.112	0.5	0.112	*
Hydramethylnon	0.007	*		
Imidacloprid	0.113	1.7	0.048	0.1
Jojoba oil	5.008	0.8		
Kinoprene	0.712	0.1		
Lambda-cyhalothrin	0.045	*	0.037	*
Malathion	1.609	3.9	1.071	0.4
Methidathion	0.501	1.8		
Methiocarb	0.943	3.5	0.970	0.3
Methomyl	0.668	0.1		
Naled	0.966	0.2		
Neem oil, clar. hyd.	3.485	7.4	7.361	0.2
Novaluron	0.062	0.1	0.096	*
Octacide-264	0.107	*		
Oxamyl	5.001	*		
Permethrin	0.134	6.5	0.183	0.3
Petroleum distillate	13.263	51.6	6.840	3.1
Piperonyl butoxide	0.265	0.6	0.244	0.2
Potassium salts	3.284	27.2	5.820	2.3
Pymetrozine	0.158	1.1	0.158	0.7
Pyrethrins	0.016	0.1	0.025	*
Pyridaben	0.290	0.3	0.324	*
Pyridine	0.098	0.5	0.097	0.1
Rotenone	0.006	*		
S-Kinoprene	0.493	0.2		
Spinosad	0.105	2.6	0.104	0.7

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	All Floriculture		Cut Flowers	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Insecticides (continued)				
Spiromesifen	0.136	0.1	0.141	*
Thiamethoxam	0.046	0.3	0.071	*
Fungicides				
Azoxystrobin	0.136	1.5	0.075	0.4
Butanone	0.145	*		
Calcium polysulfide	0.430	*		
Captan	1.384	6.4	1.952	3.6
Chloroneb	8.605	1.4		
Chlorothalonil	1.686	68.4	1.068	9.6
Copper hydroxide	0.717	59.5	0.641	1.4
Copper resinate	0.148	0.3		
Copper sulfate	0.090	0.2	0.078	*
Dimethomorph	0.301	0.6	0.258	0.3
Etridiazole	3.590	22.1	1.083	0.1
Fenarimol	0.068	0.1	0.065	0.1
Fenhexamid	0.476	3.2	0.534	1.4
Fludioxonil	0.877	8.1	0.179	0.2
Flutolanil	1.271	0.1		
Fosetyl-al	2.796	22.0	1.784	2.4
Iprodione	0.809	8.9	0.768	3.3
Kresoxim-methyl	0.080	*	0.089	*
Mancozeb	1.464	477.6	0.947	6.8
Maneb	1.432	0.6		
Mefenoxam	0.394	4.6	0.380	0.5
Metalaxyl	0.069	0.3	0.249	*
Myclobutanil	0.136	1.0	0.124	0.7
PCNB	2.409	6.9	2.366	1.2
Phosphorous acid	3.742	3.0		
Piperalin	0.988	2.3	0.941	1.8
Potassium bicarbon.	2.295	1.7	2.265	1.5
Propiconazole	0.075	0.8	0.099	0.1
Streptomycin	0.131	0.2		
Sulfur	3.225	27.9	4.226	19.9
Tebuconazole	0.234	8.9		
Thiabendazole (TBZ)	1.053	0.7		
Thiophanate	0.568	37.6	0.341	0.1
Thiophanate-methyl	2.105	106.4	0.581	2.0
Triadimefon	0.131	0.1	0.113	*
Trifloxystrobin	0.129	0.6	0.070	0.2
Triforine	0.198	*		

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	All Floriculture		Cut Flowers	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Fungicides (continued)				
Vinclozolin	0.468	*		
Other Chemicals				
Acequinocyl	0.142	0.1	0.141	*
Alk. dim. benzyl 50%	0.091	*		
Alk. dim. benzyl 60%	0.356	0.2		
Alk. dim. eth. benz.	0.368	0.2		
Alk. dim. ethbz. am.	0.358	*		
Ancymidol	0.003	*		
Benzyladenine	0.033	*		
Chlormequat chloride	1.753	2.9		
Chloropicrin	212.067	179.0	113.584	65.0
Daminozide	3.020	12.9	4.806	0.7
Diphacinone	0.002	*		
Ethephon	0.577	0.3		
Farnesol	([1])	*		
Gibberellic acid	0.141	0.1	0.078	*
Gibberellins A4A7	0.033	*		
Hydrogen peroxide	1.470	2.5		
Indolebutyric acid	0.036	*		
Iron phosphate	0.205	0.1		
Metaldehyde	1.418	5.7	1.227	0.2
Methyl bromide	205.148	177.2	236.636	137.0
Nerolidol	([1])	*		
Paclobutrazol	0.024	0.3	0.026	*
Pelargonic acid	8.103	0.3		
Uniconazole	0.012	*		

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Flowering Plants		Bedding Plants	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Herbicides				
Diquat dibromide	0.629	1.8	0.491	0.5
Flumioxazin	0.242	0.1		
Glyphosate iso. salt	1.830	3.4	2.231	18.0
Isoxaben	0.654	1.4	0.679	0.3
Oryzalin	2.390	1.5	0.904	0.7
Oxadiazon	2.054	1.5	1.489	0.8
Oxyfluorfen	1.678	1.7	1.272	0.4
Pendimethalin	1.091	0.9	1.602	1.0
Prodiamine	0.515	1.3	0.475	1.1
Trifluralin	2.897	3.5	2.658	0.9
Insecticides				
Abamectin	0.010	0.1	0.012	*
Acephate	1.067	6.6	1.001	3.7
Acetamiprid	0.281	0.3	0.176	0.1
Azadirachtin	0.039	*	0.024	*
Beauveria bassiana	0.539	0.1	0.592	0.1
Bifenazate	0.364	0.4	0.287	0.1
Bifenthrin	0.134	0.4	0.063	0.2
Buprofezin	0.640	0.1	0.281	*
Carbaryl	1.199	0.5	0.334	*
Chlorfenapyr	0.124	*	0.123	*
Chlorpyrifos	1.189	1.3	0.829	0.7
Clofentezine	0.130	*	0.135	*
Clothianidin	0.271	*	0.608	*
Cyfluthrin	0.133	0.1	0.087	0.2
Cyromazine	0.846	0.4	0.753	*
Diazinon	0.896	0.5		
Dicofol			1.217	*
Dienochlor	0.361	0.1		
Diflubenzuron	0.485	0.1	0.220	0.1
Dimethoate	0.701	*		
Dinotefuran	0.244	0.3	0.295	0.1
Endosulfan	0.834	2.1	1.005	0.5
Etoxazole	0.034	*	0.072	*
Fenoxycarb	0.014	*	0.078	*
Fenpropathrin	0.291	*	0.248	0.1
Fenpyroximate	0.104	*	0.116	*
Flonicamid	0.090	*	0.058	*
Fluvalinate	0.186	0.2	0.287	0.1
Hexythiazonx	0.080	0.1	0.089	*

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Flowering Plants		Bedding Plants	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Insecticides (continued)				
Imidacloprid	0.129	0.4	0.143	0.2
Kinoprene			0.718	*
Lambda-cyhalothrin	0.055	*		
Malathion	1.886	1.2	2.383	0.9
Methiocarb	2.013	1.4	0.917	0.3
Neem oil, clar. hyd.	4.365	1.1	5.768	0.3
Novaluron	0.072	*	0.149	*
Octacide-264			0.111	*
Permethrin	0.330	0.3	0.318	0.4
Petroleum distillate	17.063	22.4	11.953	6.6
Piperonyl butoxide	0.469	*	0.284	0.3
Potassium salts	3.608	1.2	2.525	1.1
Pymetrozine	0.214	0.1	0.172	0.1
Pyrethrins	0.016	*	0.013	*
Pyridaben	0.382	0.1	0.308	*
Pyridine	0.100	0.1	0.143	0.1
S-Kinoprene	0.546	0.1	0.490	0.1
Spinosad	0.161	0.8	0.109	0.3
Spiromesifen	0.167	*	0.072	*
Thiamethoxam	0.189	0.1	0.025	0.1
Fungicides				
Azoxystrobin	0.161	0.3	0.220	0.2
Butanone	0.141	*	0.158	*
Captan	1.393	0.1	1.168	0.1
Chlorothalonil	2.201	5.4	3.554	4.8
Copper hydroxide	0.522	1.0	0.894	1.1
Copper resinate	0.161	*	0.178	*
Copper sulfate	0.095	*	0.090	*
Dimethomorph	0.637	0.1	0.385	0.1
Etridiazole	1.672	1.2	2.234	2.1
Fenarimol	0.110	*		
Fenhexamid	0.784	0.6	0.333	1.0
Fludioxonil	0.811	0.5	0.679	0.7
Fosetyl-al	4.125	7.9	2.528	4.4
Iprodione	0.993	1.0	1.338	2.0
Kresoxim-methyl	0.080	*		
Mancozeb	1.214	4.9	1.930	2.2
Mefenoxam	0.312	1.4	0.529	1.4
Metalaxyl	0.169	0.1	0.349	0.1

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Flowering Plants		Bedding Plants	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Fungicides (continued)				
Myclobutanil	0.212	0.1	0.141	0.1
PCNB	2.570	1.4	2.383	0.7
Phosphorous acid			3.052	0.2
Piperalin	1.562	0.5	0.376	*
Potassium bicarbon.	3.004	0.1	2.282	*
Propiconazole	0.165	0.1	0.199	*
Streptomycin	0.287	0.1	0.062	*
Sulfur	2.201	2.8		
Thiabendazole (TBZ)	2.134	0.3		
Thiophanate	1.874	4.4	1.119	2.0
Thiophanate-methyl	1.456	6.3	2.261	6.9
Triadimefon	0.391	*	0.397	*
Trifloxystrobin	0.102	0.1	0.666	0.3
Triforine	0.098	*		
Vinclozolin			0.304	*
Other Chemicals				
Acequinocyl	0.064	*		
Alk. dim. benzyl 60%	0.285	*	0.767	0.1
Alk. dim. eth. benz.	0.331	*		
Ancymidol	0.009	*	0.002	*
Benzyladenine	0.034	*		
Chlormequat chloride	2.082	1.8	1.093	0.6
Daminozide	4.902	5.2	2.410	5.7
Diphacinone	0.002	*		
Ethephon	0.647	0.2	0.453	0.1
Gibberellic acid	0.241	*		
Gibberellins A4A7	0.034	*		
Hydrogen peroxide	1.417	0.3	0.846	0.2
Metaldehyde	1.587	3.9	1.348	1.0
Paclobutrazol	0.044	0.1	0.036	0.1
Uniconazole	0.010	*	0.016	*

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Foliage Plants		Floriculture Propagation Material	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Herbicides				
Glyphosate iso. salt	2.038	2.4		
Isoxaben	0.513	0.4		
Oxyfluorfen	1.446	0.6		
Trifluralin	2.267	1.8		
Insecticides				
Abamectin	0.008	0.2	0.014	*
Acephate	0.667	48.3	0.981	*
Acetamiprid	0.143	0.1		
Azadirachtin	0.020	*		
Bifenazate	0.191	0.3		
Bifenthrin	0.090	0.5	0.075	*
Carbaryl	0.812	7.4		
Chlorfenapyr	0.088	*		
Chlorpyrifos	0.726	7.3		
Clofentezine	0.089	*		
Cyfluthrin	0.052	0.1	0.047	*
Diazinon	0.734	5.6		
Dicofol	0.522	1.4		
Diflubenzuron	0.227	*		
Dimethoate	1.227	3.6		
Dinotefuran	0.117	0.2		
Endosulfan	0.926	9.6		
Etoxazole	0.045	*		
Fenbutatin-oxide	0.907	1.3		
Fenpropathrin	0.237	0.1		
Fenpyroximate	0.059	*		
Fluvalinate	0.144	0.3		
Hexythiazonx	0.141	0.3		
Imidacloprid	0.127	0.8		
Malathion	1.483	1.2		
Methidathion	0.501	1.8		
Methiocarb	0.570	1.2	1.396	0.2
Naled	0.866	0.1		
Neem oil, clar. hyd.	3.169	4.3		
Novaluron	0.027	*		
Permethrin	0.298	0.1		
Petroleum distillate	8.488	5.9		
Potassium salts	3.107	21.7	2.809	*
Pymetrozine	0.091	0.1		
Pyridaben	0.231	0.1		
Pyridine	0.085	0.3		

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Foliage Plants		Floriculture Propagation Material	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Insecticides (continued)				
Spinosad	0.095	0.1	0.095	*
Spiromesifen	0.170	*		
Thiamethoxam	0.053	*		
Fungicides				
Azoxystrobin	0.229	0.4		
Captan	1.032	2.2		
Chlorothalonil	2.612	27.9	1.937	2.2
Copper hydroxide	0.724	55.6	0.760	0.1
Copper resinate	0.166	0.2	0.068	*
Copper sulfate	0.092	0.1		
Etridiazole	4.166	18.5		
Fenhexamid	0.863	0.1		
Fludioxonil	0.986	6.4		
Fosetyl-al	2.547	6.6		
Iprodione	0.617	2.2	0.465	0.1
Mancozeb	1.247	124.2	0.791	0.3
Mefenoxam	0.371	1.1		
Metalaxyl	0.016	*		
Myclobutanil	0.351	*		
PCNB	3.287	3.2		
Propiconazole	0.034	0.2	0.252	0.1
Streptomycin	0.108	0.1		
Thiabendazole (TBZ)	0.620	0.3		
Thiophanate	1.086	15.6	2.825	0.2
Thiophanate-methyl	4.664	31.7	1.982	0.3
Trifloxystrobin	0.091	*		
Other Chemicals				
Alk. dim. benzyl 60%	0.179	0.1		
Chlormequat chloride	1.575	0.3	2.462	0.3
Daminozide	4.602	0.3		
Ethephon	2.788	*	0.391	*
Gibberellic acid	0.261	*		
Hydrogen peroxide	1.610	2.0		
Metaldehyde	0.616	0.2		
Paclobutrazol	([1])	*	0.031	*

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Cut Cultivated Greens		Herbaceous Perennials	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Herbicides				
Glyphosate iso. salt	1.383	0.4		
Oryzalin			1.886	0.1
Oxyfluorfen			2.163	*
Pendimethalin			1.158	*
Insecticides				
Abamectin	0.011	*	0.006	*
Acephate	0.751	2.6	0.120	0.2
Azadirachtin			0.009	*
Bifenazate	0.181	0.3		
Bifenthrin	0.140	0.2	0.171	*
Carbaryl	1.314	26.3	2.848	0.1
Chlorfenapyr			0.063	*
Chlorpyrifos	0.526	22.9		
Cyfluthrin	0.421	2.4	0.031	*
Cyromazine			0.065	*
Dicofol	0.566	1.1		
Diflubenzuron	0.063	1.1		
Dimethoate	0.635	1.7		
Dinotefuran			0.225	*
Endosulfan	0.495	5.9		
Etoxazole			0.027	*
Fenbutatin-oxide	0.282	0.9		
Fluvalinate			0.047	*
Hexythiazonx			0.175	*
Imidacloprid			0.089	0.1
Permethrin	0.122	5.4		
Petroleum distillate	15.167	13.4		
Potassium salts			7.530	0.8
Pymetrozine			0.154	*
Pyridine			0.132	*
Spinosad	0.075	0.6	0.038	*
Fungicides				
Azoxystrobin			0.278	0.1
Butanone			0.149	*
Chlorothalonil	1.144	17.9	2.176	0.6
Dimethomorph			0.616	*
Etridiazole			1.277	*
Fenhexamid			0.692	*
Fludioxonil			0.146	*

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Cut Cultivated Greens		Herbaceous Perennials	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*	*Pounds Per Acre*	*1,000 Pounds*
Fungicides (continued)				
Fosetyl-al			3.583	0.3
Mancozeb	1.585	339.0	1.035	0.3
Mefenoxam			0.282	*
Myclobutanil			0.610	*
PCNB			2.896	0.1
Phosphorous acid			0.946	0.1
Propiconazole	0.068	0.1	0.064	*
Tebuconazole	0.234	8.9		
Thiophanate	0.322	15.1	0.469	0.2
Thiophanate-methyl	1.780	59.1	1.677	0.2
Trifloxystrobin			0.195	*
Other Chemicals				
Daminozide			0.892	0.4
Hydrogen peroxide			0.900	*
Metaldehyde			1.567	0.4

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Non-production Areas	
	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*
Herbicides		
2,4-D, BEE	0.591	0.7
2,4-D, dimeth. salt	0.276	0.2
Atrazine	1.982	0.8
Butoxyethyl triclopy	0.296	0.3
Clethodim	0.171	*
Clopyralid	0.061	*
Dicamba, dimet. salt	0.133	*
Dichlobenil	3.487	0.2
Diquat dibromide	0.582	1.1
Diuron	0.761	0.6
Flumioxazin	0.256	44.6
Glufosinate-ammonium	0.592	2.9
Glyphosate iso. salt	1.227	325.3
Hexazinone	1.269	1.0
Isoxaben	0.772	0.4
Oryzalin	1.662	4.1
Oxadiazon	3.227	1.2
Oxyfluorfen	1.017	2.8
Paraquat	0.464	0.2
Pendimethalin	2.746	17.3
Prodiamine	0.988	35.3
Simazine	1.355	2.3
Sulfosate	2.060	1.7
Trifluralin	3.477	0.7
Insecticides		
Acephate	0.845	1.5
Bifenthrin	0.011	0.1
Chlorpyrifos	0.660	3.1
Cyfluthrin	0.058	*
Diazinon	0.636	*
Fenoxycarb	0.011	*
Hydramethylnon	0.008	*
Imidacloprid	0.695	0.2
Fungicides		
Chlorothalonil	0.528	0.5
Copper hydroxide	2.088	19.7
Mancozeb	0.587	0.7
Mefenoxam	0.104	*
Propiconazole	0.151	0.2

See footnote(s) at end of table.

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Active Ingredient
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Non-production Areas	
	Rate per Acre	Total Applied
	Pounds Per Acre	*1,000 Pounds*
Other Chemicals		
Alk. dim. benzyl 60%	0.314	0.8
Chloropicrin	104.351	97.9
Diphacinone	([1])	*
Hydrogen peroxide	2.379	0.5
Metaldehyde	0.655	0.6
Methyl bromide	220.366	212.8
Pelargonic acid	4.350	19.7
Sodium hypochlorite	1.747	0.3

* Total applied is less than 50 pounds
[1] Rate per acre is less than 0.0005 pounds.

All Nursery and Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
(Meth)propionic acid				*			*
2,4-D				1	*		*
2,4-D, 2-EHE				1		*	*
2,4-D, BEE		*	*	5	*		1
2,4-D, dieth. salt			*				*
2,4-D, dimeth. salt	*		1	2		1	1
2,4-D, triiso. salt	*						*
2,4-DP, dimeth. salt	*			*	5		1
Acifluorfen, sodium	*						*
Alachlor						4	*
Amitrole				*			*
Ammonium benzadox			1		*		*
Asulam, sodium salt				*			*
Atrazine		*	4	4	6	*	2
Benefin	1	*		*		4	*
Bensulide	*						*
Bentazon	*		*				*
Bromacil	*						*
Bromoxynil	*		*	*			*
Bromoxynil heptan.	1			*			*
Bromoxynil octanoate	1			*			*
Butoxyethyl triclopy	*	*	*	5	*		1
Carfentrazone-ethyl	*			*			*
Chlorimuron-ethyl						*	*
Chlorsulfuron	*				*		*
Clethodim	1		1	11	*	*	2
Clomazone				*			*
Clopyralid	*		2	1	4	*	1
DCPA	*	*				*	*
Dicamba		*		*			*
Dicamba, dimet. salt	*	*					*
Dicamba, sodium salt						*	*
Dichlobenil	*	*	2	3	1		1
Diflufenzopyr-sodium						*	*
Diquat dibromide	9	*		*	*	4	2
Dithiopyr	*	*				*	*
Diuron	1	*		4			1
Ethalfluralin				*			*
Fluazifop-P-butyl	*	*	2		1	1	1
Flufenacet				3		1	1
Flumetsulam				*			*
Flumioxazin	5	*	4	3	9	6	4
Fomesafen						*	*
Glufosinate-ammonium	*	*	*	1	*	*	*

See footnote(s) at end of table.

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All Nursery and Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides (continued)							
Glyphosate	*			*			*
Glyphosate iso. salt	22	26	32	48	35	21	31
Glyphosate pot. salt	1						*
Halosulfuron	1			*	*		*
Hexazinone	*		4	19			4
Imazamethabenz	*						*
Imazapyr, iso. salt						*	*
Imazethapyr		*					*
Imazethapyr, ammon.			*				*
Isoxaben	9	6	3	15	9	7	8
Lactofen						*	*
Linuron	1		*	*			*
MCPA, 2-ethylhexyl				*		4	*
MCPA, dimethyl. salt	*	*					*
MCPP, DMA salt	*	*		*			*
MCPP-P, DMA Salt	*						*
MCPP-P-potassium	*						*
MSMA	*	*					*
Metolachlor	*		*	1	*		*
Metribuzin				3		1	1
Napropamide	2	2	*	4			1
Norflurazon	*	3		*		*	1
Oryzalin	9	5	8	18	3	7	8
Oxadiazon	8	3	1	5		16	4
Oxyfluorfen	8	5	10	20	3	7	9
Paraquat	1		1	1		*	*
Pebulate	*						*
Pendimethalin	6	2	2	2	9	7	4
Prodiamine	4	4	1	9	3	6	4
Prometryn	*						*
Pronamide				*			*
Propanil						4	*
Propazine				*			*
S-Metolachlor	*		1	1	2	1	1
Sethoxydim	1	*	1	*	*	1	1
Simazine	2	*	8	5	13	1	5
Sulfentrazone				*			*
Sulfometuron methyl	*	*	1	8	1	*	2
Sulfosate	*		*		*		*
Sulfosulfuron		1	1	*	1		1
Tebuthiuron	*						*
Terbacil			*				*
Thiazopyr	*						*
Thifensulfuron					*	*	*

See footnote(s) at end of table.

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All Nursery and Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides (continued)							
Triasulfuron						*	*
Tribenuron-methyl					*		*
Triclopyr	*		*	1	*	*	*
Triethylamine triclo	*						*
Trifluralin	6	2	2	4	2	6	3
Vernolate		*					*
Insecticides							
Abamectin	43	29	25	10	19	21	25
Acephate	47	45	26	25	16	35	33
Acetamiprid	17	3	5	3	2	3	5
Aldicarb					*	*	*
Aluminum phosphide	1						*
Azadirachtin	16	1	8	2	4	7	5
Azinphos-methyl			1	*		2	*
Beauveria bassiana	3	*	2	1	3	*	1
Bendiocarb	*	1		1	1	*	1
Benzoic acid	1	*				*	*
Beta-cyfluthrin	*						*
Bifenazate	17	10	7	7	6	16	10
Bifenthrin	16	16	14	8	15	11	14
Bt subsp israelensis	4	*	1	3	2	17	3
Bt subsp. aizawai	6	*			*		1
Bt subsp. kurstaki	11	7	1	2	1	33	7
Buprofezin	6	*		*	1	*	1
Cacodylic acid, sodi		*					*
Canola oil	*			*	1		*
Carbaryl	4	28	20	3	20	9	17
Carbofuran		*		*			*
Chitin				*			*
Chlorfenapyr	7	3	3	*	2	5	3
Chlorpyrifos	27	13	19	21	17	36	20
Cinnamaldehyde	*		*	*	1	*	*
Clofentezine	*	2	3	3	1	1	2
Clothianidin		*	3	*		*	1
Cryolite	1						*
Cyfluthrin	13	7	13	8	9	6	9
Cypermethrin	*			*	*		*
Cyromazine	8	*	1	*	*	*	1
Deltamethrin	2	*					*
Diazinon	11	3	2	5	3	14	5
Dichlorvos	*		*	2	1		1
Dicofol	2	4	1	1	3	17	4
Dicrotophos		*				*	*

See footnote(s) at end of table.

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All Nursery and Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Dienochlor	4		1	*	1		1
Diflubenzuron	4	2	7	2	1	2	3
Dimethoate	3	15	1	3	12	18	9
Dinotefuran	17	5	2	2	8	23	8
Disulfoton	*	*	*	*		1	*
Emamectin benzoate	*						*
Endosulfan	*	9	5	9	6	6	6
Esfenvalerate	2	*	1	2	2	1	1
Ethoprop		*		1			*
Ethoxy sec. alcohols		*			*		*
Ethyl parathion	1			*			*
Etoxazole	11	4	2	2	1	6	4
Fenamiphos		*	*	*			*
Fenbutatin-oxide	1	3	1		*	6	2
Fenitrothion	*			*			*
Fenoxycarb	4	*	2	1	1	6	2
Fenpropathrin	6	2	8	1	1	5	3
Fenpyroximate	4	1	1	*	*	5	1
Fenvalerate			*	*			*
Fipronil				*			*
Flonicamid	3		*	1	1	4	1
Fluvalinate	15	6	4	2	1	2	5
Hexythiazonx	9	5	4	4	4	5	5
Hydramethylnon	4	1				2	1
Imidacloprid	30	15	23	8	26	35	21
Indoxacarb		*			*		*
Isofenphos		*					*
Jojoba oil	2			*			*
Kaolin	1	*		*			*
Kinoprene	3		*	*	1	4	1
Lambda-cyhalothrin	6		1	4	1	*	2
Lindane	*	*	*		1		*
Malathion	13	17	5	3	5	11	10
Methidathion	*	3	*			*	1
Methiocarb	11	2	3	2	1	5	3
Methomyl	2	1	4				1
Methoxychlor	*				1		*
Methyl parathion	*			*			*
Mevinphos	*						*
Myrothecium verruc.		*		*			*
Naled	1	1					*
Neem oil, clar. hyd.	4	4	*	*	1	18	3
Nicotine			*		1		*
Novaluron	4	1	2	*	2	*	1

See footnote(s) at end of table.

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All Nursery and Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Octacide-264	*	1	1	*	*		1
Oxamyl	*		1		*	*	*
Oxydemeton-methyl	*		*	2	8		2
Oxythioquinox	*	*	*	*			*
Permethrin	15	6	2	*	1	2	4
Petroleum distillate	21	10	3	8	5	19	10
Petroleum oil	*		1		4	21	3
Phenothrin					*		*
Phorate	*						*
Phosmet	*		4	1		17	2
Piperonyl butoxide	5	1	5	1	2	12	3
Potassium salts	13	5	3	4	7	23	7
Propargite	1			1			*
Pymetrozine	16	1	7	2	13	6	7
Pyrethrins	9	1	5	2	4	12	4
Pyridaben	6	2	4	1	1	6	3
Pyridine	13	5	4	2	4	15	6
Resmethrin	*		*		*		*
Rosemary oil				*			*
Rotenone	2			*	*		*
S-Kinoprene	3	1	4	2	2	1	2
S-Methoprene	*	*				*	*
Sabadilla	*						*
Sesame Oil		*			*		*
Silicon dioxide			*		*	*	*
Soybean oil						4	*
Spinosad	30	15	16	3	21	7	16
Spiromesifen	7	2	4	2	2	5	3
Sulfotepp			*		1		*
Tebufenozide				*		2	*
Thiamethoxam	9	1	4	1	2	5	3
Thiodicarb	*						*
Trichlorfon					*		*
Zeta-cypermethrin	*						*
Fungicides							
AQ-10 Biofungicide				*			*
Anilazine			*	*			*
Azoxystrobin	21	9	4	4	3	7	8
Bacillus pumilus	*						*
Bacillus subtilis	*		*		*		*
Bacillus subtilus	5	1	1	1	2	4	2
Bas copper zinc sulf				*			*
Basic copper sulfate	1	*		1			*

See footnote(s) at end of table.

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All Nursery and Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Benomyl	1		1	1	*	1	1
Borax decahydrate	*						*
Boscalid	2		*	*			*
Butanone	2	*	4	1	7	5	3
Calcium polysulfide	2	*	1	1	1		1
Captan	4	1	3	2	4	22	4
Chloroneb	*	*		*	*	*	*
Chlorothalonil	24	38	27	24	42	16	31
Copper (metallic)			*		*	16	1
Copper amm. complex	*	*					*
Copper chloride hyd.	*						*
Copper hydroxide	13	34	3	14	*	28	17
Copper octanoate	*						*
Copper oxide	*			*			*
Copper oxychlo. sul.	1						*
Copper oxychloride	1			1			*
Copper resinate	4	6	3	1	1	5	3
Copper sulfate	10	7	5	4	5	5	6
Cymoxanil	1	*		*	1		*
Cyprodinil	1			*			*
Dicloran	1				*		*
Dimethomorph	11	1	2	1	1	5	3
Dinocap	*					*	*
Dodine			*	1			*
Etridiazole	2	7	14	3	16	7	8
Famoxadone	1	*		*	1		*
Fenamidone	*						*
Fenarimol	3	*	1	1		*	1
Fenbuconazole				*		*	*
Fenhexamid	14	1	7	3	12	13	7
Ferbam		*					*
Fludioxonil	13	4	6	3	7	5	6
Flutolanil	1	1	*	*		4	1
Fosetyl-al	23	8	3	4	1	7	7
Iprodione	24	6	10	5	2	15	9
Kresoxim-methyl	2		2	*	*		1
Mancozeb	20	36	8	16	5	25	20
Maneb	3	*	1				1
Mefenoxam	29	16	14	8	11	18	15
Metalaxyl	6	3	2	4	3	1	3
Metiram		1					*
Milban	1						*
Mono-potassium salt		*		*			*
Myclobutanil	19	1	3	3	6	20	6

See footnote(s) at end of table.

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All Nursery and Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Oxycarboxin				1			*
Oxytetracycline			*	*			*
PCNB	9	3	5	2	1	6	4
Phosphorous acid	4	*	1	2	*	*	1
Piperalin	9		*	*	1	5	2
Potassium bicarbon.	5	*	*	2	2	*	2
Propamocarb hydroch.	*	*	*	*	1		*
Propiconazole	15	6	2	6	1	9	6
Pseudo. fluores A506	*						*
Pyraclostrobin	3	*	*	1	1		1
Sodium Percarbonate				*	*	4	*
Streptomyces gris.	1						*
Streptomyces lydicus	1		1	*	*		*
Streptomycin	8	5	1	1	*	1	3
Streptomycin sulfate		1		*	*		*
Sulfur	8	1	*	3	1	*	2
Tebuconazole	*	4					1
Thiabendazole (TBZ)	2	1	2			4	1
Thiophanate	11	31	16	4	15	9	17
Thiophanate-methyl	22	18	21	11	12	25	17
Thiram	*		*	*	*		*
Triadimefon	4	1	1	3	1	1	2
Trichoderma harz.	4	1	2	*	1	5	2
Trifloxystrobin	11	2	6	3	2	21	5
Triflumizole		1					*
Triforine	1		1	*	*	2	1
Vinclozolin	2	*	1	*	*	*	*
Ziram	1		*	*		16	2
Other Chemicals							
Acequinocyl	6	1	1	*			1
Acibenzolar-S-Methyl	*						*
Alk. dim. benzyl 50%		1	*	*		1	*
Alk. dim. benzyl 60%	5	1	1	1		5	2
Alk. dim. eth. benz.	3	1	*	1		1	1
Alk. dim. ethbz. am.	2	*	*	*		4	1
Alkyl. dim. benz. am	*						*
Aminopyridine	*						*
Amm. Soap Fatty Acid	*						*
Ancymidol	3		3	1	1	*	1
Benzyladenine	1		2	1	*	4	1
Brodifacoum	*		*		*	*	*
Bromadiolone	1					4	1
Butenoic Acid Hydro.	*						*

See footnote(s) at end of table.

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All Nursery and Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
Cacodylic acid		*					*
Capsaicin	*			*			*
Chlormequat chloride	7	1	9	2	7	15	5
Chloropicrin	4	*	*	1		*	1
Cyclopropene,1-methy	*						*
Cytokinins			*				*
Daminozide	11	1	16	3	13	17	8
Dazomet	*						*
Decenol	*						*
Decenyl acetate	*						*
Decyldimethyloctyl	*						*
Dialkyl meth. benzy.	*						*
Dichloropropene	1						*
Didecyl dim. ammon.	*						*
Dikegulac-sodium	1	*				4	*
Dimethyldioctyl	*						*
Diphacinone	3	*	*	1			1
Dodecadien-1-ol	*						*
E-8-Dodecenyl acetat	*						*
Ethephon	5	1	10	1	14	4	5
Farnesol	1					4	*
Fatty acids				*			*
Flurprimidol	*		*				*
Forchlorfenuron				*			*
Garlic oil	*			*			*
Gibberellic acid	3	1	1	1	1	9	2
Gibberellins A4A7	1		2	1	*	4	1
Harpin protein	*	*	*				*
Hexadecenal	*						*
Hexadecenyl acetate	*						*
Hydantoin, dimethyl	*						*
Hydantoin, methyl	*						*
Hydrogen peroxide	3	2	4	5	4	4	3
Indolebutyric acid	3		1	1		11	2
Iron phosphate	5	*	*	1	*		1
Maleic hydrazide				*			*
Mepiquat chloride						*	*
Metaldehyde	19	2	3	4	*	5	5
Metam-potassium	*				*		*
Metam-sodium	1			1			*
Methyl bromide	5	*	*	1		*	1
Mineral oil				*			*
Monocarbamide dihyd.						4	*
NAA	1		*	1		*	*

See footnote(s) at end of table.

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All Nursery and Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
NAA, Ammonium salt	*						*
NAD				*			*
Nerolidol	1					4	*
PT807-HCl				*			*
Paclobutrazol	8	2	18	1	10	6	7
Pelargonic acid	2		1	*	1		1
Prohexadione calcium			*	*			*
Silicic acid	*						*
Sodium chlorate						*	*
Sodium hypochlorite	1			*		*	*
Spirodiclofen		*	*				*
Strychnine	1			*		*	*
Sulfaquinoxaline	*						*
Tetrasodium salt	*						*
Thidiazuron	*						*
Trinexapac-ethyl				*	*		*
Uniconazole	4	*	8	1	2	5	3
Warfarin	*						*
Z-8-Dodecanol	*						*
Z-8-Dodecen acetate	*						*
Zinc phosphide	*		*	*	*		*

* Less than 0.5 percent.

All Nursery:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
(Meth)propionic acid				*			*
2,4-D				1	*		*
2,4-D, 2-EHE				1		1	*
2,4-D, BEE		1	1	5	*		1
2,4-D, dieth. salt			*				*
2,4-D, dimeth. salt	1		1	2		2	1
2,4-D, triiso. salt	*						*
2,4-DP, dimeth. salt	*				9		2
Acifluorfen, sodium	1						*
Alachlor						7	1
Amitrole				*			*
Ammonium benzadox			*		*		*
Asulam, sodium salt				*			*
Atrazine		*	6	4	11		4
Benefin	1			*		7	1
Bentazon	1		*				*
Bromacil	*						*
Bromoxynil	*						*
Bromoxynil heptan.	2			*			*
Bromoxynil octanoate	2			*			*
Butoxyethyl triclopy	*	1	1	5	*		1
Carfentrazone-ethyl	*			*			*
Chlorimuron-ethyl						*	*
Chlorsulfuron	*						*
Clethodim	*		1	13	*	*	3
Clomazone				*			*
Clopyralid			4	1	7	*	2
DCPA						*	*
Dicamba				1			*
Dicamba, dimet. salt	*	*					*
Dicamba, sodium salt						1	*
Dichlobenil			3	3	2		1
Diquat dibromide	5	*		*		7	1
Dithiopyr	*	*				*	*
Diuron	1			5			1
Ethalfluralin				*			*
Fluazifop-P-butyl	*	*	4		1	1	1
Flufenacet				3		2	1
Flumetsulam				*			*
Flumioxazin	3	*	7	3	15	10	5
Fomesafen						*	*
Glufosinate-ammonium	1		*	*			*
Glyphosate	*						*
Glyphosate iso. salt	25	35	54	54	58	36	45

See footnote(s) at end of table.

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All Nursery:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides (continued)							
Glyphosate pot. salt	1						*
Halosulfuron	2				*		*
Hexazinone	*		7	23			6
Imazapyr, iso. salt						*	*
Isoxaben	12	8	3	16	14	12	11
Lactofen						1	*
Linuron	*		*				*
MCPA, 2-ethylhexyl				*		7	1
MCPA, dimethyl. salt		*					*
MCPP, DMA salt	*	*					*
MCPP-P, DMA Salt	*						*
MCPP-P-potassium	*						*
MSMA	*	*					*
Metolachlor			*	1	*		*
Metribuzin				3		2	1
Napropamide	2	3	*	4			2
Norflurazon	1	4		1		*	1
Oryzalin	10	8	13	20	5	11	11
Oxadiazon	9	3	1	5		12	4
Oxyfluorfen	12	8	18	24	5	13	13
Paraquat	1		1	1		*	*
Pebulate	*						*
Pendimethalin	7	4	2	2	15	12	6
Prodiamine	3	5	2	11	4	10	6
Pronamide				*			*
Propanil						7	1
Propazine				*			*
S-Metolachlor	*		2	1	4	1	1
Sethoxydim	1	*	2		1	1	1
Simazine	3		15	5	23	1	7
Sulfentrazone				*			*
Sulfometuron methyl	*	*	2	10	1	*	3
Sulfosate	*		*				*
Sulfosulfuron		*			1		*
Tebuthiuron	*						*
Terbacil			*				*
Thiazopyr	*						*
Thifensulfuron					1	*	*
Triasulfuron						1	*
Tribenuron-methyl					1		*
Triclopyr	*		*	2	1	1	1
Trifluralin	8	1	1	4	1	10	3

See footnote(s) at end of table. --continued

All Nursery:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides							
Abamectin	30	23	4	8	2	14	14
Acephate	32	38	8	22	11	26	25
Acetamiprid	6	2	1	2	1	1	2
Aldicarb						*	*
Aluminum phosphide	1						*
Azadirachtin	9	1	3	*	*	9	2
Azinphos-methyl			2	*		3	1
Beauveria bassiana	1	*		*	1		*
Bendiocarb		*		1		*	*
Benzoic acid	1					*	*
Beta-cyfluthrin	1						*
Bifenazate	6	5	1	7	1	11	5
Bifenthrin	9	7	9	6	13	17	9
Bt subsp israelensis	4	*	*	2			1
Bt subsp. aizawai	4	*			*		*
Bt subsp. kurstaki	5	5	1	1	1	10	3
Buprofezin	3	*		*			*
Cacodylic acid, sodi		*					*
Canola oil	*						*
Carbaryl	6	26	30	3	32	15	19
Carbofuran				*			*
Chlorfenapyr	4	1	2		1	8	2
Chlorpyrifos	23	8	21	24	21	47	20
Cinnamaldehyde	*						*
Clofentezine	1	1	2	3	*	1	1
Cryolite	1						*
Cyfluthrin	7	4	13	8	3	10	7
Cypermethrin	*						*
Cyromazine	2	*					*
Deltamethrin	3	*					*
Diazinon	11	2	1	4	2	9	4
Dichlorvos	*			3			1
Dicofol	1	1	*	1	5	28	4
Dicrotophos						*	*
Dienochlor	1		1				*
Diflubenzuron	2	*	7	1		2	2
Dimethoate	3	16	1	3	22	1	10
Dinotefuran	8	3	*	1	1	10	3
Disulfoton		*	*	*		2	*
Endosulfan	*	4	1	10	2	10	5
Esfenvalerate	3	*	1	2	3	2	2
Ethoprop				1			*
Ethyl parathion				*			*
Etoxazole	5	3	1	2		10	3

See footnote(s) at end of table.

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All Nursery:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Fenamiphos			*				*
Fenbutatin-oxide	1	1	*		1	10	1
Fenitrothion	*			*			*
Fenoxycarb				1		10	1
Fenpropathrin	5	1	*		*	9	2
Fenpyroximate	1	1	1	*	*	7	1
Fenvalerate			*	*			*
Fipronil				1			*
Flonicamid				*	*		*
Fluvalinate	6	3		*	*	1	2
Hexythiazonx	5	2	4	4	6	8	4
Hydramethylnon	1	1				3	1
Imidacloprid	30	11	5	6	3	46	12
Indoxacarb		*			*		*
Jojoba oil	*			*			*
Kaolin	1	*		*			*
Kinoprene	1			*		7	1
Lambda-cyhalothrin	4		2	5	2	1	2
Lindane		*	1		1		*
Malathion	14	22	7	2	4	19	11
Methidathion	1	1	*			*	*
Methiocarb	6	1	1	1			1
Methomyl	2	*	6				1
Methoxychlor					1		*
Methyl parathion	*			*			*
Mevinphos	1						*
Naled	1						*
Neem oil, clar. hyd.	2	3	*	*	1	2	2
Novaluron	1	*		*	1	*	*
Octacide-264	*	*		*			*
Oxamyl			*		*		*
Oxydemeton-methyl	*		1	2	14		3
Oxythioquinox	*	*		*			*
Permethrin	6	3	1		1	2	2
Petroleum distillate	23	12	6	8	5	14	10
Petroleum oil			2		8	37	4
Phosmet	*		7	2		30	4
Piperonyl butoxide	2	*	1	*		1	1
Potassium salts	7	6	*	1	3	10	4
Propargite	1			1			*
Pymetrozine	7	1	1	1	2	9	2
Pyrethrins	6	*	1	*		1	1
Pyridaben	2	2	1	1	*	8	2
Pyridine	4	4	1	1	*	10	3

See footnote(s) at end of table.

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All Nursery:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Resmethrin	*						*
Rosemary oil				*			*
Rotenone	1						*
S-Kinoprene	1	*	*	1	1	1	1
S-Methoprene	*					1	*
Sabadilla	*						*
Soybean oil						7	1
Spinosad	14	13	2	1	1	11	7
Spiromesifen	3	1	3	2	*	8	2
Tebufenozide				*		3	*
Thiamethoxam	3	1	1	*	1	8	2
Trichlorfon					*		*
Zeta-cypermethrin	*						*
Fungicides							
AQ-10 Biofungicide				*			*
Anilazine				*			*
Azoxystrobin	12	6	1	4	4	11	6
Bacillus pumilus	*						*
Bacillus subtilis					*		*
Bacillus subtilus	1	1	*	1	*	7	1
Basic copper sulfate	1			1			*
Benomyl	*		1	1	*	1	1
Boscalid	5		*	*			1
Butanone	*	*	1	*		8	1
Calcium polysulfide	4		*	1	*		1
Captan	6	1	2	2	4	38	5
Chloroneb						*	*
Chlorothalonil	15	39	23	24	63	26	34
Copper (metallic)						28	2
Copper amm. complex		*					*
Copper chloride hyd.	*						*
Copper hydroxide	10	30	4	15	*	49	18
Copper oxide	*			*			*
Copper oxychlo. sul.	1						*
Copper oxychloride	1			1			*
Copper resinate	2	4	2	1	1	9	3
Copper sulfate	4	6	1	3	*	8	4
Cymoxanil	1	*		*	1		*
Cyprodinil	2			1			*
Dicloran	1						*
Dimethomorph	4	1	*	*	1	9	2
Dinocap						*	*
Dodine			*	1			*

See footnote(s) at end of table.

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All Nursery:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Etridiazole	*	5	1	2	*	9	3
Famoxadone	1	*		*	1		*
Fenamidone	*						*
Fenarimol	1		1	2		*	1
Fenbuconazole				*		*	*
Fenhexamid	5	*	*	1	*	8	2
Fludioxonil	6	1	1	2	*	8	2
Flutolanil	2	1		*		8	1
Fosetyl-al	13	5	1	4	1	12	5
Iprodione	10	2	3	4	*	9	4
Kresoxim-methyl	*		1	1			*
Mancozeb	11	26	7	17	2	42	17
Maneb	4	*	1				1
Mefenoxam	17	14	5	6	2	12	9
Metalaxyl	3	2	*	4	*	1	2
Metiram		1					*
Mono-potassium salt				*			*
Myclobutanil	11	1	2	3	2	36	5
Oxycarboxin				*			*
Oxytetracycline			*	*			*
PCNB	3	*	*	2		11	2
Phosphorous acid	2	*	1	2	1	1	1
Piperalin	1		1			*	*
Potassium bicarbon.	3	*		2	*	1	1
Propamocarb hydroch.	1				1		*
Propiconazole	12	6	2	7	1	15	6
Pyraclostrobin	4	*	*	1	1		1
Sodium Percarbonate				*		7	1
Streptomyces gris.	*						*
Streptomycin	6	4	1	1		2	2
Streptomycin sulfate		1					*
Sulfur	6		*	3	1		2
Tebuconazole	*	*					*
Thiabendazole (TBZ)	2	*	1			7	1
Thiophanate	3	25	3	3	3	15	11
Thiophanate-methyl	12	16	9	11	4	42	14
Thiram	*		*				*
Triadimefon	3	1	1	3	*	2	2
Trichoderma harz.	1		*			8	1
Trifloxystrobin	7	1	1	2		37	4
Triforine	1		1	*		2	*
Vinclozolin	1				*	*	*
Ziram	1		*			28	2

See footnote(s) at end of table.

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All Nursery:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals							
Acequinocyl	2	*		*			*
Alk. dim. benzyl 50%		*	*			1	*
Alk. dim. benzyl 60%	3	*	1	*		1	1
Alk. dim. eth. benz.	1	*	*	*		1	*
Alk. dim. ethbz. am.	2		*				*
Alkyl. dim. benz. am	*						*
Ancymidol	1			*			*
Benzyladenine	*					7	1
Brodifacoum	*		*		*	1	*
Bromadiolone	1					7	1
Cacodylic acid		*					*
Capsaicin	1			*			*
Chlormequat chloride	2	*		*	*	9	1
Chloropicrin	5	*	1	1		1	1
Cytokinins			*				*
Daminozide	4	*	*	1	*	10	1
Dazomet	*						*
Decenol	*						*
Decenyl acetate	*						*
Decyldimethyloctyl	*						*
Dichloropropene	*						*
Didecyl dim. ammon.	*						*
Dikegulac-sodium	*	*				7	1
Dimethyldioctyl	*						*
Diphacinone	2	*	1	1			1
E-8-Dodecenyl acetat	*						*
Ethephon	1	*		*	*	8	1
Farnesol	1					8	1
Flurprimidol	*						*
Garlic oil				*			*
Gibberellic acid	1	*		*			*
Gibberellins A4A7	*					7	1
Harpin protein	1						*
Hydrogen peroxide	2	*	1	4	1	8	2
Indolebutyric acid	4		*	1		1	1
Iron phosphate	7	*		1	*		1
Mepiquat chloride						1	*
Metaldehyde	19	1	3	3		8	4
Metam-sodium	*			1			*
Methyl bromide	6	*	1	1		*	1
Mineral oil				*			*
NAA	1		*	1		1	*
NAA, Ammonium salt	*						*
Nerolidol	1					8	1

See footnote(s) at end of table.

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All Nursery:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
Paclobutrazol	2	1	1	*	*	8	1
Pelargonic acid	1		2	*	1		1
Prohexadione calcium			*	*			*
Silicic acid	*						*
Sodium hypochlorite	*			*		*	*
Spirodiclofen			*				*
Strychnine	1			*		*	*
Tetrasodium salt	*						*
Trinexapac-ethyl				*			*
Uniconazole	1	*			*	8	1
Z-8-Dodecanol	*						*
Z-8-Dodecen acetate	*						*
Zinc phosphide	*		*	*	*		*

* Less than 0.5 percent.

Transplants for Commercial Vegetable & Strawberry Production:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
Atrazine					37		4
Diquat dibromide	6						3
Flumioxazin	3						2
Glyphosate iso. salt	4			10	37	3	7
Glyphosate pot. salt	1						1
Halosulfuron	1						1
Linuron	1						1
Oryzalin	3					4	2
Oxadiazon	12						6
Oxyfluorfen	3						2
Pendimethalin	2						1
S-Metolachlor					37		4
Simazine	5			18			3
Sulfentrazone				18			1
Insecticides							
Abamectin	21	43		10	5	65	26
Acephate	23		36	14			16
Acetamiprid	8						4
Azadirachtin	14	12	18			6	10
Beauveria bassiana	1						*
Benzoic acid	1						1
Bifenazate	6						3
Bifenthrin	4		24		5		5
Bt subsp israelensis	9						4
Bt subsp. aizawai	9	12					5
Bt subsp. kurstaki	10	22	12			12	10
Buprofezin	2						1
Carbaryl	12					7	7
Chlorfenapyr	2						1
Chlorpyrifos	9				25		7
Clofentezine	1						1
Cyfluthrin	2	13			42		6
Cyromazine	1	7					1
Diazinon	2					5	2
Dicofol	2						1
Dienochlor	1		18				3
Diflubenzuron	1						1
Endosulfan	1	7			5		2
Esfenvalerate	1	7			37		5
Etoxazole	3						1
Fenpropathrin	1						*
Fenpyroximate	1						1
Fluvalinate	5						2

See footnote(s) at end of table.

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Transplants for Commercial Vegetable & Strawberry Production:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Hexythiazonx	3						1
Imidacloprid	8	42	12		44	5	14
Indoxacarb		13					1
Kinoprene	1						1
Lambda-cyhalothrin	4				37		6
Malathion	4				37		6
Methiocarb	2						1
Methomyl		13					1
Naled	1						1
Neem oil, clar. hyd.	3				37		5
Novaluron					5		1
Permethrin	6	9					4
Petroleum distillate	2						1
Piperonyl butoxide			24			3	3
Potassium salts	9				44		9
Propargite	3						1
Pymetrozine	13	33			42		13
Pyrethrins	11		24			3	9
Pyridaben	1						1
Pyridine	1						1
Rotenone	4						2
S-Kinoprene					5		1
Spinosad	19	26			5	9	13
Spiromesifen	3						2
Thiamethoxam	1				5		1
Zeta-cypermethrin	1						1
Fungicides							
Azoxystrobin	14	9			37		11
Bacillus subtilis					5		1
Bacillus subtilus	1	22			5		3
Basic copper sulfate	2						1
Benomyl	1					3	1
Boscalid	6			17			4
Captan	6						3
Chlorothalonil	15	86	12	19	56	4	22
Copper hydroxide	13	32	23			4	11
Copper oxide	1						1
Copper oxychlo. sul.	2						1
Copper oxychloride	2						1
Copper resinate	1					5	1
Copper sulfate	5			19			4
Cymoxanil	3	7			37		6
Cyprodinil	6			30			5

See footnote(s) at end of table.

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Transplants for Commercial Vegetable & Strawberry Production:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Dicloran	4						2
Dimethomorph	4	29			37		8
Etridiazole					5		1
Famoxadone	3	7			37		6
Fenamidone	1						1
Fenhexamid	8				5		4
Fludioxonil	11			30	5		8
Fosetyl-al	12	9					6
Iprodione	8		35				8
Mancozeb	8	58		10	37	5	13
Maneb	10	13					6
Mefenoxam	20	42		30	37		18
Metalaxyl	3	9					2
Myclobutanil	16			30	37		13
PCNB	1						1
Phosphorous acid				17	5		2
Piperalin	5						2
Potassium bicarbon.	6			19			4
Propamocarb hydroch.	3				37		5
Propiconazole	8					5	5
Pyraclostrobin	3	27		17	37		8
Streptomycin	9	16	12				7
Sulfur	3			17			3
Tebuconazole		9					1
Thiophanate	1	31			38		7
Thiophanate-methyl	14	9		23	5	5	10
Triadimefon	2				5		1
Trichoderma harz.						5	1
Trifloxystrobin	4						2
Vinclozolin	4						2
Ziram	1						1
Other Chemicals							
Alk. dim. benzyl 60%	1		12				2
Alk. dim. eth. benz.	1						1
Alk. dim. ethbz. am.			12				1
Benzyladenine	1						1
Capsaicin				9			1
Chlormequat chloride	6	14			5	3	5
Chloropicrin	2						1
Daminozide	8				5	6	5
Diphacinone	1	7					1
Ethephon	1				5		1
Farnesol						65	12

See footnote(s) at end of table.

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Transplants for Commercial Vegetable & Strawberry Production:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
Gibberellins A4A7	1						1
Harpin protein	2						1
Hydrogen peroxide	3		12			5	4
Iron phosphate	11						5
Metaldehyde	16						7
Methyl bromide	3						2
Nerolidol						65	12
Paclobutrazol	1				5	6	2
Pelargonic acid	1						1

* Less than 0.5 percent.

Nursery Propagation or Lining-out Stock:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
2,4-D, 2-EHE				1			*
2,4-D, dieth. salt			5				*
2,4-D, dimeth. salt	3			5			2
Atrazine			11				1
Benefin						51	7
Bentazon			5				*
Clethodim			16	8	3		4
Clopyralid			14		12		2
Dichlobenil					8		1
Diquat dibromide	3			2		51	8
Diuron	6			2			1
Fluazifop-P-butyl			10				1
Flumioxazin	3		16	4	18	51	11
Glufosinate-ammonium	3			1			1
Glyphosate iso. salt	30	3	36	20	33	57	24
Halosulfuron	3						1
Hexazinone	3			2			1
Isoxaben	24		21	4	22	54	16
Linuron			10				1
MSMA	3						1
Metolachlor				4			1
Napropamide				5			1
Norflurazon	2						*
Oryzalin	6		21	9	22	51	14
Oxadiazon	8	5		9		3	6
Oxyfluorfen	8	3	44	14	13		10
Paraquat	2		14				1
Pendimethalin	5	3	16	2		3	3
Prodiamine	2		16	2	8	54	10
S-Metolachlor			16	5	8		3
Simazine			26	2	12		3
Sulfosate			5				*
Terbacil			5				*
Thiazopyr	2						*
Trifluralin	2			2		56	9
Insecticides							
Abamectin	17	13	21	4		59	16
Acephate	27	15	14	16		71	23
Acetamiprid	9	2	16	4			4
Azadirachtin	9	3				56	10
Azinphos-methyl			5				*
Beauveria bassiana	3						1
Bifenazate	7	5		4		56	11

See footnote(s) at end of table.

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Nursery Propagation or Lining-out Stock:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Bifenthrin	8	7	44	6	19	62	18
Bt subsp israelensis	8	5		4			4
Bt subsp. aizawai	3						1
Bt subsp. kurstaki	7	5	10				3
Buprofezin	3						1
Canola oil	3						*
Carbaryl	5	3	5		3	5	3
Carbofuran				2			1
Chlorfenapyr	16	2			23		6
Chlorpyrifos	20	2	21	15		62	18
Clofentezine		5				5	2
Cryolite	2						*
Cyfluthrin	8	4	27	8		51	13
Cyromazine	7						1
Diazinon	4	2	11	4			3
Diflubenzuron	6	5	21	5			5
Dimethoate		5		3	3	5	3
Dinotefuran	10	7				5	4
Disulfoton			10				1
Endosulfan		2		2		51	8
Esfenvalerate	2		5	4			2
Etoxazole	4			2		5	2
Fenamiphos			5				*
Fenbutatin-oxide						12	2
Fenoxycarb				2		51	8
Fenpropathrin	3	5				5	3
Fenpyroximate		5					1
Flonicamid				1			*
Fluvalinate	3					5	1
Hexythiazonx	3	3	16	2		51	10
Hydramethylnon		3					1
Imidacloprid	36	9	32	5	20	68	23
Jojoba oil	3						1
Kaolin				2			1
Kinoprene	2						*
Lambda-cyhalothrin			5	3			1
Malathion	7	39		1		8	12
Methiocarb	16	2					3
Methomyl			5				*
Mevinphos	6						1
Neem oil, clar. hyd.	2					5	1
Novaluron	2	2		1	20		3
Octacide-264		3					1
Oxamyl			5				*

See footnote(s) at end of table.

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Nursery Propagation or Lining-out Stock:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Oxydemeton-methyl				2			1
Permethrin	8	2	5				2
Petroleum distillate	5		5	2		5	2
Petroleum oil			10				1
Phosmet			5	1			1
Piperonyl butoxide		3					1
Potassium salts	12	5		4		8	5
Pymetrozine	8	2		2		56	10
Pyrethrins	12	3					3
Pyridaben	8	5				56	10
Pyridine	2	5		1			2
S-Kinoprene	2	7		2		5	3
Spinosad	21	6				5	6
Spiromesifen		4		4			2
Tebufenozide				2			*
Thiamethoxam	5	2	5				2
Fungicides							
Azoxystrobin	10	6	5	3	3	56	12
Bacillus subtilus	3		5	4			2
Basic copper sulfate				2			1
Benomyl				11			3
Boscalid	7		5	1			2
Calcium polysulfide				5			1
Captan	2	5		14			6
Chlorothalonil	21	47	21	35	3	56	35
Copper hydroxide	6	10	5	14		68	17
Copper oxychloride				2			1
Copper resinate		2	16			51	8
Copper sulfate	8	8		7		5	6
Cyprodinil				1			*
Dimethomorph	3	5		2			2
Dodine			5				*
Etridiazole		3	5	4		56	10
Fenarimol				6			2
Fenbuconazole				1			*
Fenhexamid	5	5		6		51	11
Fludioxonil	4	3	5	10		56	12
Flutolanil	16	4				5	4
Fosetyl-al	8		5	7		56	11
Iprodione	17	3		8		54	13
Kresoxim-methyl	3						*
Mancozeb	13	12	11	25		59	21
Maneb	6		10				2

See footnote(s) at end of table.

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Nursery Propagation or Lining-out Stock:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Mefenoxam	31	7	11	25		57	22
Metalaxyl	9	9		15		3	9
Myclobutanil	5	2	5	4			3
Oxytetracycline			5				*
PCNB	3	3		7		63	12
Phosphorous acid	3			6			2
Potassium bicarbon.	5			4		5	3
Propiconazole	8	3		15		54	14
Pyraclostrobin	7		5	1			2
Sodium Percarbonate				2			1
Streptomyces gris.	3						1
Streptomycin	3		5				1
Streptomycin sulfate		5					1
Sulfur	12		5	4			3
Thiabendazole (TBZ)	3					51	7
Thiophanate	6	48	10	10	7	60	25
Thiophanate-methyl	35	19	37	15		62	25
Thiram	3		10				1
Triadimefon	3		5	2			1
Trichoderma harz.	4					51	8
Trifloxystrobin	5	2	5	6		51	10
Triforine						12	2
Vinclozolin	2						*
Ziram	2		5				1
Other Chemicals							
Acequinocyl	2						*
Alk. dim. benzyl 60%				2			1
Alk. dim. eth. benz.				2			1
Alkyl. dim. benz. am	2						*
Ancymidol	6						1
Brodifacoum	3						1
Chlormequat chloride	3					56	8
Chloropicrin	2	2		2		5	2
Cytokinins			5				*
Daminozide	6					68	10
Decyldimethyloctyl	2						*
Didecyl dim. ammon.	2						*
Dikegulac-sodium						51	7
Dimethyldioctyl	2						*
Diphacinone	3			4			2
Ethephon	3	2				56	9
Farnesol	3						1
Gibberellic acid	3			2			1

See footnote(s) at end of table.

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Nursery Propagation or Lining-out Stock:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
Hydrogen peroxide	6			19		51	13
Indolebutyric acid	25		5	8		5	7
Iron phosphate	7	3					2
Metaldehyde	31	5		7			8
Metam-sodium				2			1
Methyl bromide	2	2		2			1
NAA	3		5	8		5	4
Nerolidol	3						1
Paclobutrazol	6	3				51	9
Pelargonic acid	3			2			1
Prohexadione calcium			5				*
Sodium hypochlorite				2			1
Spirodiclofen			5				*
Uniconazole	3					5	1

* Less than 0.5 percent.

Broadleaf Evergreens:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
Alachlor						35	4
Atrazine				1			*
Benefin	3			1		35	5
Bromoxynil heptan.				2			*
Bromoxynil octanoate				2			*
Clethodim				14			3
Clopyralid			13	2	2		1
Dichlobenil				2			*
Diquat dibromide	11					35	5
Diuron	3						*
Fluazifop-P-butyl		1					*
Flufenacet				2			*
Flumioxazin	3		13	2	80	42	15
Glufosinate-ammonium				1			*
Glyphosate iso. salt	35	64	5	14		42	38
Halosulfuron	5						*
Isoxaben	16	14	9	3	82	42	22
MCPA, 2-ethylhexyl				2			*
Metribuzin				2			*
Napropamide	10			10			3
Norflurazon		4					2
Oryzalin	13	27		11		38	20
Oxadiazon	16	4	5	9		6	6
Oxyfluorfen	17	18		9		40	16
Pebulate	4						*
Pendimethalin	21	5	13	3		40	10
Prodiamine	18	15		7		38	14
Propazine				1			*
Sethoxydim	4						*
Simazine	4			3			1
Sulfosulfuron					2		*
Tebuthiuron	3						*
Trifluralin	14		9	2		38	6
Insecticides							
Abamectin	26	2		14	4	44	12
Acephate	58	27	13	44	14	61	36
Acetamiprid	9			5			2
Azadirachtin	9	*			2	2	1
Beauveria bassiana	2			1			1
Bendiocarb						2	*
Bifenazate	3	2		18	2	38	10
Bifenthrin	18	2	19	11	4	49	12
Bt subsp israelensis				5			1

See footnote(s) at end of table.

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Broadleaf Evergreens:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Bt subsp. aizawai	4						*
Bt subsp. kurstaki	3					36	5
Carbaryl	3	49	39			42	27
Chlorfenapyr	4	*					*
Chlorpyrifos	21	2	5	22	4	42	13
Clofentezine				14	2	3	4
Cyfluthrin	13	3		15	2	40	11
Cyromazine	8						1
Deltamethrin	16						1
Diazinon	24		13	11		38	10
Dicofol		1					*
Dienochlor	4						*
Diflubenzuron	6			1		3	1
Dimethoate		41			4		17
Dinotefuran	24	2				42	8
Disulfoton						4	*
Endosulfan		1		2		5	2
Esfenvalerate			13				*
Etoxazole	6	13		1		38	11
Fenbutatin-oxide	3				4	3	1
Fenoxycarb				3		7	2
Fenpropathrin	16					3	2
Fenpyroximate					2		*
Fluvalinate	15	12				5	7
Hexythiazonx	4			6		36	6
Hydramethylnon	3					6	1
Imidacloprid	25	4		7		47	11
Kaolin				1			*
Kinoprene						35	4
Lambda-cyhalothrin	8		13	10			3
Malathion	5	34		2		49	21
Methidathion		*				2	*
Methiocarb	16			1			2
Methyl parathion	3						*
Neem oil, clar. hyd.	7	1				2	1
Oxythioquinox	3						*
Permethrin	8		13				1
Petroleum distillate	28	16		6	2	42	15
Petroleum oil						36	4
Piperonyl butoxide	4						*
Potassium salts	11	6		1		38	8
Propargite				2			*
Pymetrozine	7	*		1			1
Pyrethrins	4						*

See footnote(s) at end of table.

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Broadleaf Evergreens:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Pyridaben		1	13		2	3	1
Pyridine	3	1		1		5	2
S-Kinoprene	4						*
Spinosad	11	5				2	3
Spiromesifen	8			3		2	2
Thiamethoxam	4					3	1
Fungicides							
Azoxystrobin	28	1		3	2	38	8
Bacillus subtilus	3	1		1			1
Basic copper sulfate				1			*
Benomyl						2	*
Butanone	3					36	4
Calcium polysulfide	4						*
Captan	4			2		35	5
Chlorothalonil	34	53	25	18	2	57	37
Copper hydroxide	20	45		19	2	47	31
Copper oxychloride				1			*
Copper resinate	11	1				38	6
Copper sulfate	5	13		3	2		7
Dimethomorph	3			3			1
Dinocap						2	*
Dodine				2			*
Etridiazole	4	12				3	6
Fludioxonil	9	1		3		38	6
Flutolanil		1					*
Fosetyl-al	23	4		4	2	45	10
Iprodione	18	1		10		35	8
Mancozeb	20	5		29	2	40	16
Mefenoxam	30	2	42	9		42	12
Metalaxyl		1		3		4	2
Mono-potassium salt				2			*
Myclobutanil	7					35	5
PCNB	6			4			1
Phosphorous acid					2		*
Potassium bicarbon.				2			*
Propiconazole	40	2		4	2	45	11
Streptomycin	5	1		2		3	2
Streptomycin sulfate		1					*
Sulfur	7			1			1
Thiabendazole (TBZ)	6	*				35	5
Thiophanate	12	15	5	3	2	42	13
Thiophanate-methyl	16	12	24	5	2	7	9
Triadimefon	15			14			5
Trifloxystrobin	26					38	7
Triforine						2	*

See footnote(s) at end of table.

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Broadleaf Evergreens:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals							
Acequinocyl	4						*
Alk. dim. benzyl 60%	3						*
Alk. dim. eth. benz.	3						*
Bromadiolone	3					35	4
Capsaicin	4						*
Chlormequat chloride						2	*
Daminozide				1		3	1
Dazomet	3						*
Dikegulac-sodium	4	1					1
Diphacinone	4						*
Farnesol						36	4
Gibberellic acid	4						*
Hydrogen peroxide				3	2	35	5
Indolebutyric acid						2	*
Iron phosphate	6			1			1
Metaldehyde	15			3		3	2
Metam-sodium	4						*
Nerolidol						36	4
Paclobutrazol				1			*
Pelargonic acid	4			1			1
Sodium hypochlorite	3						*
Uniconazole						2	*

* Less than 0.5 percent.

Coniferous Evergreens:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
(Meth)propionic acid				1			*
2,4-D				2	1		1
2,4-D, 2-EHE				1			*
2,4-D, BEE			1	1			*
2,4-D, dimeth. salt			1	1		4	1
2,4-DP, dimeth. salt					28		7
Atrazine			4	1	1		1
Benefin	3			1		44	4
Butoxyethyl triclopy			1	1			*
Clethodim			2	15	*		5
Clopyralid			7	1	5		3
Dicamba				1			*
Dicamba, sodium salt						4	*
Dichlobenil			2	4	*		2
Diquat dibromide	4						*
Diuron	1			1			*
Fluazifop-P-butyl			3		2	2	1
Flumioxazin	1		16	8	31	53	17
Fomesafen						2	*
Glyphosate iso. salt	20	6	53	34	52	60	38
Halosulfuron	1				1		*
Hexazinone			5	*			1
Isoxaben	6		4	23	26	48	18
Lactofen						5	*
MSMA		2					*
Metolachlor			1	1	*		*
Napropamide				3			1
Norflurazon				2			1
Oryzalin	8	19	2	30	5	44	17
Oxadiazon	6		1	9		50	7
Oxyfluorfen	3	19	18	32	6	55	20
Paraquat				1			*
Pendimethalin	1		3	5	28	50	13
Prodiamine	3	4	4	17	2	44	10
Propazine				1			*
S-Metolachlor			4		3		1
Sethoxydim			7		2	2	2
Simazine			9	9	12		7
Sulfometuron methyl			2				*
Sulfosate			1				*
Sulfosulfuron					1		*
Tebuthiuron	1						*
Thifensulfuron					2		*
Triasulfuron						4	*
Tribenuron-methyl					2		*
Triclopyr				*			*
Trifluralin	6	3	4	8		48	7

See footnote(s) at end of table.

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Coniferous Evergreens:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides							
Abamectin	47	6	5	14	*	46	14
Acephate	10	41	4	28	7	14	18
Acetamiprid			1	1	*	3	1
Azadirachtin			1				*
Azinphos-methyl				1			*
Beauveria bassiana				1			*
Bendiocarb				2		2	1
Bifenazate	1	2	3	13	*	53	8
Bifenthrin	3	5	8	8	5	51	9
Bt subsp israelensis			1	1			1
Bt subsp. kurstaki			1				*
Buprofezin	2						*
Cacodylic acid, sodi		2					*
Carbaryl	2	15	29	4	33	3	16
Carbofuran				1			*
Chlorpyrifos	43	12	38	24	40	48	32
Clofentezine				4		4	2
Cyfluthrin	3		12	7		48	7
Deltamethrin	3						*
Diazinon	11	6	1	2	*		3
Dichlorvos				9			3
Dicofol			1	4	8	2	4
Dienochlor	1						*
Diflubenzuron			5	2			1
Dimethoate		1	1	2	5		2
Dinotefuran	1	3		2	*		1
Disulfoton				1		2	*
Endosulfan		31		3	*	4	5
Esfenvalerate		3		3		5	2
Ethoprop				1			*
Ethyl parathion				1			*
Etoxazole	1	2	4	5		4	3
Fenbutatin-oxide						44	3
Fenoxycarb				2		2	1
Fenpropathrin	2	2	1				1
Fenvalerate				1			*
Fluvalinate	8			2		4	2
Hexythiazonx	3	1	4	4	7	44	7
Hydramethylnon		8				2	1
Imidacloprid	61		8	7			10
Jojoba oil				1			*
Kinoprene				1			*
Lambda-cyhalothrin	3		1	5	*		2
Lindane					2		*

See footnote(s) at end of table.

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Coniferous Evergreens:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Malathion	19	1	4	1		46	6
Methiocarb	1			2			1
Methyl parathion				1			*
Neem oil, clar. hyd.			1	1		2	*
Oxamyl					*		*
Oxydemeton-methyl			3	1	3		1
Oxythioquinox		1					*
Permethrin	2	3	1			7	1
Petroleum distillate	22		6	17	2		9
Petroleum oil					3		1
Phosmet				4			1
Piperonyl butoxide	2						*
Potassium salts	4	13			*		2
Propargite				2			1
Pymetrozine			1	1			1
Pyrethrins	2						*
Pyridaben		1	2	1		4	1
Pyridine			1	3		2	1
Rosemary oil				1			*
S-Kinoprene	1			2			1
Spinosad	1		1	1		5	1
Spiromesifen	1		1	3	*		1
Tebufenozide						2	*
Thiamethoxam			1	1			*
Trichlorfon					*		*
Fungicides							
Azoxystrobin	3	20	1	8	1		5
Bacillus pumilus	1						*
Bacillus subtilus	1			1			*
Basic copper sulfate				1			*
Butanone	1						*
Calcium polysulfide	18				*		2
Captan	4		3		1	2	1
Chlorothalonil	8	38	40	21	45	53	33
Copper hydroxide	6	4	4	9		46	7
Copper oxychloride				1			*
Copper resinate	4	1	2		*		1
Copper sulfate	1		2	1		44	4
Cymoxanil				1			*
Dimethomorph	1			1			*
Etridiazole			2	3		7	2
Famoxadone				1			*
Fenarimol			1	1			*

See footnote(s) at end of table.

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Coniferous Evergreens:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Fenhexamid	1		1	2			1
Fludioxonil	3		3	3			2
Flutolanil						44	3
Fosetyl-al	4			3	1	2	2
Iprodione	5		3	2			1
Mancozeb	5	4	17	12	1	7	7
Maneb			1				*
Mefenoxam	6	2	9	5	1	44	7
Metalaxyl				8			2
Myclobutanil	4		8	1			2
Oxycarboxin				1			*
PCNB	5			2		4	1
Phosphorous acid			3	1			1
Potassium bicarbon.				2			1
Propiconazole	3	22	3	7	3	2	6
Sodium Percarbonate				1			*
Streptomycin	4			1			1
Sulfur	1			9			3
Thiabendazole (TBZ)	1		1				*
Thiophanate	6	54	4	4	*	48	13
Thiophanate-methyl	4	34	6	7	3	12	9
Triadimefon			2	2		5	1
Trichoderma harz.			2				*
Trifloxystrobin	1			1			*
Triforine				1			*
Other Chemicals							
Acequinocyl				1			*
Alk. dim. benzyl 50%						2	*
Alk. dim. benzyl 60%	1					2	*
Alk. dim. eth. benz.	1					2	*
Brodifacoum			1				*
Bromadiolone	1						*
Cacodylic acid		2					*
Capsaicin	2						*
Chloropicrin		3		1			1
Daminozide	3		1				*
Dazomet	1						*
Diphacinone	2		1				*
Ethephon				1			*
Farnesol						44	3
Hydrogen peroxide	1			3		44	4
Iron phosphate	4			1			1
Metaldehyde	19			3		4	3

See footnote(s) at end of table.

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Coniferous Evergreens:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
Methyl bromide	1	3		1		2	1
Mineral oil				1			*
Nerolidol						44	3
Paclobutrazol			1				*
Pelargonic acid			1	1			*
Prohexadione calcium				1			*
Uniconazole						4	*
Zinc phosphide	1		1	1			1

* Less than 0.5 percent.

Deciduous Shade Trees:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
2,4-D				1			*
2,4-D, BEE		5	1	2			2
2,4-D, dimeth. salt				1		1	*
Atrazine		2		1			1
Butoxyethyl triclopy		5	1	2			2
Clethodim			2	26			8
Clopyralid			1	1			*
Dicamba				1			*
Dichlobenil			1	8			2
Diquat dibromide	13					21	4
Fluazifop-P-butyl			2				*
Flumetsulam				1			*
Flumioxazin		2	3	8	7	3	5
Glufosinate-ammonium			1	1			*
Glyphosate iso. salt	42	51	65	16	45	71	46
Isoxaben	11		6	40	6	3	14
MCPA, 2-ethylhexyl						21	3
Metolachlor				1			*
Napropamide	4		2	2			1
Oryzalin	11	2	19	43	7	3	18
Oxadiazon	19		1	2		5	2
Oxyfluorfen			8	34	2	29	16
Paraquat				2			*
Pendimethalin	5		3	2	15	27	8
Prodiamine	8	1	2	24	2	22	12
Propanil						21	3
S-Metolachlor			1	1	7		1
Sethoxydim						2	*
Simazine			5	7	7		4
Sulfosate			1				*
Triclopyr				1		1	*
Trifluralin	11			5	1	1	2
Insecticides							
Abamectin	19	5	1	4	3		3
Acephate	42	24	4	13	11	12	14
Acetamiprid	4	1		3	1		1
Aldicarb						1	*
Azinphos-methyl			2				*
Beauveria bassiana					4		1
Bendiocarb				1		1	*
Bifenazate		3	1	2	1		1
Bifenthrin	12	29	11		27	8	13
Bt subsp. aizawai	5						*

See footnote(s) at end of table.

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Deciduous Shade Trees:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Bt subsp. kurstaki	4				4		1
Buprofezin				1			*
Carbaryl		9	17	2	19	5	9
Chlorfenapyr	5	1					*
Chlorpyrifos	11	3	2	20		7	8
Clofentezine			1				*
Cyfluthrin	11	5	21	13	2	2	10
Deltamethrin	12						1
Diazinon	28			5	3		3
Dicofol		3					*
Diflubenzuron			2				*
Dimethoate	4	26		1	9		6
Dinotefuran				1	2		1
Disulfoton						1	*
Endosulfan				2	3		1
Ethoprop				1			*
Etoxazole		1				2	*
Fenbutatin-oxide			1			1	*
Fenitrothion				1			*
Fenoxycarb				2		3	1
Fenpropathrin	20						1
Fenpyroximate			1	1			*
Fenvalerate			1				*
Fluvalinate	19						1
Hexythiazonx		1	1	9	3		3
Hydramethylnon						3	1
Imidacloprid	28	6	3	6		6	5
Jojoba oil				1			*
Lambda-cyhalothrin			1	2		1	1
Lindane		1					*
Malathion	13	17	2	1	6		5
Methidathion		3					*
Methiocarb	8						*
Neem oil, clar. hyd.		1					*
Octacide-264		1					*
Oxydemeton-methyl				2			*
Permethrin	7	2			3	2	2
Petroleum distillate	36		3	10	3	1	5
Petroleum oil			1		8	3	2
Piperonyl butoxide	7	1					1
Potassium salts	4	2		1		1	1
Pymetrozine	4			1	1		1
Pyrethrins	11	1					1
Pyridaben		1					*

See footnote(s) at end of table.

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Deciduous Shade Trees:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Pyridine		2				1	1
Spinosad	4	1		4			2
Spiromesifen		1	1	2			1
Thiamethoxam	4		1	1			1
Fungicides							
Anilazine				1			*
Azoxystrobin	8	2		2			1
Bacillus subtilus				2			*
Basic copper sulfate				2			1
Benomyl			4				1
Butanone	4		2	1			1
Calcium polysulfide			2				*
Captan			4				1
Chlorothalonil	27	31	10	11	4	29	17
Copper amm. complex		2					*
Copper chloride hyd.	5						*
Copper hydroxide	24	9	4	33		9	14
Copper oxide				1			*
Copper oxychloride				2			1
Copper resinate			1	1		21	4
Copper sulfate		3	2	4			2
Etridiazole		2	2	1			1
Fenarimol				3			1
Fenbuconazole				1			*
Fenhexamid				1			*
Fludioxonil	4			2			1
Flutolanil				1			*
Fosetyl-al	7	1		3		2	2
Iprodione	11		1	2			1
Kresoxim-methyl			1	2			1
Mancozeb	8	12	6	29		2	12
Maneb			2				*
Mefenoxam	15	11	1	3		22	7
Metalaxyl			2				*
Myclobutanil		4	1	5			2
Phosphorous acid					1	1	*
Potassium bicarbon.				2			1
Propiconazole	8	4	2	12	3	5	6
Streptomycin	5	1	1	1		1	1
Sulfur	4						*
Thiabendazole (TBZ)	5						*
Thiophanate	11	28	2	2	2	26	11
Thiophanate-methyl	9	13	17	30		3	15
Triadimefon	7			3			1
Trifloxystrobin			1				*

See footnote(s) at end of table.

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Deciduous Shade Trees:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals							
Ancymidol				1			*
Brodifacoum					1		*
Capsaicin	7						*
Chlormequat chloride				1			*
Chloropicrin			2				*
Daminozide				1			*
Dazomet	4						*
Diphacinone	7						*
Ethephon				1			*
Gibberellic acid				1			*
Hydrogen peroxide				4	1		1
Iron phosphate					1		*
Metaldehyde	9		12	2			3
Metam-sodium				3			1
Methyl bromide			2				*
Paclobutrazol				1			*
Pelargonic acid			1				*
Uniconazole	3						*
Zinc phosphide					1		*

* Less than 0.5 percent.

Deciduous Flowering Trees:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
2,4-D, BEE				4			1
2,4-D, dimeth. salt						2	*
Amitrole				4			1
Butoxyethyl triclopy				4			1
Carfentrazone-ethyl				5			1
Clomazone				5			1
DCPA						2	*
Dichlobenil			2				*
Diquat dibromide	13						1
Ethalfluralin				5			1
Flumioxazin				4		46	9
Glyphosate iso. salt	16		40	17	10	38	19
Isoxaben	20		3			2	3
Metolachlor					4		*
Napropamide				4			1
Oryzalin	11		2	11	6		4
Oxadiazon	11					2	1
Oxyfluorfen	5		2	3	4	8	3
Paraquat	5						*
Pendimethalin	9			3	4	8	3
Prodiamine	4	3	3	3		2	3
Sethoxydim			2				*
Simazine					4		1
Trifluralin	16		4			2	2
Insecticides							
Abamectin	41		18	14		2	9
Acephate	82	16	20	7	54	17	26
Acetamiprid		7		3			2
Azadirachtin	23		18				5
Azinphos-methyl			9				2
Bendiocarb						2	*
Benzoic acid	9						1
Beta-cyfluthrin	7						1
Bifenazate	14			8	2	2	3
Bifenthrin	13	7	24	21		48	19
Bt subsp. kurstaki	5					2	1
Carbaryl		5	16	18	15	8	11
Chlorpyrifos	35	11	3	26	4	2	11
Clofentezine	9						1
Cyfluthrin	27	8		17	4		7
Deltamethrin	4						*
Diazinon	18			3			2
Dicofol	5						*

See footnote(s) at end of table.

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Deciduous Flowering Trees:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Diflubenzuron		1					*
Dimethoate				3			1
Dinotefuran		6				4	2
Disulfoton		4		2			1
Endosulfan		5	2	7			3
Esfenvalerate	28						2
Ethoprop				2			*
Etoxazole	5			17			3
Fenbutatin-oxide	9				2		1
Fenpropathrin	12					2	1
Fenpyroximate	5						*
Fluvalinate	15					2	2
Hexythiazonx	9			7			2
Hydramethylnon						2	*
Imidacloprid	16	14	2	10	2	4	8
Kaolin	5						*
Lambda-cyhalothrin	5			9			2
Malathion	14	7	17		2	19	9
Methidathion	9						1
Methomyl	23						2
Neem oil, clar. hyd.						2	*
Oxydemeton-methyl	5						*
Oxythioquinox		1		3			1
Permethrin	5	2			4	2	2
Petroleum distillate	54	19	7	11	9	11	15
Petroleum oil					4		1
Phosmet			2				*
Piperonyl butoxide	12						1
Potassium salts	11	2					1
Pymetrozine	4			6			1
Pyrethrins	7						1
Pyridine	4	2				2	1
Spinosad	32		18	4	9		8
Spiromesifen			18				3
Thiamethoxam			2				*
Fungicides							
AQ-10 Biofungicide				3			1
Azoxystrobin	36	13	2	9			8
Bacillus subtilus		2					1
Basic copper sulfate				3			1
Benomyl				4			1
Boscalid	32						3
Butanone	4						*

See footnote(s) at end of table.

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Deciduous Flowering Trees:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Captan	9					2	1
Chloroneb						2	*
Chlorothalonil	24	10	2	12	55	13	17
Copper hydroxide	34	6		18		13	9
Copper oxychloride				3			1
Copper resinate	7	1					1
Copper sulfate		2		3			1
Cyprodinil	9						1
Dimethomorph				3			1
Dodine				6			1
Fenarimol			6	10			3
Fenhexamid	5						*
Fludioxonil	4	2					1
Fosetyl-al	11			4		2	2
Iprodione	21	2	10	10			6
Kresoxim-methyl				3			1
Mancozeb	8	6	9	28		2	9
Maneb	5						*
Mefenoxam	20	38	5	3		2	14
Metalaxyl		2					1
Myclobutanil	21	2		16		2	5
Oxytetracycline				4			1
PCNB						2	*
Phosphorous acid	18			7			3
Potassium bicarbon.	5			7			1
Propiconazole	13	4	8	14	6	6	8
Pyraclostrobin	32						3
Sodium Percarbonate				3			1
Streptomycin	9	1					1
Sulfur	13			3			2
Tebuconazole	5						*
Thiabendazole (TBZ)		1					*
Thiophanate	11	7		8	2	8	6
Thiophanate-methyl	9	3	10	11	33	2	10
Triadimefon	7	3		7		4	3
Trifloxystrobin	5						*
Ziram	14						1
Other Chemicals							
Acequinocyl	5						*
Alk. dim. benzyl 60%	18						1
Alk. dim. ethbz. am.	18						1
Capsaicin	7						1
Chloropicrin	28						2

See footnote(s) at end of table.

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Deciduous Flowering Trees:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
Dazomet	4						*
Decenol	5						*
Decenyl acetate	5						*
Diphacinone	7						1
E-8-Dodecenyl acetat	5						*
Garlic oil				3			1
Iron phosphate	8						1
Metaldehyde	4			3			1
Methyl bromide	28						2
Paclobutrazol			4				1
Pelargonic acid				3			1
Z-8-Dodecanol	5						*
Z-8-Dodecen acetate	5						*

* Less than 0.5 percent.

Deciduous Shrubs:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
Ammonium benzadox			3				1
Atrazine				6			1
Benefin	6						1
Bromoxynil	3						*
Bromoxynil heptan.	20						2
Bromoxynil octanoate	20						2
Carfentrazone-ethyl	3						*
Clethodim			1				*
Dichlobenil			13	5	9		6
Diquat dibromide	17					40	9
Dithiopyr						2	*
Diuron	3						*
Fluazifop-P-butyl						4	1
Flumioxazin	9					53	10
Glufosinate-ammonium	3						*
Glyphosate iso. salt	20	4	15	9	29	51	23
Glyphosate pot. salt	3						*
Isoxaben	49		3	13	29	51	23
Napropamide	7			17			3
Oryzalin	39	6	14	9		42	17
Oxadiazon	23	8	6	13		11	8
Oxyfluorfen	30		4	9	3	49	15
Paraquat	3			6			1
Pendimethalin	13		1	9	1	49	12
Prodiamine	13	5			24	49	16
S-Metolachlor	4					6	1
Sethoxydim	3		3				1
Simazine				5		2	1
Sulfosate			1				*
Sulfosulfuron					1		*
Tebuthiuron	3						*
Trifluralin	46		2	8	5	48	16
Insecticides							
Abamectin	47	11	6	13	8	54	21
Acephate	40	33	11	31	37	65	35
Acetamiprid	3			9		7	3
Azadirachtin	7	6				45	9
Azinphos-methyl						4	1
Beauveria bassiana				3			*
Bifenazate	23					49	11
Bifenthrin	14	10	15	7	35	51	24
Bt subsp israelensis		5		7			2
Bt subsp. aizawai	6						1

See footnote(s) at end of table.

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Deciduous Shrubs:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Bt subsp. kurstaki	3	11				44	9
Buprofezin	3						*
Canola oil	4						*
Carbaryl	6		12	3	22	47	17
Chlorfenapyr	7	6	11			43	11
Chlorpyrifos	15		5	13	1	49	14
Clofentezine			11			4	3
Cryolite	3						*
Cyfluthrin	20	6	5	9		49	14
Deltamethrin	7						1
Diazinon	13						1
Diflubenzuron			4	3		4	2
Dimethoate		8	1			2	2
Dinotefuran	18	5	3	4		44	11
Endosulfan			1	5	6	47	11
Etoxazole	26	5	3			47	12
Fenbutatin-oxide			1			44	8
Fenoxycarb				5		4	1
Fenpropathrin	6	6				9	3
Fenpyroximate			3				1
Flonicamid					1		*
Fluvalinate	12				2	8	3
Hexythiazonx	13		7	5		40	11
Hydramethylnon	3						*
Imidacloprid	24	11	7	7		51	15
Kaolin	10						1
Kinoprene				3		40	7
Lambda-cyhalothrin	3		4	26			5
Malathion	18		3	9	7	50	14
Methidathion			1				*
Methiocarb	6	6	5	8			4
Neem oil, clar. hyd.				3		4	1
Novaluron						3	*
Octacide-264	3	5		3			1
Permethrin	6	2			1		1
Petroleum distillate	50	11	2	17	7	6	12
Phosmet			1				*
Piperonyl butoxide	9	5	3	3		2	3
Potassium salts	9	5	3	7	5	44	12
Propargite	7						1
Pymetrozine	9	6	4	11	6	45	13
Pyrethrins	13	5	3	3		2	4
Pyridaben	3	11	3	8	1	46	12
Pyridine	27	6	3		1	47	13

See footnote(s) at end of table.

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Deciduous Shrubs:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Rosemary oil				3			*
S-Kinoprene						4	1
Spinosad	13	11		3		7	4
Spiromesifen	6	6	3	9			3
Thiamethoxam	9	6	5			4	3
Fungicides							
Azoxystrobin	16	6	9	2	22	5	10
Bacillus subtilus	3		2	7			2
Benomyl					1		*
Butanone						44	8
Captan	3	6				40	8
Chlorothalonil	27	32	14	19	23	62	29
Copper hydroxide	23	16	12	29	1	47	20
Copper resinate	10		9	7		40	11
Copper sulfate	10	10	4	13	3		6
Dimethomorph	23	6	3			5	5
Etridiazole			3			4	1
Fenarimol	7			5		3	2
Fenhexamid	6			3		3	1
Fludioxonil	13	6	6	5	1	44	12
Fosetyl-al	43	11	8	12	3	51	19
Iprodione	24		1	14		7	6
Kresoxim-methyl			6				1
Mancozeb	41	26	7	27	3	15	16
Maneb	7						1
Mefenoxam	33	4	14	5	1	49	17
Metalaxyl	4	6				2	2
Mono-potassium salt				5			1
Myclobutanil	36	6	5		5	3	7
PCNB	6		3			44	9
Phosphorous acid	4		3	9			2
Piperalin			5			3	2
Potassium bicarbon.	3	6			1		1
Propiconazole	34	16	5	15		48	17
Streptomycin	3			9		4	2
Sulfur	7						1
Thiabendazole (TBZ)	3					40	7
Thiophanate	17	5	9	16	3	57	17
Thiophanate-methyl	13	11	12	13	3	11	10
Triadimefon	10	5					2
Trichoderma harz.	3						*
Trifloxystrobin	24	6	4	17		45	14
Triforine	3		10				3
Vinclozolin					1	3	1

See footnote(s) at end of table.

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Deciduous Shrubs:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals							
Acequinocyl				3			*
Alk. dim. benzyl 60%	7						1
Alk. dim. eth. benz.	7						1
Ancymidol				3			*
Brodifacoum			1			4	1
Bromadiolone	4						*
Capsaicin	6						1
Chlormequat chloride	6					44	8
Chloropicrin	3			5			1
Daminozide	3			3		44	8
Dazomet	3						*
Dichloropropene	3						*
Diphacinone	6		1				1
Ethephon						4	1
Farnesol						40	7
Hydrogen peroxide	3	11		7			3
Indolebutyric acid	8						1
Iron phosphate	12	5		9			3
Mepiquat chloride						4	1
Metaldehyde	21					44	10
Methyl bromide	3			5			1
Nerolidol						40	7
Pelargonic acid			11	4	5		4
Strychnine	3						*
Uniconazole						44	8

* Less than 0.5 percent.

Fruit and Nut Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
Clethodim						1	*
Dichlobenil			5				1
Diquat dibromide						17	8
Flufenacet						5	2
Flumioxazin	12					17	9
Glyphosate iso. salt	56	9		29		1	10
Isoxaben	30		2				3
Metribuzin						5	2
Napropamide		57		13			12
Norflurazon		71				1	14
Oryzalin	8	5	85	13		2	16
Oxadiazon	8					20	10
Oxyfluorfen	17	4	83			1	14
Paraquat	9					1	1
Pendimethalin	4	4				2	2
Prodiamine	8					17	9
Sethoxydim						2	1
Simazine	4					1	1
Trifluralin	19					1	2
Insecticides							
Abamectin	20	27		5		21	17
Acephate	12	4		8		22	13
Acetamiprid	12						1
Aldicarb						1	*
Azadirachtin				8			1
Azinphos-methyl						5	2
Bifenazate	4						*
Bifenthrin	8	15				18	12
Bt subsp. kurstaki						17	8
Buprofezin	4						*
Carbaryl	8	64		8		24	24
Chlorpyrifos	17	4	2	8		91	44
Clofentezine						2	1
Cryolite	4						*
Cyfluthrin						19	9
Deltamethrin	4						*
Diazinon	19						2
Dicofol	4	4				66	31
Diflubenzuron						2	1
Dinotefuran	4						*
Endosulfan						2	1
Esfenvalerate	9			16			2
Etoxazole	4					2	1

See footnote(s) at end of table.

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Fruit and Nut Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Fenbutatin-oxide		4				2	1
Fenpropathrin	8	4				17	9
Fluvalinate	4					2	1
Hexythiazonx	15						2
Imidacloprid	28	80				85	56
Kaolin				8			1
Lambda-cyhalothrin						1	*
Malathion	20	4	12		75	2	8
Methidathion		5					1
Methiocarb	4						*
Methomyl			83				11
Methoxychlor					75		3
Naled	4						*
Neem oil, clar. hyd.	4					1	1
Oxydemeton-methyl				8			1
Permethrin						2	1
Petroleum distillate	33	68			100	1	20
Petroleum oil						66	30
Phosmet	4		83	13		71	45
Potassium salts				8			1
Pymetrozine	4						*
Pyridaben		4				2	1
Resmethrin	4						*
Sabadilla	4						*
Spinosad	21			5		17	10
Thiamethoxam	4					17	8
Fungicides							
Azoxystrobin	4	5					1
Boscalid	4						*
Captan	24				75	71	37
Chlorothalonil	23	9		8		23	15
Copper (metallic)						66	30
Copper hydroxide	8	32	2			74	41
Copper sulfate	4			14			2
Etridiazole		4				2	1
Fenbuconazole						1	*
Fenhexamid	8						1
Fosetyl-al	16	15	2			18	13
Iprodione	8		2				1
Mancozeb	4					68	31
Maneb	4						*
Mefenoxam	4			13		17	9
Metalaxyl	4						*

See footnote(s) at end of table.

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Fruit and Nut Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Myclobutanil	8					66	30
Propiconazole	4			8		2	2
Pyraclostrobin	4			8			1
Streptomycin	4					1	1
Sulfur	28			8	75		6
Thiophanate		4				17	9
Thiophanate-methyl	4	4				69	32
Trifloxystrobin						66	30
Triforine	4						*
Ziram						66	30
Other Chemicals							
Acequinocyl	8						1
Alk. dim. benzyl 60%	4						*
Alk. dim. ethbz. am.	4						*
Chloropicrin	24						2
Hydrogen peroxide	4						*
Iron phosphate	4						*
Metaldehyde	12					19	10
Methyl bromide	24						2
NAA, Ammonium salt	4						*
Silicic acid	4						*
Strychnine	9						1
Tetrasodium salt	4						*

* Less than 0.5 percent.

Christmas Trees:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
2,4-D, 2-EHE				1			*
2,4-D, BEE				9	*		4
2,4-D, dimeth. salt	6		3	3		5	2
2,4-D, triiso. salt	6						*
2,4-DP, dimeth. salt	6						*
Asulam, sodium salt				1			*
Atrazine			13	8	21		13
Bromacil	6						*
Butoxyethyl triclopy	6			9	*		4
Chlorsulfuron	6						*
Clethodim	6						*
Clopyralid			3	2	10	5	5
Dicamba, dimet. salt	6						*
Diquat dibromide	6						*
Dithiopyr	6						*
Diuron	6			10			4
Fluazifop-P-butyl	6		6		*		2
Flufenacet				7			3
Flumioxazin	6		8		9		5
Glyphosate	6						*
Glyphosate iso. salt	72	18	66	86	64	50	73
Halosulfuron	6						*
Hexazinone			14	54			25
Imazapyr, iso. salt						5	*
Isoxaben	6						*
MCPP, DMA salt	6						*
MCPP-P, DMA Salt	6						*
MCPP-P-potassium	6						*
Metolachlor					*		*
Metribuzin				7			3
Norflurazon	6						*
Oryzalin	22			1	1	5	1
Oxadiazon	6						*
Oxyfluorfen	44		12	15	3		11
Pendimethalin	11		*		9		3
Prodiamine	6						*
Pronamide				*			*
S-Metolachlor			1		2		1
Sethoxydim					1		*
Simazine	22		31	2	39	5	21
Sulfometuron methyl	6	30	4	24	3	5	12
Sulfosate	6						*
Triclopyr	6		*	3		5	2
Trifluralin	6						*

See footnote(s) at end of table.

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Christmas Trees:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides							
Abamectin		18					*
Acephate	6	18	1	6	1	50	5
Acetamiprid					1		*
Aluminum phosphide	17						*
Benzoic acid						5	*
Bifenazate					*		*
Bifenthrin	11		*	1	13	10	5
Bt subsp. aizawai					1		*
Bt subsp. kurstaki				1	1		1
Carbaryl			42		32		20
Chlorpyrifos	11		34	17	14	25	20
Cyfluthrin			17			5	4
Cypermethrin	6						*
Deltamethrin	6						*
Diazinon	6			*	3		1
Dicofol			*		5	5	2
Dicrotophos						5	*
Diflubenzuron			13			10	3
Dimethoate	6	30	1	4	43		15
Endosulfan			3	18		5	8
Esfenvalerate			1		5	20	2
Etoxazole						5	*
Fenitrothion	5						*
Fipronil				1			1
Hexythiazonx			4	1	8		4
Imidacloprid	6		1	2	1		1
Indoxacarb					*		*
Lambda-cyhalothrin	6				1		1
Lindane			2		1		1
Malathion	11		5	*	1	10	2
Methyl parathion				1			*
Oxydemeton-methyl			1	4	31		11
Permethrin	22					5	1
Petroleum distillate	17		9		1		3
Petroleum oil			3		12		4
Potassium salts	11				1		1
S-Methoprene	6					10	*
Tebufenozide						30	1
Fungicides							
Azoxystrobin		18				5	*
Captan					5		2
Chlorothalonil			37	27	95	40	49
Copper hydroxide		35				15	1

See footnote(s) at end of table.

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Christmas Trees:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Mancozeb		18	3	1		25	2
Maneb			*				*
Mefenoxam	6	30					*
Metalaxyl					1		*
Propiconazole		30				10	*
Thiophanate		18	1			5	*
Thiophanate-methyl			*			15	1
Triadimefon			2				1
Other Chemicals							
Chloropicrin			1				*
Diphacinone	6			1			1
Ethephon	6						*
Metaldehyde	6			*			*
Methyl bromide			1				*
Strychnine				*		5	*

* Less than 0.5 percent.

Palms:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
2,4-D, dimeth. salt						6	*
Chlorimuron-ethyl						3	*
Dicamba, sodium salt						6	*
Diquat dibromide	5						1
Flumioxazin						65	5
Glyphosate iso. salt	20	44				71	44
Isoxaben	29	2				6	5
Napropamide	2						*
Oryzalin	6						1
Oxadiazon	9	1					2
Oxyfluorfen	2					6	1
Pendimethalin	2					6	1
Prodiamine	5	5				6	5
Sulfosulfuron		*					*
Thifensulfuron						3	*
Triasulfuron						6	*
Trifluralin	9	*					1
Insecticides							
Abamectin	34	36				6	33
Acephate	38	33				61	35
Acetamiprid	3						*
Azadirachtin	9						1
Beauveria bassiana		*					*
Bifenazate	5	2				61	8
Bifenthrin	18	3				3	5
Bt subsp. kurstaki		4					3
Buprofezin	9	*					1
Carbaryl		24					19
Chlorfenapyr	20						2
Chlorpyrifos	23	15				61	20
Clofentezine		1					1
Cyfluthrin	7	2					2
Deltamethrin	5						*
Diazinon	11	2					3
Diflubenzuron	3						*
Dimethoate	15	8					8
Dinotefuran	11	6					6
Etoxazole	3	*					1
Fenbutatin-oxide		1					1
Fenpropathrin	7						1
Fenpyroximate		*					*
Fluvalinate	9						1
Hexythiazonx	5	4					4

See footnote(s) at end of table.

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Palms:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Hydramethylnon	3						*
Imidacloprid	46	5					9
Lambda-cyhalothrin	3						*
Malathion	28	4				7	7
Methidathion		1					1
Methiocarb	22	1					3
Neem oil, clar. hyd.		1					*
Permethrin	6	9					7
Petroleum distillate	40	8		49		7	12
Piperonyl butoxide	4						*
Potassium salts	9	5		51		61	10
Pyrethrins	4						*
Pyridaben		1					1
Pyridine	2	6					5
S-Kinoprene	2						*
Spinosad	3	22				61	23
Spiromesifen	3						*
Thiamethoxam		*					*
Fungicides							
Azoxystrobin	5	6					5
Chlorothalonil	20	37				3	32
Copper hydroxide	11	35		49			30
Copper resinate						3	*
Copper sulfate	3	1					1
Dimethomorph	3	1					1
Etridiazole		4					3
Fludioxonil	5	1					1
Flutolanil	18	1					3
Fosetyl-al	17	5				3	6
Iprodione	7	2				3	3
Mancozeb	16	45				3	38
Mefenoxam	29	24					22
Metiram		4					3
Myclobutanil	3						*
PCNB	3					61	5
Phosphorous acid		1				3	1
Propiconazole	7	3				61	8
Streptomycin	7	1					2
Sulfur	2						*
Thiabendazole (TBZ)	3	*					*
Thiophanate	9	29					25
Thiophanate-methyl	20	7					8
Triadimefon	4	1				3	2
Trifloxystrobin	2						*

See footnote(s) at end of table.

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Palms:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals							
Acequinocyl	5	*					1
Capsaicin	4						*
Dazomet	2						*
Diphacinone	4						*
Farnesol	2						*
Indolebutyric acid	18						2
Iron phosphate	2						*
Metaldehyde	30	*					4
Nerolidol	2						*
Uniconazole		*					*

* Less than 0.5 percent.

Ornamental Grasses:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
2,4-D, 2-EHE						6	2
2,4-D, dimeth. salt						6	2
Benefin						60	17
Clethodim				28			2
Clopyralid				28			2
Dicamba, dimet. salt		3					1
Diquat dibromide						60	17
Fluazifop-P-butyl		5					2
Flumioxazin						66	18
Glyphosate iso. salt	25					66	21
Isoxaben	17	75				70	49
MCPA, dimethyl. salt		3					1
MCPP, DMA salt		3					1
Oryzalin	11	55				60	38
Oxadiazon	11	20				73	29
Oxyfluorfen	6					70	20
Pendimethalin	6					73	21
Prodiamine		4				66	20
S-Metolachlor			19				2
Trifluralin	17	20				60	26
Insecticides							
Abamectin	11						1
Acephate	71	20		44		70	38
Acetamiprid	6						1
Azadirachtin						60	17
Beta-cyfluthrin	11						1
Bifenazate	6						1
Bifenthrin			28			64	20
Bt subsp. kurstaki						60	17
Chlorfenapyr	47						6
Chlorpyrifos	11					6	3
Diazinon	11						1
Dichlorvos				16			1
Dinotefuran					26	60	19
Endosulfan				16			1
Etoxazole						70	19
Fenpropathrin	17					6	4
Fenpyroximate						60	17
Fluvalinate	17						2
Hexythiazonx	6					60	17
Imidacloprid	18		29			9	7
Malathion			29				2
Methidathion						3	1

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Ornamental Grasses:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Methiocarb	53						7
Permethrin	18						2
Petroleum distillate	13					4	3
Piperonyl butoxide	11						1
Potassium salts	18	20			66		16
Pymetrozine	6					60	17
Pyrethrins	18						2
Pyridaben	6						1
Pyridine						6	2
S-Kinoprene			11				1
Spinosad	7						1
Thiamethoxam						60	17
Fungicides							
Azoxystrobin						67	18
Bacillus pumilus	7						1
Bacillus subtilus						60	17
Butanone						64	17
Chlorothalonil	18	12				67	25
Copper hydroxide	18	20				60	26
Copper resinate	11					60	18
Copper sulfate						6	2
Dimethomorph		8				64	21
Etridiazole		8				66	21
Fludioxonil	15			28		60	20
Flutolanil	47					6	8
Fosetyl-al	11					64	19
Iprodione	11					60	18
Mancozeb		8				73	23
Mefenoxam	65	8		28		67	31
Myclobutanil	18						2
PCNB						60	17
Potassium bicarbon.	6						1
Propiconazole					8		1
Sodium Percarbonate						60	17
Streptomycin	6						1
Thiabendazole (TBZ)						60	17
Thiophanate	11					70	21
Thiophanate-methyl	54	28				70	37
Triadimefon	11						1
Trichoderma harz.	6						1
Trifloxystrobin	6					60	17

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Ornamental Grasses:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals							
Benzyladenine						60	17
Bromadiolone						60	17
Capsaicin	11						1
Chlormequat chloride						60	17
Daminozide						60	17
Dikegulac-sodium						60	17
Diphacinone	11		13				2
Ethephon						60	17
Farnesol	6						1
Gibberellins A4A7						60	17
Hydrogen peroxide			11			60	18
Indolebutyric acid	55						7
Iron phosphate	7						1
Metaldehyde	53			16		6	9
Nerolidol	6						1
Paclobutrazol						60	17
Trinexapac-ethyl				28			2

Other Woody Ornamentals and Vines:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
2,4-D, BEE				7			*
2,4-D, dimeth. salt						5	*
Acifluorfen, sodium	5						*
Ammonium benzadox					9		*
Atrazine					26		1
Benefin	3						*
Bentazon	5						*
Butoxyethyl triclopy				7			*
Diquat dibromide	8	*					1
Dithiopyr		*					*
Diuron	3						*
Flumioxazin	5	1				51	6
Glyphosate iso. salt	18	11	14	7	26	52	16
Halosulfuron	3						*
Isoxaben	28	4		14		62	12
Oryzalin	26	2		7			4
Oxadiazon	13	1		14		59	8
Oxyfluorfen	11	7		21		7	8
Pendimethalin	8	8		7		7	8
Prodiamine		3		7		54	8
Sethoxydim	5	1					1
Simazine					26		1
Sulfosulfuron		*			15		1
Tebuthiuron	3						*
Triclopyr					26		1
Trifluralin	9	2		14		54	8
Insecticides							
Abamectin	13	27				60	26
Acephate	24	50	39	14	9	20	41
Acetamiprid	4	4		14		3	4
Azadirachtin	6	1					1
Bendiocarb		1					*
Benzoic acid	8						1
Bifenazate	11	12		14	13	3	11
Bifenthrin	10	4		14		12	6
Bt subsp israelensis	3						*
Bt subsp. kurstaki	5	10				49	12
Buprofezin		*					*
Canola oil	3						*
Carbaryl		15	14		26	5	12
Chlorfenapyr		1	39				1
Chlorpyrifos	11	4	47	21	9	8	7
Cinnamaldehyde	2						*

See footnote(s) at end of table.

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Other Woody Ornamentals and Vines:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Clofentezine	3	1				3	1
Cyfluthrin	3	6		21	9	50	11
Deltamethrin	2	*					1
Diazinon	2	3	14				3
Dichlorvos	4						*
Dicofol		3			9		2
Dimethoate		10					7
Dinotefuran	11	3				47	8
Endosulfan		1		3	9		1
Esfenvalerate				7			*
Etoxazole		2				54	7
Fenbutatin-oxide		1					1
Fenpropathrin	4				9	5	1
Fenpyroximate		1				47	5
Fluvalinate	15	1					2
Hexythiazonx	2	2				52	7
Imidacloprid	36	10		26		12	13
Kaolin		*					*
Kinoprene						47	5
Malathion	5	31		21	17	15	25
Methidathion		1					1
Methiocarb	21	1		7			3
Methomyl		1					*
Neem oil, clar. hyd.		10					7
Novaluron	3						*
Permethrin	10						1
Petroleum distillate	9	5		7	21		5
Piperonyl butoxide	4					3	1
Potassium salts	7	1				3	2
Pymetrozine	2	*				47	5
Pyrethrins	7					3	1
Pyridaben	2	1				47	6
Pyridine		3					2
Rotenone	4						*
S-Kinoprene					24		1
Soybean oil						47	5
Spinosad	5	15			9	3	12
Spiromesifen		2				47	6
Thiamethoxam	4	1			13	50	7
Fungicides							
Azoxystrobin	11	2	14	7		8	4
Bacillus subtilus	3	*		14			1
Basic copper sulfate				7			*

See footnote(s) at end of table.

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Other Woody Ornamentals and Vines:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Butanone		1					1
Calcium polysulfide	4						*
Captan	2						*
Chlorothalonil	9	26		21	39	58	28
Copper hydroxide	10	24		34		63	26
Copper oxide	3						*
Copper oxychloride				7			*
Copper resinate	10	13			15	47	15
Copper sulfate		7	33	7			6
Cyprodinil	3						*
Dimethomorph				7			*
Etridiazole		2			9	54	7
Fenarimol				7			*
Fenhexamid	9						1
Fludioxonil	5	1		7			2
Flutolanil	19						2
Fosetyl-al	14	7		7		8	7
Iprodione	16	2		7	15	47	8
Mancozeb	5	28		14		50	26
Mefenoxam	45	6		7		55	14
Metalaxyl		2				3	1
Myclobutanil	10						1
PCNB		*				52	5
Phosphorous acid	3	1		14			2
Potassium bicarbon.				7			*
Propiconazole	16	5		7		3	6
Streptomycin	15	10					8
Streptomycin sulfate		2					2
Sulfur	3						*
Thiabendazole (TBZ)	3	1	33			47	6
Thiophanate	11	11		7	28	52	15
Thiophanate-methyl	33	17	14	21	9	62	22
Triadimefon	4	*				3	1
Trifloxystrobin	5	1		14			2
Vinclozolin					9		*
Other Chemicals							
Acequinocyl		*					*
Alk. dim. benzyl 50%		1	33			3	1
Alk. dim. benzyl 60%	3	1	33			3	2
Alk. dim. eth. benz.	3	1	33			3	2
Benzyladenine						47	5
Capsaicin	4						*
Daminozide	6	*			9	51	6

See footnote(s) at end of table.

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Other Woody Ornamentals and Vines:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
Dikegulac-sodium						47	5
Diphacinone	4						*
Ethephon		*			9		1
Farnesol	2					47	5
Flurprimidol	3						*
Gibberellic acid		*					*
Gibberellins A4A7						47	5
Hydrogen peroxide		*		7	9		1
Indolebutyric acid	25						2
Iron phosphate	8						1
Metaldehyde	24	1		14		47	9
NAA	3						*
Nerolidol	2					47	5
Paclobutrazol	6	4				47	8
Pelargonic acid	3						*
Sodium hypochlorite						3	*
Uniconazole		1			9	47	5
Zinc phosphide	3						*

* Less than 0.5 percent.

All Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
2,4-D, BEE				2			*
2,4-D, dimeth. salt				1			*
2,4-DP, dimeth. salt				1			*
Alachlor						1	*
Ammonium benzadox			1				*
Atrazine		*				1	*
Benefin	*	*				8	1
Bensulide	*						*
Bromoxynil			*	1			*
Butoxyethyl triclopy				2			*
Chlorsulfuron					1		*
Clethodim	1			2			*
Clopyralid	*			1			*
DCPA	1	*				*	*
Dicamba		1					*
Dicamba, dimet. salt	*						*
Dicamba, sodium salt						1	*
Dichlobenil	1	*	1		*		*
Diflufenzopyr-sodium						1	*
Diquat dibromide	10				1	8	3
Dithiopyr	*						*
Diuron	1	*		1			*
Fluazifop-P-butyl	*		*			1	*
Flumioxazin	4					11	2
Glufosinate-ammonium	*	*		1	1	*	*
Glyphosate	*			1			*
Glyphosate iso. salt	15	8	4	12	6	9	9
Glyphosate pot. salt	1						*
Halosulfuron	1			1			*
Imazamethabenz	1						*
Imazethapyr		1					*
Imazethapyr, ammon.			*				*
Isoxaben	5	2	3	5	3	9	4
Linuron	1			1			*
MCPA, dimethyl. salt	*						*
MCPP, DMA salt				1			*
Metolachlor	*			1			*
Napropamide	1			2			*
Norflurazon		*					*
Oryzalin	7	*	2	10	1	9	3
Oxadiazon	5	2	1	1		27	4
Oxyfluorfen	5	1	1	2	1	9	2
Paraquat	1		1	2		*	1
Pendimethalin	4	*	*	2	1	9	2

See footnote(s) at end of table.

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All Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides (continued)							
Prodiamine	3	2		2	1	9	2
Prometryn	*						*
S-Metolachlor	1		*	1		1	*
Sethoxydim	*			1		1	*
Simazine	*	*		2		*	*
Sulfosate					*		*
Sulfosulfuron		3	1	1	*		1
Triasulfuron						1	*
Triclopyr	*						*
Triethylamine triclo	*						*
Trifluralin	4	2	2	1	3	9	3
Vernolate		*					*
Insecticides							
Abamectin	47	35	43	17	36	33	37
Acephate	51	46	42	32	22	49	41
Acetamiprid	22	4	9	6	3	5	8
Aldicarb					1		*
Aluminum phosphide	1						*
Azadirachtin	19	2	12	10	8	12	9
Azinphos-methyl				1			*
Beauveria bassiana	4	1	4	5	5	*	3
Bendiocarb	*	1		1	3		1
Benzoic acid	*	*					*
Bifenazate	21	15	12	4	11	27	15
Bifenthrin	19	25	19	19	15	12	20
Bt subsp israelensis	4	*	1	7	3	32	5
Bt subsp. aizawai	7	*					1
Bt subsp. kurstaki	14	9	1	6	1	61	12
Buprofezin	7	1		1	1	*	2
Canola oil				1	2		*
Carbaryl	2	26	6	5	4	9	11
Carbofuran		*					*
Chitin				1			*
Chlorfenapyr	8	6	4	2	4	*	5
Chlorpyrifos	24	19	14	9	11	27	18
Cinnamaldehyde	1		1	2	2	*	1
Clofentezine		4	4	2	1	1	2
Clothianidin		*	6	1		*	1
Cryolite	*						*
Cyfluthrin	14	10	11	11	16	9	12
Cypermethrin				1	*		*
Cyromazine	10	1	3	2	1	*	3
Deltamethrin	2						*

See footnote(s) at end of table. --continued

All Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Diazinon	8	5	2	5	3	17	6
Dichlorvos			*		1		*
Dicofol	2	6	1	1	1	1	3
Dicrotophos		*					*
Dienochlor	5		1	1	1		1
Diflubenzuron	4	4	5	4	3	2	4
Dimethoate	3	12	1	1		33	8
Dinotefuran	21	5	4	8	14	43	13
Disulfoton	*			1		*	*
Emamectin benzoate	*						*
Endosulfan	*	13	9	4	11	2	8
Esfenvalerate	*	1	*	2			*
Ethoprop		*		1			*
Ethoxy sec. alcohols		*			1		*
Ethyl parathion	1						*
Etoxazole	13	5	3	3	2	10	6
Fenamiphos		*	*	1			*
Fenbutatin-oxide	1	5	2		*	9	3
Fenoxycarb	5	*	4	2	3	*	2
Fenpropathrin	5	4	14	6	2	10	6
Fenpyroximate	5	1	2	2		9	2
Flonicamid	4		1	3	2	8	2
Fluvalinate	18	9	7	6	3	3	8
Hexythiazonx	10	8	3	4	2	8	6
Hydramethylnon	5	*				*	1
Imidacloprid	24	18	39	20	51	29	30
Isofenphos		1					*
Jojoba oil	3						*
Kinoprene	4		1	1	1	8	2
Lambda-cyhalothrin	6		1	2			1
Lindane	*				*		*
Malathion	10	8	3	8	5	3	6
Methidathion		4					1
Methiocarb	13	4	5	5	2	9	6
Methomyl	2	1	1				1
Methoxychlor	1						*
Myrothecium verruc.		*		1			*
Naled	1	2					1
Neem oil, clar. hyd.	4	4		1	*	32	5
Nicotine			1		2		*
Novaluron	5	1	4	1	4		3
Octacide-264		2	3	2	*		1
Oxamyl	*		2			*	*
Oxythioquinox	*		1				*

See footnote(s) at end of table.

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All Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Permethrin	19	8	2	2	2	*	7
Petroleum distillate	15	6	1	6	4	23	8
Petroleum oil	*		1			1	*
Phenothrin					*		*
Phorate	*						*
Piperonyl butoxide	7	2	10	4	4	21	6
Potassium salts	14	3	5	15	12	33	11
Propargite	*						*
Pymetrozine	22	2	13	8	25	10	13
Pyrethrins	10	2	9	7	7	21	8
Pyridaben	8	3	6	4	2	10	5
Pyridine	17	7	6	8	9	27	11
Resmethrin	*		*		*		*
Rotenone	2			1	1		1
S-Kinoprene	4	1	7	7	2	1	3
S-Methoprene		*					*
Sesame Oil		1			*		*
Silicon dioxide			*		*	*	*
Spinosad	37	16	29	11	42	12	26
Spiromesifen	9	2	4	5	4	9	5
Sulfotepp			1		2		*
Thiamethoxam	11	2	6	2	3	9	5
Thiodicarb	*						*
Fungicides							
Anilazine			1				*
Azoxystrobin	25	11	7	8	2	12	11
Bacillus pumilus	*						*
Bacillus subtilis	1		*		*		*
Bacillus subtilus	6	1	1	5	3	8	3
Bas copper zinc sulf				1			*
Basic copper sulfate	1	*					*
Benomyl	1			1		*	*
Borax decahydrate	*						*
Boscalid	*		1	1			*
Butanone	3	*	6	4	14	9	5
Calcium polysulfide	*	*	1	2	1		1
Captan	2	3	5	3	3	9	4
Chloroneb	1	*		1	1		*
Chlorothalonil	27	31	29	19	14	12	24
Copper (metallic)			*		1	*	*
Copper amm. complex	*	1					*
Copper hydroxide	13	33	1	6	*	11	14
Copper octanoate	1						*

See footnote(s) at end of table.

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All Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Copper oxide	*						*
Copper oxychlo. sul.	1						*
Copper oxychloride	*						*
Copper resinate	5	6	3	3	1	8	4
Copper sulfate	12	9	8	9	10	9	9
Cymoxanil	*						*
Cyprodinil	*						*
Dicloran	*				1		*
Dimethomorph	14	1	3	3	1	8	4
Dinocap	*						*
Dodine				1			*
Etridiazole	2	10	25	8	32	12	15
Famoxadone	*						*
Fenarimol	4	*	1	1			1
Fenbuconazole				1			*
Fenhexamid	19	2	13	14	24	25	14
Ferbam		*					*
Fludioxonil	16	7	11	8	13	10	11
Flutolanil	1	1	1	1			1
Fosetyl-al	27	12	5	7	1	10	11
Iprodione	29	10	15	12	3	27	15
Kresoxim-methyl	2		2		*		1
Mancozeb	23	48	7	11	7	11	23
Maneb	2	1					*
Mefenoxam	34	15	23	14	20	30	22
Metalaxyl	8	3	2	3	6	1	4
Metiram		2					1
Milban	1						*
Mono-potassium salt		*					*
Myclobutanil	23	*	4	5	9	8	8
Oxycarboxin				2			*
PCNB	12	6	9	6	2	9	7
Phosphorous acid	4	1	2	3	1		1
Piperalin	13			2	1	8	3
Potassium bicarbon.	6	*	1	2	4		2
Propamocarb hydroch.		*	1	1	1		*
Propiconazole	15	6	2	3	*	9	6
Pseudo. fluores A506	1						*
Pyraclostrobin	1	*		1			*
Sodium Percarbonate					*		*
Streptomyces gris.	1						*
Streptomyces lydicus	1		1	1	1		1
Streptomycin	8	5	*	1	*		3
Streptomycin sulfate		1		1	1		*

See footnote(s) at end of table.

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All Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Sulfur	8	1	*	1	1	1	2
Tebuconazole		9					3
Thiabendazole (TBZ)	2	1	2			8	2
Thiophanate	15	34	27	13	27	11	25
Thiophanate-methyl	26	19	32	13	19	14	21
Thiram				1	1		*
Triadimefon	4	1	1	2	1	*	2
Trichoderma harz.	5	2	3	2	2	1	2
Trifloxystrobin	13	3	10	6	3	8	6
Triflumizole		2					1
Triforine	*		1	1	1	1	1
Vinclozolin	1	*	1	1	1		1
Ziram	1			1			*
Other Chemicals							
Acequinocyl	7	1	1	1			2
Acibenzolar-S-Methyl	*						*
Alk. dim. benzyl 50%		1		1		1	1
Alk. dim. benzyl 60%	5	2	*	5		9	3
Alk. dim. eth. benz.	3	1		3		1	1
Alk. dim. ethbz. am.	1	1	*	2		8	2
Alkyl. dim. benz. am	*						*
Aminopyridine	*						*
Amm. Soap Fatty Acid	*						*
Ancymidol	4		6	4	2	*	2
Benzyladenine	2		5	3	1	8	2
Bromadiolone	2						*
Butenoic Acid Hydro.	1						*
Capsaicin	*			2			*
Chlormequat chloride	10	1	17	9	14	27	11
Chloropicrin	3			1			1
Cyclopropene,1-methy	1						*
Daminozide	16	2	30	12	25	30	17
Dazomet	*						*
Decenol	*						*
Decenyl acetate	*						*
Decyldimethyloctyl	*						*
Dialkyl meth. benzy.	*						*
Dichloropropene	1						*
Didecyl dim. ammon.	*						*
Dikegulac-sodium	*	*				8	1
Dimethyldioctyl	*						*
Diphacinone	3			1			*
Dodecadien-1-ol	*						*

See footnote(s) at end of table. --continued

All Floriculture:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
E-8-Dodecenyl acetat	*						*
Ethephon	6	1	19	4	26	8	11
Farnesol	1					8	1
Fatty acids				1			*
Flurprimidol			1				*
Forchlorfenuron				1			*
Garlic oil	*						*
Gibberellic acid	3	2	2	1	1	17	3
Gibberellins A4A7	2		5	3	1	8	2
Harpin protein	*	*	*				*
Hexadecenal	*						*
Hexadecenyl acetate	*						*
Hydantoin, dimethyl	*						*
Hydantoin, methyl	*						*
Hydrogen peroxide	3	3	6	9	7	8	5
Indolebutyric acid	2		1			20	2
Iron phosphate	2		*	2			1
Maleic hydrazide				1			*
Metaldehyde	16	4	2	7	1	9	6
Metam-potassium	*				1		*
Metam-sodium	1						*
Methyl bromide	5			2			1
Monocarbamide dihyd.						8	1
NAA	1						*
NAD				1			*
Nerolidol	1					8	1
PT807-HCl				1			*
Paclobutrazol	11	2	34	6	21	11	14
Pelargonic acid	2		2	1	1		1
Sodium chlorate						1	*
Sodium hypochlorite	1					*	*
Spirodiclofen		*					*
Strychnine	1						*
Sulfaquinoxaline	*						*
Thidiazuron	1						*
Trinexapac-ethyl					1		*
Uniconazole	5	*	16	3	3	10	6
Warfarin	*						*
Z-8-Dodecanol	*						*
Z-8-Dodecen acetate	*						*
Zinc phosphide				1			*

* Less than 0.5 percent.

Cut Flowers:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
2,4-D, BEE				4			*
Bensulide	1						*
Bromoxynil			12				1
Butoxyethyl triclopy				4			*
Clethodim	1			4			1
DCPA	2						1
Diquat dibromide	5						3
Diuron	1			4			1
Fluazifop-P-butyl	1					3	1
Flumioxazin						81	8
Glufosinate-ammonium	1						*
Glyphosate	1						*
Glyphosate iso. salt	14		51	15	28	81	24
Isoxaben	4		5	14	28	8	7
Linuron	2			4			2
Metolachlor	1						*
Napropamide	1			10			2
Oryzalin	5		7	18			6
Oxadiazon	5					8	4
Oxyfluorfen	2					8	2
Paraquat	2						1
Pendimethalin			5			8	1
Prodiamine	1					8	1
Prometryn	1						*
S-Metolachlor	1		7				1
Sethoxydim	1					4	1
Simazine	1						1
Sulfosulfuron					5		*
Trifluralin	2		12		28		4
Insecticides							
Abamectin	50		7		31	11	35
Acephate	58	100	25	23	47	15	48
Acetamiprid	21		7	9			15
Aluminum phosphide	2						1
Azadirachtin	24			4	5	8	17
Beauveria bassiana	6			9			5
Bendiocarb	1			5			1
Bifenazate	24		7	4	22		18
Bifenthrin	9			9	5	11	8
Bt subsp israelensis	1			4			1
Bt subsp. aizawai	7						5
Bt subsp. kurstaki	15					11	11
Buprofezin	14						9

See footnote(s) at end of table.

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Cut Flowers:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Carbaryl			39	4			3
Chlorfenapyr	10		7				7
Chlorpyrifos	14	100	5	5		8	13
Cinnamaldehyde	1						*
Clofentezine					5		*
Clothianidin			7				*
Cryolite	1						1
Cyfluthrin	11			5	20	8	10
Cyromazine	20						13
Diazinon	13			9	35		12
Dicofol	1			4			1
Dienochlor	1						1
Diflubenzuron	2			5		8	3
Dimethoate	3		12	5			3
Dinotefuran	14		7		14		10
Disulfoton	1						*
Emamectin benzoate	1						*
Endosulfan	1			4		8	2
Esfenvalerate	1		7				1
Ethyl parathion	1						*
Etoxazole	15		7		7	8	11
Fenbutatin-oxide	2						1
Fenoxycarb				4			*
Fenpropathrin					7		*
Fenpyroximate	4						2
Flonicamid	5			4	7		4
Fluvalinate	11			4	19		8
Hexythiazonx	6			4			4
Imidacloprid	11		7	9	21	15	12
Kinoprene	3						2
Lambda-cyhalothrin	10		7				7
Malathion	7	100			7		7
Methiocarb	15						10
Methomyl	1	100					3
Naled	3						2
Neem oil, clar. hyd.	3						2
Novaluron	9			4	7		7
Oxamyl	1					4	1
Oxythioquinox	1						1
Permethrin	16		15				11
Petroleum distillate	12					4	8
Petroleum oil	1					8	1
Phorate	1						1
Piperonyl butoxide	9			4			6

See footnote(s) at end of table.

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Cut Flowers:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Potassium salts	14			4	15		11
Propargite	1						*
Pymetrozine	28			4	7		18
Pyrethrins	9			4			6
Pyridaben	5				13	8	5
Pyridine	18			4	15		13
Rotenone	1						1
S-Kinoprene	1					8	1
Spinosad	48			9	34	15	35
Spiromesifen	11		7				7
Thiamethoxam	4						2
Thiodicarb	1						*
Fungicides							
Azoxystrobin	23			5	5	81	23
Bacillus pumilus	1						*
Bacillus subtilis	1						*
Bacillus subtilus	8						5
Basic copper sulfate	1						*
Borax decahydrate	1						*
Butanone	1			4		81	9
Calcium polysulfide					28		2
Captan	5		12	4			4
Chlorothalonil	22	100	19	15	40	8	23
Copper amm. complex	1						*
Copper hydroxide	8	100	5	11		11	10
Copper resinate	1						*
Copper sulfate	8			14	5		7
Cymoxanil	1						*
Dicloran	1						*
Dimethomorph	18					81	19
Dinocap	1						*
Etridiazole	2			5	5	11	4
Famoxadone	1						*
Fenarimol	8						5
Fenhexamid	19			13	15		14
Fludioxonil	14						9
Flutolanil	1		7				1
Fosetyl-al	28			16		4	20
Iprodione	41		12	19			29
Kresoxim-methyl	3				8		3
Mancozeb	28	100	12	23	40	81	34
Maneb	2						1
Mefenoxam	28			4	7	89	27

See footnote(s) at end of table.

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Cut Flowers:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Metalaxyl	4			8			3
Milban	2						1
Myclobutanil	26		7				17
PCNB	13			4	7		9
Phosphorous acid	1			4	5		1
Piperalin	24			4			16
Potassium bicarbon.	9			4			6
Propamocarb hydroch.				4			*
Propiconazole	10					81	14
Streptomyces lydicus	1						1
Streptomycin	1						1
Sulfur	18						11
Thiabendazole (TBZ)	1						*
Thiophanate	9			12	16		8
Thiophanate-methyl	21	100	12	16	5	11	19
Triadimefon	4			4			3
Trichoderma harz.	1						1
Trifloxystrobin	15			4		81	18
Triforine	1				7		1
Vinclozolin	2						1
Other Chemicals							
Acequinocyl	10		7				6
Alk. dim. benzyl 60%	1						*
Alk. dim. ethbz. am.	1						*
Aminopyridine	1						*
Ancymidol					5		*
Bromadiolone	1						*
Chlormequat chloride	1				7	8	2
Chloropicrin	6						4
Daminozide	7				20	8	6
Dazomet	1						1
Decenol	1						*
Decenyl acetate	1						*
Dichloropropene	1						1
Diphacinone	1						*
Dodecadien-1-ol	1						*
E-8-Dodecenyl acetat	1						*
Ethephon	1				11	8	2
Gibberellic acid	5						3
Hexadecenal	1						*
Hexadecenyl acetate	1						*
Hydrogen peroxide	2				5		2
Indolebutyric acid	1						1

See footnote(s) at end of table.

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Cut Flowers:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
Iron phosphate	1						*
Metaldehyde	9			14		8	8
Metam-potassium	1						*
Metam-sodium	2						1
Methyl bromide	8			5			5
NAA	1						1
Paclobutrazol	3					8	3
Sodium hypochlorite	1					4	1
Strychnine	1						1
Sulfaquinoxaline	1						*
Uniconazole						8	1
Warfarin	1						*
Z-8-Dodecanol	1						*
Z-8-Dodecen acetate	1						*

* Less than 0.5 percent.

Flowering Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
2,4-D, dimeth. salt				2			*
2,4-DP, dimeth. salt				2			*
Ammonium benzadox			2				*
Atrazine		1					*
Benefin						12	2
Bromoxynil				2			*
Clethodim	1						*
Clopyralid	*			2			*
DCPA						1	*
Dicamba, sodium salt						1	*
Dichlobenil					1		*
Diflufenzopyr-sodium						1	*
Diquat dibromide	12				1	12	5
Flumioxazin	10					13	4
Glufosinate-ammonium					1		*
Glyphosate	*			2			*
Glyphosate iso. salt	10	1	5	2	5	12	7
Glyphosate pot. salt	1						*
Halosulfuron	1						*
Isoxaben	6			4	1	13	4
Linuron	1						*
MCPP, DMA salt				2			*
Metolachlor				2			*
Napropamide	*			2			*
Oryzalin	7			18	1	12	5
Oxadiazon	6	6				13	5
Oxyfluorfen	6	1			1	14	4
Paraquat			2	5			1
Pendimethalin	4	1				14	3
Prodiamine	6			2		13	4
Sethoxydim						1	*
Simazine				2			*
Sulfosulfuron		10	2				2
Triasulfuron						1	*
Triclopyr	1						*
Trifluralin	7				1	14	4
Insecticides							
Abamectin	31	44	44	20	26	43	35
Acephate	42	32	45	27	20	64	39
Acetamiprid	18	6	9	4	3	5	8
Azadirachtin	12	5	12	7	2	13	8
Beauveria bassiana	4	2	7	5	2	1	3
Bendiocarb					5		1

See footnote(s) at end of table.

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Flowering Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Benzoic acid	*						*
Bifenazate	14	15	12	4	5	39	16
Bifenthrin	23	33	27	27	6	14	20
Bt subsp israelensis	5		3	9	1	49	11
Bt subsp. aizawai	4						1
Bt subsp. kurstaki	9	6	2	9		15	7
Buprofezin	5				*	1	1
Carbaryl	6	4		7	1	1	3
Carbofuran		2					*
Chitin				2			*
Chlorfenapyr	6	2	6	2	4		4
Chlorpyrifos	26	2	13	8	9	39	18
Cinnamaldehyde	*				1	1	*
Clofentezine		4	10	2		1	2
Clothianidin			11				2
Cyfluthrin	13	14	10	14	11	13	12
Cypermethrin				2			*
Cyromazine	7	2	4	6	1		3
Deltamethrin	1						*
Diazinon	3	1	2	2	1	26	6
Dichlorvos					3		1
Dicofol	1	1	3				1
Dienochlor	10		2	2			2
Diflubenzuron	5		4	6		1	2
Dimethoate	3	8				1	2
Dinotefuran	23	10	2	13	12	14	13
Disulfoton				3			*
Endosulfan		10	13	4	9	2	7
Esfenvalerate				5			*
Ethoprop				2			*
Ethyl parathion	*						*
Etoxazole	11	11	4	2	1	14	7
Fenbutatin-oxide			4		1	1	1
Fenoxycarb	10	1	3				3
Fenpropathrin	7	4	14	9	1	2	5
Fenpyroximate	5		4	5		1	2
Flonicamid	5			2	1		1
Fluvalinate	16	6	17	9	1	2	8
Hexythiazonx	12	9	4	4	1	12	7
Hydramethylnon	10						2
Imidacloprid	22	37	30	16	40	15	28
Jojoba oil	4						1
Kinoprene	2						*
Lambda-cyhalothrin	3			2			1

See footnote(s) at end of table.

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Flowering Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Lindane	1						*
Malathion	10	4	2	13	3	1	5
Methiocarb	14	4	5	8	3		6
Methomyl	5		2				1
Naled	*						*
Neem oil, clar. hyd.	4	1					1
Novaluron	2	1	9	2	4		3
Octacide-264				2			*
Permethrin	18	1		4	1		4
Petroleum distillate	17	4		2	1	1	5
Petroleum oil						1	*
Piperonyl butoxide	3		2	2	2	1	2
Potassium salts	9	1		12	8	49	14
Pymetrozine	15	1	16	14	25	13	15
Pyrethrins	6			4	2	1	2
Pyridaben	9	5	4	9	4	14	7
Pyridine	18	7	5	12	4	1	7
Rotenone	2			2			*
S-Kinoprene	6		14	4	2	1	4
Sesame Oil		4					1
Silicon dioxide						1	*
Spinosad	25	27	24	15	32	14	24
Spiromesifen	4	1	10	7	5	1	4
Thiamethoxam	14	1	11	2	2	12	8
Fungicides							
Azoxystrobin	20	10	9	17	2	14	11
Bacillus pumilus	*						*
Bacillus subtilus	6	1		2	2		2
Basic copper sulfate	*						*
Benomyl				2		1	*
Boscalid	*						*
Butanone	4	1	7	2	11	1	5
Captan		5	2	2	2	13	4
Chloroneb	1			2	1		1
Chlorothalonil	25	13	29	15	7	13	16
Copper (metallic)						1	*
Copper amm. complex		2					*
Copper hydroxide	14	14	2	2		2	6
Copper oxide	*						*
Copper oxychlo. sul.	1						*
Copper oxychloride	*						*
Copper resinate	8				1		2
Copper sulfate	10	11	12	12	10	13	11

See footnote(s) at end of table.

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Flowering Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Cymoxanil	1						*
Dicloran	1						*
Dimethomorph	7		6	5			2
Dodine				2			*
Etridiazole	3	18	24	4	26	3	14
Famoxadone	1						*
Fenarimol	4	2	2				1
Fenbuconazole				2			*
Fenhexamid	14	5	15	18	12	37	17
Ferbam		1					*
Fludioxonil	15	3	9	20	8	2	8
Flutolanil	*						*
Fosetyl-al	23	11	4	5	2	14	10
Iprodione	20	5	16	7	3	13	11
Kresoxim-methyl	4		2		*		1
Mancozeb	15	34	8	9	3	1	12
Maneb	*						*
Mefenoxam	33	20	30	15	19	40	27
Metalaxyl	8	2	3	2	2	1	3
Metiram		7					1
Milban	1						*
Myclobutanil	20	1	9	2	8		8
PCNB	11	5	14	7	1	13	8
Phosphorous acid	4				*		1
Piperalin	10				1	1	2
Potassium bicarbon.	4	1			6		2
Propamocarb hydroch.			2				*
Propiconazole	17	6	2				5
Pyraclostrobin	2						*
Streptomyces lydicus	2			2	1		1
Streptomycin	11	1		2	*		3
Streptomycin sulfate					1		*
Sulfur	4	1					1
Thiabendazole (TBZ)	1		8			12	4
Thiophanate	14	33	20	17	23	12	20
Thiophanate-methyl	28	27	32	13	19	3	20
Thiram					1		*
Triadimefon	3		2	5	2		2
Trichoderma harz.	5	1	8	4	3	1	3
Trifloxystrobin	10	6	8	13	3		6
Triflumizole		9					1
Triforine			2	2	1	1	1
Vinclozolin	*						*
Ziram				2			*

See footnote(s) at end of table.

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Flowering Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals							
Acequinocyl	6		3				2
Acibenzolar-S-Methyl	*						*
Alk. dim. benzyl 50%				4		1	*
Alk. dim. benzyl 60%	5	2		6		1	2
Alk. dim. eth. benz.	5			6		1	2
Alk. dim. ethbz. am.	*	2					*
Alkyl. dim. benz. am	1						*
Amm. Soap Fatty Acid	*						*
Ancymidol	1		4	5	2		2
Benzyladenine	5		11	9	1	12	5
Bromadiolone	3						1
Chlormequat chloride	11	2	22	18	17	39	18
Chloropicrin	1			2			*
Cyclopropene,1-methy	2						*
Daminozide	17	3	26	11	27	40	22
Decyldimethyloctyl	1						*
Didecyl dim. ammon.	1						*
Dikegulac-sodium	1	1				12	3
Dimethyldioctyl	1						*
Diphacinone	4						1
Ethephon	9	1	22	11	31	13	16
Farnesol	2					12	3
Fatty acids				2			*
Flurprimidol			2				*
Garlic oil	1						*
Gibberellic acid	4	1		5		26	6
Gibberellins A4A7	5		11	9	1	12	5
Harpin protein	*						*
Hydantoin, dimethyl	*						*
Hydantoin, methyl	*						*
Hydrogen peroxide	4	3	4	5	1	13	5
Indolebutyric acid	2						*
Iron phosphate	1						*
Metaldehyde	22	6	2	4	1	2	7
Metam-potassium					1		*
Methyl bromide	3			2			1
Monocarbamide dihyd.						12	2
Nerolidol	2					12	3
Paclobutrazol	11	7	17	12	23	15	15
Pelargonic acid	1			2			*
Uniconazole	7	2	10	4	4	13	7

* Less than 0.5 percent.

Bedding Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
Ammonium benzadox			1				*
Chlorsulfuron					1		*
Dicamba, dimet. salt	1						*
Dicamba, sodium salt						1	*
Dichlobenil	2						*
Diquat dibromide	14					9	3
Flumioxazin	4					9	2
Glufosinate-ammonium						*	*
Glyphosate				2			*
Glyphosate iso. salt	25			5	4	9	6
Halosulfuron	2						*
Imazamethabenz	2						*
Isoxaben	9		1		1	10	3
Linuron	1						*
MCPA, dimethyl. salt	1						*
Napropamide	1						*
Oryzalin	13		1	3	2	*	2
Oxadiazon	5		1			30	7
Oxyfluorfen	5		1		1	10	3
Paraquat			1	3		1	1
Pendimethalin	8				1	10	3
Prodiamine	4				1	9	3
Sulfosate					*		*
Sulfosulfuron			1	2	1		1
Triasulfuron						1	*
Triethylamine triclo	1						*
Trifluralin	6				1	9	3
Insecticides							
Abamectin	59	26	43	23	27	13	32
Acephate	50	48	37	39	15	14	28
Acetamiprid	17	8	8	2	3	1	6
Aldicarb					1		*
Azadirachtin	22	10	15	11	9	12	13
Azinphos-methyl				2			*
Beauveria bassiana	4	6	3	3	2		2
Bendiocarb				1	1		*
Bifenazate	13		11	1	11	10	10
Bifenthrin	31	35	14	18	13	3	14
Bt subsp israelensis	7			6	3		2
Bt subsp. aizawai	15						1
Bt subsp. kurstaki	28	18	1	6	2	31	11
Buprofezin	2	4			2		1
Canola oil				1	3		1

See footnote(s) at end of table.

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Bedding Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Carbaryl	1		3	2	5	10	5
Chlorfenapyr	7	13	3	2	3		3
Chlorpyrifos	27		11	5	6	11	10
Cinnamaldehyde	1		1	3			1
Clofentezine			3	2	*		1
Clothianidin			3				1
Cyfluthrin	18	17	11	6	13	10	12
Cypermethrin					*		*
Cyromazine	5		3				1
Deltamethrin	5						*
Diazinon	8		2	4	2		2
Dichlorvos			*				*
Dicofol	5		1		1		1
Dienochlor	5		1		1		1
Diflubenzuron	7		5	3	2	2	4
Dimethoate						37	8
Dinotefuran	13		4	9	10	11	8
Disulfoton						*	*
Endosulfan			10	4	10	1	6
Esfenvalerate	1						*
Ethyl parathion	2						*
Etoxazole	5	4	2	2	1	1	2
Fenbutatin-oxide	1		*			10	2
Fenoxycarb	6		5	3	4		3
Fenpropathrin	8		13	7	1	11	8
Fenpyroximate	4		2				1
Flonicamid			1	4	1	9	3
Fluvalinate	26	27	3	4	2		5
Hexythiazonx	7	5	2		*	9	4
Hydramethylnon	3					*	*
Imidacloprid	33	30	41	27	41	30	37
Jojoba oil	6						1
Kinoprene	1		1	1	1	10	3
Lambda-cyhalothrin	7						1
Lindane					*		*
Malathion	15	9	4	10	3	1	5
Methiocarb	11	5	5	4	2	10	6
Methomyl			1				*
Methoxychlor	2						*
Neem oil, clar. hyd.	6			3	*	1	1
Nicotine			1		3		1
Novaluron	4		2		6		3
Octacide-264		18	3	3	1		2
Oxamyl			2				1

See footnote(s) at end of table.

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Bedding Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Oxythioquinox			1				*
Permethrin	22		2	2	*	*	3
Petroleum distillate	11	8	1	7	5	24	9
Petroleum oil			1			1	*
Phenothrin					1		*
Piperonyl butoxide	8	18	11	5	6	24	12
Potassium salts	12		6	19	10	37	15
Pymetrozine	28	13	9	11	22	1	13
Pyrethrins	17	18	11	8	10	24	14
Pyridaben	11	5	5	1	3	1	4
Pyridine	20	9	6	9	9	31	14
Resmethrin			*		1		*
Rotenone	4			2	1		1
S-Kinoprene	7		4	14	1	1	3
Sesame Oil					*		*
Silicon dioxide			*		*		*
Spinosad	39	18	30	17	42	11	29
Spiromesifen	12	5	2	2	2	9	5
Sulfotepp			1		3		1
Thiamethoxam	10	10	5	2	5	9	6
Fungicides							
Anilazine			1				*
Azoxystrobin	43	28	5	10	2	10	10
Bacillus subtilis	2						*
Bacillus subtilus	6		1	1	4	9	4
Bas copper zinc sulf				2			*
Basic copper sulfate		4					*
Benomyl	6						1
Boscalid			1				*
Butanone	4		4	5	8	9	6
Calcium polysulfide			1	3			*
Captan	1	5	3	1	3	1	3
Chlorothalonil	44	12	23	17	11	13	18
Copper (metallic)					1		*
Copper hydroxide	27	18			1	11	6
Copper octanoate	2						*
Copper oxychlo. sul.	1						*
Copper resinate	6	10	4	4	1	9	4
Copper sulfate	27	13	8	6	9	11	11
Cyprodinil	1						*
Dicloran					1		*
Dimethomorph	31	14	1		1	9	6
Etridiazole		7	22	14	30	12	19

See footnote(s) at end of table.

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Bedding Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Fenarimol	1			2			*
Fenhexamid	31	5	14	17	23	10	17
Fludioxonil	23	18	14	11	14	11	14
Flutolanil			1				*
Fosetyl-al	42	33	5	6	2	11	10
Iprodione	32	24	12	14	4	22	14
Kresoxim-methyl	2		2				1
Mancozeb	42	22	4	7	4	10	9
Maneb	2						*
Mefenoxam	42	19	16	18	17	12	18
Metalaxyl	16	10	2	1	7		4
Myclobutanil	25		3	3	8		6
Oxycarboxin				3			*
PCNB	16	9	6	5	2	10	7
Phosphorous acid	8						1
Piperalin	8			2	1	9	3
Potassium bicarbon.	4	6		1	2		1
Propamocarb hydroch.					1		*
Propiconazole	23	5			*	10	4
Pseudo. fluores A506	2						*
Pyraclostrobin	2						*
Sodium Percarbonate					1		*
Streptomyces gris.	2						*
Streptomyces lydicus					1		*
Streptomycin	15						1
Streptomycin sulfate					1		*
Sulfur	1				1	1	1
Thiabendazole (TBZ)	2		1			9	2
Thiophanate	24	25	27	11	23	11	21
Thiophanate-methyl	36	12	24	15	13	13	19
Triadimefon	7			1	*		1
Trichoderma harz.	9	6	3		1		2
Trifloxystrobin	16	5	8	4	1	9	7
Triforine			*			1	*
Vinclozolin	2		2	1	1		1
Ziram	4						*
Other Chemicals							
Acequinocyl	2			1			*
Alk. dim. benzyl 50%						*	*
Alk. dim. benzyl 60%	5		*	3		10	3
Alk. dim. eth. benz.	1			3		*	*
Alk. dim. ethbz. am.	4		*			9	2
Ancymidol	15		6	6	3	*	5

See footnote(s) at end of table.

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Bedding Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
Benzyladenine	2		4	2			2
Butenoic Acid Hydro.	2						*
Capsaicin				3			*
Chlormequat chloride	31	8	16	13	10	11	14
Chloropicrin	3						*
Daminozide	36	21	35	24	21	13	25
Decenol	1						*
Decenyl acetate	1						*
Dichloropropene	1						*
Diphacinone	5						*
E-8-Dodecenyl acetat	1						*
Ethephon	14	5	19	6	23	10	17
Gibberellic acid			1		2		1
Gibberellins A4A7	2		4	2			2
Hydrogen peroxide	1	19	5	5	8		5
Indolebutyric acid			1			24	5
Iron phosphate	5						*
Maleic hydrazide				3			*
Metaldehyde	14			3		10	4
Methyl bromide	3						*
Paclobutrazol	30	19	39	9	20	11	24
Pelargonic acid	2				2		1
Sodium chlorate						1	*
Sodium hypochlorite	3						*
Strychnine	1						*
Thidiazuron	2						*
Uniconazole	16		19	5	2	11	11
Z-8-Dodecanol	1						*
Z-8-Dodecen acetate	1						*

* Less than 0.5 percent.

Foliage Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
Alachlor						2	*
Atrazine						2	*
Benefin		*				18	3
DCPA		1					*
Dicamba		1					1
Diquat dibromide	7						*
Dithiopyr	2						*
Diuron	2						*
Flumioxazin						18	3
Glufosinate-ammonium		1					*
Glyphosate iso. salt	8	12				18	11
Imazethapyr		1					1
Isoxaben		4			3	20	5
Napropamide	2						*
Oryzalin	2	1				18	3
Oxadiazon		1				18	3
Oxyfluorfen		1				20	3
Pendimethalin		*				20	3
Prodiamine		2				18	4
S-Metolachlor	3						*
Sulfosulfuron		2					1
Trifluralin		3			3	18	5
Vernolate		*					*
Insecticides							
Abamectin	60	41	45	6	10	20	35
Acephate	61	53	36	5	8	77	51
Acetamiprid	46	4	14	6			6
Azadirachtin	20	2	4			20	5
Beauveria bassiana					14		1
Bendiocarb		2			2		1
Benzoic acid		*					*
Bifenazate	49	16	8		5	18	16
Bifenthrin	15	26	26	11	31	20	24
Bt subsp israelensis	6	1					1
Bt subsp. aizawai		1					*
Bt subsp. kurstaki	4	10		6		76	17
Buprofezin	6	1					1
Carbaryl		27		6		2	18
Chlorfenapyr	8	7					5
Chlorpyrifos	38	17		6	15		14
Cinnamaldehyde					14		1
Clofentezine		4	12				3
Clothianidin			8				*

See footnote(s) at end of table.

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Foliage Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Cyfluthrin	25	10	13	23	5	20	13
Cyromazine		*					*
Diazinon	9	7					5
Dicofol		5				1	3
Dienochlor					2		*
Diflubenzuron	4	2	10				2
Dimethoate	5	12		5			8
Dinotefuran	41	6	18		9	94	21
Endosulfan		8	4	5			5
Esfenvalerate		1					1
Etoxazole	25	3		9		20	7
Fenbutatin-oxide		5					3
Fenpropathrin	2	5	19				4
Fenpyroximate	8	1					1
Flonicamid	8			6			1
Fluvalinate	29	8			2		7
Hexythiazonx	21	9	8			18	10
Hydramethylnon		*					*
Imidacloprid	39	17	29	31	22	18	20
Isofenphos		1					1
Kinoprene	21						1
Lambda-cyhalothrin	4						*
Malathion	5	8		11	3	1	6
Methidathion		7					4
Methiocarb	2	4	4		1		3
Naled		4					2
Neem oil, clar. hyd.		6					4
Novaluron	9	1	10		8		2
Octacide-264		1	10				1
Permethrin	18	1		9	9		3
Petroleum distillate	30	7					6
Piperonyl butoxide	7	1	10		2		2
Potassium salts	17	4			6	76	15
Pymetrozine	12	1	10		3		2
Pyrethrins	13	1	10		2		2
Pyridaben	8	3	18		2	18	6
Pyridine	5	8	13	15			6
Rotenone	6						*
S-Kinoprene		1		15	2		1
S-Methoprene		*					*
Spinosad	22	11	32	17	5		10
Spiromesifen	13	3	17				3
Thiamethoxam	19	2	8		2		3

See footnote(s) at end of table.

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Foliage Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides							
Azoxystrobin	4	11		11	2	18	10
Bacillus subtilus		*		6			*
Butanone			8		5		1
Calcium polysulfide		*					*
Captan	2	3					2
Chlorothalonil	15	33	18	5	8	18	26
Copper amm. complex		*					*
Copper hydroxide	2	45				18	31
Copper resinate	2	8				18	8
Copper sulfate	5	9	10				6
Dimethomorph		1					*
Etridiazole		11	24		7		9
Fenhexamid	7	1	13	15	3		2
Fludioxonil	11	8		21	3	18	9
Flutolanil		1		9			1
Fosetyl-al	10	12					9
Iprodione	12	12	18	9			9
Mancozeb		45		5		20	32
Maneb		1					1
Mefenoxam	34	19	34	6	7	19	19
Metalaxyl		4					2
Metiram		2					1
Mono-potassium salt		1					*
Myclobutanil	9	*		6	3	18	4
PCNB	2	5	18	9		18	7
Phosphorous acid	5	1	8				1
Potassium bicarbon.	2				4		1
Propamocarb hydroch.		*					*
Propiconazole		3				18	4
Sodium Percarbonate					2		*
Streptomyces lydicus			10				*
Streptomycin		8					5
Sulfur		1					1
Thiabendazole (TBZ)	2	1	4			18	4
Thiophanate	23	35	26		8	18	28
Thiophanate-methyl	25	18	24	11	5	1	15
Triadimefon		1		6			1
Trichoderma harz.	4	2				1	1
Trifloxystrobin	8	2					2
Vinclozolin		*					*
Other Chemicals							
Acequinocyl	13	1					1
Alk. dim. benzyl 50%		2					1

See footnote(s) at end of table.

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Foliage Plants:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
Alk. dim. benzyl 60%	4	3					2
Alk. dim. eth. benz.		2					1
Alk. dim. ethbz. am.		1					1
Ancymidol			10				*
Chlormequat chloride	2	1	26	21			2
Daminozide	6	1	26	6			2
Dialkyl meth. benzy.	4						*
Ethephon		2	26	17		2	3
Farnesol	2					18	3
Gibberellic acid	2	2	8				2
Harpin protein		*					*
Hydrogen peroxide	2	2	10		5		2
Iron phosphate	2			11			*
Metaldehyde	14	5		6		2	4
Nerolidol	2					18	3
Paclobutrazol	2	*	33		5	2	2
Pelargonic acid	8						*
Uniconazole	2		14				1

* Less than 0.5 percent.

Floriculture Propagation Material:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
Ammonium benzadox			10				2
Clethodim				7			1
Fluazifop-P-butyl						4	1
Glyphosate iso. salt	22			15			5
Imazethapyr, ammon.			12				2
Isoxaben				7		4	2
Oryzalin						4	1
Oxadiazon			17			67	21
Oxyfluorfen				7			1
Pendimethalin				22			3
Prodiamine						4	1
S-Metolachlor				7		4	2
Simazine				7		4	2
Trifluralin						4	1
Insecticides							
Abamectin	19	71	10	19	16	4	18
Acephate	7	11	10	35		4	9
Acetamiprid	7	18		12			4
Azadirachtin	7		22	16	5		7
Beauveria bassiana		19	10	8			4
Bifenazate		18	18		12	4	8
Bifenthrin	6	41		12	15	4	10
Bt subsp israelensis				15			2
Bt subsp. kurstaki		33	10	8		4	7
Buprofezin				8			1
Carbaryl		14					1
Chlorfenapyr	7	19	10	8		4	6
Chlorpyrifos	6	18			16	6	8
Clofentezine		11	10				3
Clothianidin		18					2
Cyfluthrin		18	24	12	20		11
Cyromazine					5		1
Dicofol		15					1
Diflubenzuron				8		4	2
Dimethoate						4	1
Dinotefuran		18		28	12		8
Endosulfan		18	10		16		7
Etoxazole			10			4	3
Fenoxycarb			10			4	3
Fenpropathrin			14	12			4
Fenpyroximate			10			4	3
Flonicamid						4	1
Fluvalinate				12		4	3

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Floriculture Propagation Material:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Hexythiazonx	7		10	12			4
Imidacloprid		33	10	12	12		9
Lambda-cyhalothrin			10				2
Methiocarb		32	18	7			7
Novaluron			10				2
Oxamyl			10				2
Permethrin	7			12			3
Petroleum distillate		19					2
Potassium salts		19	19	20	5		8
Pymetrozine			10	8		7	5
Pyridaben			10				2
Pyridine	7		10	12			4
Resmethrin	6						1
S-Kinoprene		15		12	4		4
Spinosad	14	18	18	15	16	8	14
Spiromesifen		11	10			4	4
Thiamethoxam	7		10	7		4	5
Fungicides							
Anilazine			17				3
Azoxystrobin	6	48	24	27		4	14
Bacillus subtilus	7	18		20			5
Captan	6			7			2
Chlorothalonil	6	18	10	15	9	21	14
Copper hydroxide		73		15			9
Copper resinate	18		10		5		5
Copper sulfate	6	14	10	8	12		7
Dimethomorph				7	5	4	3
Etridiazole		18	27	12	16		11
Fenarimol			10				2
Fenhexamid				27	53		14
Fludioxonil		18	10	20	5		7
Flutolanil				12			2
Fosetyl-al	7			7			2
Iprodione	12	32		27			9
Mancozeb	6	25	10	7	16	11	12
Mefenoxam	6	18	10	12	12	4	9
Metalaxyl	7			7			2
Myclobutanil	7					4	2
Oxycarboxin				8			1
PCNB		32		12			5
Phosphorous acid			10		5		2
Piperalin				8			1
Potassium bicarbon.			10				2

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Floriculture Propagation Material:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Propiconazole		19		7		11	6
Streptomyces lydicus			10				2
Streptomycin		14					1
Sulfur	6						1
Thiophanate	7	19	30	27	16	7	16
Thiophanate-methyl	6	44	27	19	21	8	18
Triadimefon	16						2
Trifloxystrobin	7	32	10			4	7
Other Chemicals							
Alk. dim. benzyl 60%	24						3
Alk. dim. eth. benz.	24						3
Ancymidol	7			8	5		3
Chlormequat chloride	6		10	16	9		6
Chloropicrin	6						1
Daminozide	12		10	16	5		6
Ethephon	6		10	16	44		13
Forchlorfenuron				8			1
Hydrogen peroxide			10	31			6
Metaldehyde		14					1
Methyl bromide	19						3
Paclobutrazol	12	18	10		10		7
Uniconazole			10				2

Cut Cultivated Greens:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
2,4-D, BEE				20			1
Butoxyethyl triclopy				20			1
Dichlobenil		1					1
Diquat dibromide	22						1
Diuron		1					1
Glyphosate iso. salt		4		67			8
Halosulfuron	11						1
Norflurazon		1					1
Oxadiazon		2				100	3
Prodiamine		4					3
Simazine		1		10			1
Insecticides							
Abamectin	47	6					8
Acephate	44	21		10			21
Azadirachtin	11				26		1
Beauveria bassiana	21						1
Bifenazate	11	20					17
Bifenthrin		10				100	9
Bt subsp. aizawai	21						1
Bt subsp. kurstaki	11	6					6
Carbaryl		49					40
Chlorfenapyr	11						1
Chlorpyrifos	33	45					39
Cyfluthrin	22	6	100				8
Cyromazine	34						2
Dicofol		16					13
Dicrotophos		3					2
Diflubenzuron		19					16
Dimethoate		21					18
Dinotefuran	12	1					2
Endosulfan		38					31
Ethoprop		3					2
Ethoxy sec. alcohols		1					1
Etoxazole		3					2
Fenamiphos		1					1
Fenbutatin-oxide		16					13
Flonicamid	11						1
Fluvalinate	22	6					6
Hexythiazonx		3					3
Imidacloprid		4			74		5
Malathion	12	4					4
Methiocarb		1					1
Myrothecium verruc.		1					1

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Cut Cultivated Greens:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Neem oil, clar. hyd.		1					1
Novaluron	11						1
Permethrin		42					34
Petroleum distillate		1		35		100	4
Pymetrozine	23						1
Pyridine	12						1
Spinosad	46	20					19
Fungicides							
Azoxystrobin	20						1
Bacillus subtilus	11						1
Boscalid				10			1
Captan	10						1
Chloroneb		3					2
Chlorothalonil	21	43					37
Copper hydroxide	11	2		10			3
Copper resinate		3		13			3
Copper sulfate	22	1	100				4
Dimethomorph	10						1
Etridiazole				10			1
Fenhexamid	31						2
Fludioxonil	10	1					1
Flutolanil		1					1
Fosetyl-al	21	3		10			4
Iprodione	33						2
Kresoxim-methyl	10						1
Mancozeb	32	80		10			68
Mefenoxam	11						1
Metiram		2					1
Myclobutanil	11			10			1
PCNB	11	3					3
Piperalin	11						1
Potassium bicarbon.	11						1
Propiconazole	12	13					12
Pyraclostrobin				10			1
Streptomycin sulfate		3					2
Sulfur	22	4					4
Tebuconazole		57					47
Thiophanate	10	39					33
Thiophanate-methyl	21	17		10			16
Triadimefon	10						1
Trifloxystrobin	11						1

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Cut Cultivated Greens:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals							
Acequinocyl		1					1
Chloropicrin	10						1
Daminozide	21						1
Hydrogen peroxide		3					2
Metaldehyde	11						1
Methyl bromide	10						1
Paclobutrazol	9					100	2
Spirodiclofen		3					2

Herbaceous Perennials:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
Benefin	6						*
Clethodim				3			*
Dichlobenil			4				1
Fluazifop-P-butyl			2				*
Flumioxazin						5	2
Glufosinate-ammonium				4			*
Glyphosate iso. salt	26		2	3		2	3
Halosulfuron				3			*
Isoxaben			16	7	6	1	6
Oryzalin	6		6	4	3		2
Oxadiazon				7		2	1
Oxyfluorfen	15		2	7	3	1	3
Paraquat			4				1
Pendimethalin	21		2			1	2
Prodiamine				7		1	1
S-Metolachlor						1	*
Sethoxydim				3			*
Sulfosulfuron				3			*
Trifluralin			12	7	4		4
Insecticides							
Abamectin	46		10	10	47	9	20
Acephate	26	29	22	21	23	5	16
Acetamiprid	21		9	16		2	5
Azadirachtin	28			12	5	3	5
Beauveria bassiana			2	7	4		2
Bifenazate	6	17	10	9	21	17	15
Bifenthrin	21	17	14	23	6	2	9
Bt subsp israelensis	7		2	12	5		3
Bt subsp. kurstaki	14			3		2	2
Buprofezin	12						1
Carbaryl			13	4	2		3
Chlorfenapyr	12		2	7	16		5
Chlorpyrifos	21		26	20		3	9
Cinnamaldehyde				3			*
Clofentezine				3	6	1	2
Clothianidin			3	7		1	1
Cyfluthrin	26		4	9	21	3	9
Cyromazine	29			3	3	1	3
Diazinon				7			1
Dicofol						1	*
Dienochlor	6			3	2		1
Diflubenzuron			2		10		3
Dimethoate			2				*

See footnote(s) at end of table.

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Herbaceous Perennials:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Dinotefuran	17			13	22	1	7
Endosulfan			6		6	1	3
Ethoprop				3			*
Ethoxy sec. alcohols					3		1
Etoxazole	6	17		7	6	2	4
Fenamiphos			2	3			1
Fenoxycarb				3			*
Fenpropathrin		17			6	1	3
Fenpyroximate	6			3		16	7
Fluvalinate	35					2	3
Hexythiazonx	6			12	6	16	9
Imidacloprid	46	17	8	14	59	3	21
Kinoprene					3		1
Lambda-cyhalothrin	6			6			1
Malathion				11	5	2	3
Methiocarb	11			3	4		2
Myrothecium verruc.				3			*
Neem oil, clar. hyd.						67	25
Novaluron					11		2
Octacide-264					1		*
Permethrin	5						*
Petroleum distillate	6		4	3	3		2
Petroleum oil						2	1
Piperonyl butoxide	6				1		1
Potassium salts	33		2	13	6	1	5
Pymetrozine	11		16	11	17	2	9
Pyrethrins	6			9	1		1
Pyridaben	6			4	8	2	3
Pyridine	23			9	5	1	4
S-Kinoprene			2		4	1	2
Spinosad	37	17	14	4	24	2	12
Spiromesifen	6			12	11		4
Thiamethoxam	5		1		1	1	1
Fungicides							
Anilazine			4				1
Azoxystrobin	24	17	8	17	5	4	8
Bacillus subtilis			2		1		1
Bacillus subtilus	12			14			2
Basic copper sulfate	6						*
Butanone	5		9		36	1	11
Calcium polysulfide	6			3			1
Captan			7				1
Chlorothalonil	26		24	23	20	1	13

See footnote(s) at end of table.

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Herbaceous Perennials:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Fungicides (continued)							
Copper (metallic)			2				*
Copper hydroxide	9	29		10		1	3
Copper oxychloride	6						*
Copper resinate			3	3	3		1
Copper sulfate	11			3	5		2
Dimethomorph	19		5	3			2
Etridiazole			19	7	8	2	7
Fenarimol			2				*
Fenbuconazole				4			*
Fenhexamid	17		2	11	24		8
Fludioxonil	12			7	6		3
Fosetyl-al	19		2	7	1		2
Iprodione	6		2	7		1	2
Kresoxim-methyl			5				1
Mancozeb	20	29	11	16	21	3	12
Mefenoxam	19		11	13	11	2	8
Metalaxyl	12				5		2
Myclobutanil	11			10	1		2
PCNB	11		2	3	4	1	2
Phosphorous acid	9		7	16			3
Piperalin				3	3		1
Potassium bicarbon.	6		2	3			1
Propiconazole	6	17	9	15	3		5
Pyraclostrobin		24					1
Streptomyces lydicus	6						*
Streptomycin			2				*
Streptomycin sulfate		13		3			1
Sulfur			2	4	3		1
Thiabendazole (TBZ)	12		2			1	1
Thiophanate	29		17	7	27	3	13
Thiophanate-methyl	6		29	11	12	3	11
Thiram				4			*
Triadimefon		17			2	1	2
Trichoderma harz.				3	1		1
Trifloxystrobin	5		13	7	8		5
Triforine	6					1	1
Other Chemicals							
Acequinocyl	6			3			1
Alk. dim. benzyl 60%	12			12			2
Alk. dim. eth. benz.	6						*
Alk. dim. ethbz. am.	6			12			1
Ancymidol					1		*
Benzyladenine					3		1

See footnote(s) at end of table.

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Herbaceous Perennials:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
Capsaicin	6			3			1
Chlormequat chloride	6			4	5		2
Daminozide	14		4	11	8	4	6
Diphacinone				3			*
Ethephon				3	5		1
Gibberellic acid			6				1
Gibberellins A4A7					3		1
Harpin protein			2				*
Hydrogen peroxide			2	23			2
Indolebutyric acid	13		2				1
Iron phosphate	6		2	4			1
Metaldehyde	20		10	10		2	5
NAA	13						1
NAD				4			*
PT807-HCl				3			*
Paclobutrazol	5		14	3	8	2	6
Pelargonic acid			10				2
Trinexapac-ethyl					4		1
Uniconazole	5		9	3			2
Zinc phosphide				3			*

* Less than 0.5 percent.

Non-production Areas:
Percent of Operations Using an Active Ingredient
Program States, 2006

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides							
2,4-D, 2-EHE	*	*		*			*
2,4-D, BEE			1	20	1		4
2,4-D, dimeth. salt		1	3	2		35	5
2,4-DP, dimeth. salt				1			*
2,4-DP-p, 2-EH ester		*					*
Atrazine			*	2	1		*
Benefin	*						*
Bentazon					1		*
Bromacil	*						*
Bromoxynil octanoate				*			*
Butoxyethyl triclopy			1	20	1		4
Clethodim	*			2	1		1
Clopyralid			3	1	5		1
Copper ethanolamine						1	*
Dicamba		*					*
Dicamba, dimet. salt			1	1	4		1
Dichlobenil			4	6			2
Diquat dibromide	6	1			4		2
Dithiopyr	1						*
Diuron	*	1		2			1
EPTC					1		*
Flumioxazin	*	1	1	1		12	2
Glufosinate-ammonium	1	5		1	6	*	3
Glyphosate		5		9			4
Glyphosate iso. salt	90	84	94	76	70	61	81
Halosulfuron	1		*	*			*
Hexazinone	1			2			1
Imazamethabenz	*						*
Imazaquin				1			*
Imazethapyr				1			*
Isoxaben	2	*	*	4	1	1	1
Linuron	1						*
MCPA, dimethyl. salt					4		*
MCPP, DMA salt			1	1	4		1
Metolachlor	*			*	2		*
Napropamide	*			1			*
Norflurazon		*					*
Oryzalin	4	*	2	8	1	1	3
Oxadiazon	2			4		1	1
Oxyfluorfen	2	*	*	6	4	*	2
Paraquat	6	*		1	2		2
Pendimethalin	2	*		2	1	*	1
Prodiamine	*	3	*	2	8	1	2
Pronamide				*			*

See footnote(s) at end of table.

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Non-production Areas:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Herbicides (continued)							
Propazine				*			*
S-Metolachlor				1			*
Sethoxydim				*			*
Simazine	*	1	1	2	20		2
Sulfometuron methyl				2			*
Sulfosate	*		*	1	1		*
Triclopyr			3	1			*
Trifluralin	1			2		1	1
Insecticides							
Abamectin				1	1		*
Acephate	1	3		1		2	1
Acetamiprid	*						*
Aprocarb	1						*
Azadirachtin				1	1		*
Bifenazate		5					1
Bifenthrin	*	2		2		11	2
Carbaryl	*	*					*
Chlorpyrifos	7	5		3	1	1	3
Clofentezine				1			*
Cyfluthrin				2	1	*	*
Cyromazine	*						*
Diazinon	1	*	4				1
Diflubenzuron	*				2	*	*
Dimethoate		4					1
Dinotefuran						1	*
Disulfoton				*			*
Esfenvalerate		1		*			*
Ethoxy sec. alcohols	*						*
Etoxazole				*			*
Fenbutatin-oxide						*	*
Fenoxycarb		3		*		3	1
Fenpropathrin				1			*
Fluvalinate	*						*
Hexythiazonx		*					*
Hydramethylnon	1	2				2	1
Imidacloprid	*	1	*	2	1		1
Lambda-cyhalothrin	*						*
Malathion		4					1
Methiocarb	*				2		*
Methomyl		4					1
Oxythioquinox				1			*
Permethrin		4		1			2
Petroleum distillate	*			1		*	*

See footnote(s) at end of table.

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Non-production Areas:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Insecticides (continued)							
Pyrethrins		1					*
Pyridine	*						*
Rotenone		1					*
S-Kinoprene						*	*
S-Methoprene		*				1	*
Spinosad	*	1					*
Tralomethrin		4					1
Fungicides							
Azoxystrobin				*			*
Basic copper sulfate		1					*
Boscalid	6						1
Butanone				*			*
Calcium polysulfide					2		*
Chlorothalonil		6		1	4		2
Copper hydroxide	6	1		1		1	1
Copper sulfate				*		*	*
Etridiazole				*			*
Fenarimol				1			*
Fosetyl-al	*						*
Iprodione	1	2		1			1
Mancozeb	*	4		1			2
Maneb	6	2					2
Mefenoxam	1			*	2		*
Myclobutanil				1			*
PCNB				*			*
Potassium bicarbon.				*			*
Propiconazole	1	1		1			1
Pyraclostrobin	6						1
Sulfur		1					*
Thiophanate	1				5		*
Thiophanate-methyl					1		*
Triadimefon		*		1	1		*
Triforine						*	*
Other Chemicals							
Alk. dim. benzyl 50%						*	*
Alk. dim. benzyl 60%	*		1	*	4	*	1
Alk. dim. eth. benz.	*				2	*	*
Alk. dim. ethbz. am.			1	*	2		*
Brodifacoum	*						*
Bromadiolone	1						*
Chloropicrin	1		2	1			1
Daminozide				*			*

See footnote(s) at end of table.

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Non-production Areas:
Percent of Operations Using an Active Ingredient
Program States, 2006 - continued

Active Ingredient	CA	FL	MI	OR	PA	TX	Total
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Other Chemicals (continued)							
Didecyl dim. ammon.				*			*
Diphacinone	1		1	1			*
Hydrogen peroxide		1	2	1	1		1
Indolebutyric acid	1			*			*
Iron phosphate	2			*			*
Metaldehyde	9			2	2	9	3
Methyl bromide	1		2	1			1
Paclobutrazol	*			*	1		*
Pelargonic acid	1		*	3			1
Sodium hypochlorite		1	1		2	1	*
Strychnine	*						*
Zinc phosphide			1				*

* Less than 0.5 percent.

Chemical Applications by Applicator,
Percent of Operations,
Program States, 2006

Production Category	Licensed Operator/ Employee Applicator	Unlicensed Operator/ Employee Applicator	Hired Custom Applicator	Other
All Nursery and Floriculture	76	27	4	2
All Nursery	74	27	4	2
Transplants for Commercial Vegetable & Strawberry Production	69	28	3	4
Nursery Propagation or Lining-out Stock	64	36	4	4
Broadleaf Evergreens	70	33	4	1
Coniferous Evergreens	75	30	4	1
Deciduous Shade Trees	54	44	2	2
Deciduous Flowering Trees	59	40	1	2
Deciduous Shrubs	57	40	4	5
Fruit and Nut Plants	78	24	*	1
Christmas Trees	76	22	8	3
Palms	65	33		1
Ornamental Grasses	69	34	7	1
Other Woody Ornamentals and Vines	70	29	1	2
All Floriculture	76	28	3	3
Cut Flowers	76	29	4	4
Flowering Plants	80	21	3	3
Bedding Plants	77	28	6	4
Foliage Plants	68	35	1	1
Floriculture Propagation Material	57	42	3	1
Cut Cultivated Greens	83	19		2
Herbaceous Perennials	72	27		3
Non-production Areas	70	28	1	4

* Less than 0.5 percent.

Chemical Applications by Where Applied,
Percent of Operations,
Program States, 2006

Production Category	Enclosed Greenhouse	Shade Structure	Natural Shade Area	In the Open Area
All Nursery and Floriculture	35	14	3	63
All Nursery	12	8	3	88
Transplants for Commercial Vegetable & Strawberry Production	49	8	2	44
Nursery Propagation or Lining-out Stock	48	32	8	49
Broadleaf Evergreens	13	9	4	92
Coniferous Evergreens	6	8	*	97
Deciduous Shade Trees	5	2	1	96
Deciduous Flowering Trees	4	3	9	89
Deciduous Shrubs	22	21	2	85
Fruit and Nut Plants	14	10	9	95
Christmas Trees	*			100
Palms	10	26	19	76
Ornamental Grasses	41	33	1	70
Other Woody Ornamentals and Vines	21	11	1	83
All Floriculture	64	23	2	26
Cut Flowers	51	13	*	58
Flowering Plants	79	11	1	25
Bedding Plants	86	14	*	10
Foliage Plants	53	36	*	27
Floriculture Propagation Material	64	25		19
Cut Cultivated Greens	11	60	30	13
Herbaceous Perennials	61	17		32
Non-production Areas	5	2	2	22

* Less than 0.5 percent.

**Chemical Applications by Method of Application,
Percent of Operations,
Program States, 2006**

Production Categories	Hand-held backpack sprayer	Hand-held power hydraulic sprayer	Granular shaker	Granular rotary applicator
All Nursery and Floriculture	36	45	7	5
All Nursery	31	41	5	6
Transplants for Commercial Vegetable & Strawberry Production	17	56		4
Nursery Propagation or Lining-out Stock	43	33	5	15
Broadleaf Evergreens	29	54	9	17
Coniferous Evergreens	20	46	3	14
Deciduous Shade Trees	27	46	3	5
Deciduous Flowering Trees	22	47	2	2
Deciduous Shrubs	49	38	5	17
Fruit and Nut Plants	24	26	2	10
Christmas Trees	32	12	*	*
Palms	23	72	7	9
Ornamental Grasses	21	64	12	19
Other Woody Ornamentals and Vines	21	58	8	9
All Floriculture	39	51	9	3
Cut Flowers	30	51	5	1
Flowering Plants	46	46	8	5
Bedding Plants	51	47	8	3
Foliage Plants	30	65	6	5
Floriculture Propagation Material	27	70		3
Cut Cultivated Greens	4	16		3
Herbaceous Perennials	54	36	6	2
Non-production Areas	47	38	3	4

See footnote(s) at end of table.

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**Chemical Applications by Method of Application,
Percent of Operations,
Program States, 2006 - Continued**

Production Categories	Hand-held fogger	Dusting	Overhead rail sprayer	Root ball/ container/ cutting/ flower dip
All Nursery and Floriculture	2	1	1	1
All Nursery	2	1	*	1
Transplants for Commercial Vegetable & Strawberry Production		1	8	
Nursery Propagation or Lining-out Stock	1	1	*	3
Broadleaf Evergreens		*	*	
Coniferous Evergreens	*	3		
Deciduous Shade Trees	1	*		1
Deciduous Flowering Trees	1	*		
Deciduous Shrubs	8			*
Fruit and Nut Plants	1			
Christmas Trees	2			
Palms	*			
Ornamental Grasses				
Other Woody Ornamentals and Vines	1	*		1
All Floriculture	3	2	2	1
Cut Flowers	1	1	3	*
Flowering Plants	3	2	1	1
Bedding Plants	3	3	1	1
Foliage Plants	1	1	*	*
Floriculture Propagation Material				8
Cut Cultivated Greens			1	
Herbaceous Perennials	1	1	*	1
Non-production Areas	1	1	*	*

See footnote(s) at end of table.

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**Chemical Applications by Method of Application,
Percent of Operations,
Program States, 2006 - Continued**

Production Categories	Drench	Stationary fogger, aerosols, misters, electrostatic sprayers, smokers	Tractor powered boom sprayer	Tractor powered air blast or mister
All Nursery and Floriculture	12	6	16	17
All Nursery	5	1	25	24
Transplants for Commercial Vegetable & Strawberry Production	4	3	11	3
Nursery Propagation or Lining-out Stock	18	6	24	16
Broadleaf Evergreens	7	3	20	12
Coniferous Evergreens	5	*	34	35
Deciduous Shade Trees	1	3	17	22
Deciduous Flowering Trees	8		19	22
Deciduous Shrubs	13	4	24	22
Fruit and Nut Plants	9		19	48
Christmas Trees	*		43	40
Palms	8	*	11	10
Ornamental Grasses	24	1	30	18
Other Woody Ornamentals and Vines	14	1	14	13
All Floriculture	22	10	4	7
Cut Flowers	9	2	14	9
Flowering Plants	21	8	1	5
Bedding Plants	26	16	3	3
Foliage Plants	21	4	1	6
Floriculture Propagation Material	14	2	2	4
Cut Cultivated Greens	1		10	49
Herbaceous Perennials	15	6	5	3
Non-production Areas	3	*	11	4

See footnote(s) at end of table.

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**Chemical Applications by Method of Application,
Percent of Operations,
Program States, 2006 - Continued**

Production Categories	Aerial application	Chemigation	Machine injection, banded, broadcast, knifed in	Other
All Nursery and Floriculture	2	2	3	4
All Nursery	2	1	3	3
Transplants for Commercial Vegetable & Strawberry Production	1	1	2	2
Nursery Propagation or Lining-out Stock	1	4	5	5
Broadleaf Evergreens			*	6
Coniferous Evergreens	2	*	3	2
Deciduous Shade Trees	*	1	2	1
Deciduous Flowering Trees	2		3	2
Deciduous Shrubs	1		3	5
Fruit and Nut Plants			3	2
Christmas Trees	6	*	3	3
Palms	*			*
Ornamental Grasses				3
Other Woody Ornamentals and Vines	*	1	*	1
All Floriculture	2	3	3	4
Cut Flowers	7	*	6	6
Flowering Plants	*	*	4	4
Bedding Plants	2	1	3	5
Foliage Plants		2	*	1
Floriculture Propagation Material		1	5	3
Cut Cultivated Greens		31	1	2
Herbaceous Perennials			*	2
Non-production Areas	*	1	1	2

* Less than 0.5 percent.

Distribution Tables – Highlights

The following distribution tables provide details about the distribution of agricultural chemical active ingredients commonly applied by the nursery and floriculture operations in the 6 program States: California, Florida, Michigan, Oregon, Pennsylvania, and Texas. Chemical distribution rates are listed by active ingredient for Rate per Application. In order for an active ingredient to be published in these tables, at least 30 operations reported an application of the active ingredient on the specified production category. The data in each table are summarized for a specific group of States, called Program States.

These distribution tables show the 10^{th} percentile, median, 90^{th} percentile, mean, and coefficient of variation (cv) of the reported rates. The 10^{th} percentile is the value below which 10 percent of all application rates fall. Thus, only 10 percent of operators reported an application rate for the active ingredient on the specified crop that was lower than the 10^{th} percentile value. Likewise, the 90^{th} percentile is a value for which 90 percent of all applications were at rates lower than this value. The median is the midpoint of the distribution with half of the reported application rates higher and half lower than the median value. The mean is the weighted average calculated by summing the application rate multiplied by the acres applied and then dividing by the acres applied.

The cv is a relative measure of the variability, expressed as a percentage of the estimate. For a specific commodity, the States have different agricultural practices which can lead to a wide range of pesticide usage rates. These ranges can lead to higher cv rates for different active ingredients. Some active ingredients are only applied in one manner resulting in smaller cv's, while other active ingredients have more varied agricultural uses which will have larger cv's. Please see the Survey and Estimation Procedures and Reliability sections for more information.

The Rate per Application distribution tables are calculated using data only from reports where the farm operator applied the active ingredient.

All Nursery and Floriculture:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Herbicides					
Atrazine	0.750	2.000	4.000	2.155	45
Clopyralid	0.047	0.188	0.375	0.189	26
Diquat dibromide	0.142	0.386	1.114	0.471	22
Flumioxazin	0.056	0.238	0.382	0.241	16
Glyphosate iso. salt	0.375	0.974	3.000	1.282	16
Hexazinone	0.282	1.012	1.029	0.863	9
Isoxaben	0.322	0.767	0.767	0.675	12
Oryzalin	0.923	2.990	2.990	2.479	15
Oxadiazon	0.811	1.600	3.022	1.702	12
Oxyfluorfen	0.500	1.982	2.001	1.505	17
Pendimethalin	0.730	1.000	1.013	1.015	7
Prodiamine	0.101	0.650	0.787	0.576	17
Simazine	1.000	1.344	2.036	1.487	13
Sulfometuron methyl	0.047	0.098	0.098	0.089	9
Trifluralin	1.000	2.866	3.600	2.554	19
Insecticides					
Abamectin	0.004	0.005	0.011	0.007	14
Acephate	0.325	0.563	1.403	0.808	13
Acetamiprid	0.049	0.080	0.201	0.134	24
Azadirachtin	0.011	0.025	0.046	0.026	15
Beauveria bassiana	0.328	0.392	0.644	0.445	8
Bifenazate	0.063	0.063	0.359	0.155	33
Bifenthrin	0.008	0.052	0.153	0.066	33
Buprofezin	0.200	0.497	0.984	0.526	9
Carbaryl	0.375	1.000	2.000	1.138	10
Chlorfenapyr	0.031	0.079	0.193	0.104	19
Chlorpyrifos	0.250	0.800	1.000	0.765	9
Clofentezine	0.063	0.102	0.175	0.104	12
Cyfluthrin	0.014	0.047	0.500	0.098	37
Cyromazine	0.083	0.231	0.304	0.262	22
Diazinon	0.500	0.500	0.813	0.582	10
Dicofol	0.222	0.500	0.525	0.448	11
Diflubenzuron	0.016	0.063	0.094	0.073	15
Dimethoate	0.333	0.625	1.001	0.887	17
Dinotefuran	0.043	0.106	0.187	0.135	17
Endosulfan	0.375	0.750	1.000	0.726	18
Esfenvalerate	0.020	0.041	0.041	0.036	9
Etoxazole	0.035	0.050	0.103	0.064	22
Fenbutatin-oxide	0.250	0.250	1.333	0.543	37
Fenpropathrin	0.131	0.188	0.400	0.234	18
Fenpyroximate	0.050	0.085	0.134	0.081	10
Fluvalinate	0.046	0.156	0.292	0.160	9
Hexythiazonx	0.061	0.080	0.202	0.116	16
Imidacloprid	0.045	0.084	0.354	0.149	26
Lambda-cyhalothrin	0.052	0.052	0.052	0.050	4
Malathion	0.375	1.164	3.125	1.313	21
Methiocarb	0.400	0.800	2.078	0.905	19

See footnote(s) at end of table. --continued

All Nursery and Floriculture:
Rate per Application Distribution,
Program States, 2006 - continued

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Insecticides (continued)					
Neem oil, clar. hyd.	1.775	4.667	7.000	4.845	47
Novaluron	0.026	0.039	0.122	0.060	22
Permethrin	0.075	0.100	0.200	0.136	14
Petroleum distillate	5.129	10.150	22.444	11.680	14
Piperonyl butoxide	0.102	0.186	0.306	0.229	17
Potassium salts	0.762	4.259	25.239	6.278	59
Pymetrozine	0.078	0.110	0.250	0.133	14
Pyrethrins	0.001	0.015	0.051	0.019	37
Pyridaben	0.140	0.204	0.413	0.254	23
Pyridine	0.016	0.076	0.108	0.082	15
S-Kinoprene	0.255	0.408	0.604	0.444	14
Spinosad	0.047	0.075	0.186	0.094	14
Spiromesifen	0.063	0.094	0.125	0.100	7
Thiamethoxam	0.023	0.063	0.076	0.059	19
Fungicides					
Azoxystrobin	0.038	0.233	0.500	0.245	24
Butanone	0.095	0.095	0.111	0.098	3
Captan	0.236	0.629	1.789	0.879	17
Chlorothalonil	0.750	1.564	3.858	2.142	14
Copper hydroxide	0.350	0.500	1.350	0.756	20
Copper resinate	0.129	0.143	0.216	0.160	10
Copper sulfate	0.027	0.083	0.239	0.178	30
Dimethomorph	0.195	0.584	0.584	0.531	14
Etridiazole	0.877	4.500	4.500	3.482	18
Fenarimol	0.016	0.045	0.126	0.055	25
Fenhexamid	0.096	0.423	0.771	0.491	22
Fludioxonil	0.130	0.606	1.550	0.881	28
Fosetyl-al	1.320	1.320	4.000	1.866	26
Iprodione	0.232	0.500	1.031	0.620	22
Mancozeb	0.672	1.125	2.250	1.303	12
Mefenoxam	0.392	0.392	1.067	0.515	24
Metalaxyl	0.016	0.016	0.968	0.198	76
Myclobutanil	0.073	0.087	0.151	0.111	19
PCNB	0.185	0.750	5.750	2.592	32
Phosphorous acid	1.063	2.438	2.438	2.362	11
Piperalin	0.535	0.775	1.500	0.974	12
Potassium bicarbon.	1.133	2.008	3.572	2.214	8
Propiconazole	0.030	0.061	0.193	0.100	21
Streptomycin	0.077	0.170	0.340	0.181	16
Sulfur	0.950	1.500	6.047	2.734	20
Tebuconazole	0.141	0.281	0.281	0.234	9
Thiophanate	0.215	0.499	1.140	0.643	23
Thiophanate-methyl	0.234	1.758	2.637	1.697	20
Triadimefon	0.040	0.250	0.500	0.262	29
Trifloxystrobin	0.054	0.054	0.067	0.064	18

See footnote(s) at end of table.

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All Nursery and Floriculture:
Rate per Application Distribution,
Program States, 2006 - continued

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Other Chemicals					
Acequinocyl	0.052	0.153	0.303	0.193	17
Alk. dim. benzyl 60%	0.101	0.212	0.283	0.223	12
Ancymidol	0.002	0.003	0.003	0.003	15
Chlormequat chloride	0.365	1.105	3.700	1.566	26
Daminozide	0.536	2.382	7.696	3.437	30
Ethephon	0.047	0.342	0.850	0.521	24
Hydrogen peroxide	0.155	2.250	2.745	1.853	21
Metaldehyde	3.871	3.871	3.871	3.790	3
Methyl bromide	21.375	133.475	265.298	161.305	35
Paclobutrazol	*	0.007	0.041	0.024	43
Uniconazole	0.001	0.006	0.034	0.010	34

* Rate per acre is less than 0.0005 pounds

All Nursery:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Herbicides					
Atrazine	0.750	2.000	4.000	2.156	45
Clopyralid	0.047	0.188	0.375	0.189	26
Flumioxazin	0.056	0.250	0.382	0.241	19
Glyphosate iso. salt	0.375	0.763	3.000	1.235	17
Hexazinone	0.282	1.012	1.029	0.863	9
Isoxaben	0.322	0.767	0.767	0.676	12
Oryzalin	0.990	2.990	2.990	2.502	14
Oxadiazon	0.811	1.499	3.500	1.616	14
Oxyfluorfen	0.500	1.982	2.001	1.509	17
Pendimethalin	0.730	1.000	1.000	1.010	8
Prodiamine	0.101	0.650	0.750	0.573	21
Simazine	1.000	1.344	2.036	1.485	13
Sulfometuron methyl	0.047	0.098	0.098	0.089	9
Trifluralin	1.438	3.600	3.600	2.754	20
Insecticides					
Abamectin	0.005	0.005	0.009	0.006	16
Acephate	0.368	0.731	1.610	0.902	20
Acetamiprid	0.055	0.070	0.131	0.080	12
Azadirachtin	0.011	0.021	0.034	0.020	30
Bifenazate	0.063	0.063	0.268	0.126	37
Bifenthrin	0.008	0.034	0.104	0.057	41
Carbaryl	0.375	1.000	2.000	1.129	15
Chlorpyrifos	0.500	0.947	1.063	0.917	7
Cyfluthrin	0.016	0.047	0.054	0.040	17
Diazinon	0.500	0.500	0.611	0.535	5
Diflubenzuron	0.031	0.061	0.063	0.076	26
Dimethoate	0.500	0.750	1.001	0.882	20
Dinotefuran	0.043	0.100	0.168	0.104	19
Endosulfan	0.250	0.750	1.500	0.742	22
Etoxazole	0.040	0.050	0.103	0.067	24
Hexythiazonx	0.061	0.080	0.231	0.118	21
Imidacloprid	0.051	0.125	0.402	0.179	35
Lambda-cyhalothrin	0.052	0.052	0.052	0.050	5
Malathion	0.375	1.164	3.125	1.275	24
Permethrin	0.063	0.178	0.229	0.170	15
Petroleum distillate	5.250	10.150	24.170	11.413	16
Potassium salts	1.680	25.239	25.239	14.520	54
Pymetrozine	0.078	0.100	0.120	0.102	9
Pyridine	0.016	0.069	0.081	0.057	26
Spinosad	0.047	0.047	0.125	0.078	23
Fungicides					
Azoxystrobin	0.063	0.233	0.500	0.283	26
Captan	0.236	0.629	0.900	0.750	19
Chlorothalonil	0.743	1.969	3.858	2.301	15
Copper hydroxide	0.381	0.725	1.550	0.809	21
Copper sulfate	0.062	0.124	0.265	0.270	41

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All Nursery:
Rate per Application Distribution,
Program States, 2006 - continued

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Fungicides (continued)					
Etridiazole	1.200	1.543	7.971	2.543	52
Fludioxonil	0.130	0.217	4.084	0.885	54
Fosetyl-al	1.320	1.320	3.200	1.743	27
Iprodione	0.232	0.325	0.863	0.482	32
Mancozeb	0.672	0.672	1.381	0.957	23
Mefenoxam	0.392	0.392	1.067	0.524	27
Myclobutanil	0.059	0.087	0.103	0.103	21
Propiconazole	0.041	0.083	0.205	0.120	19
Streptomycin	0.153	0.170	0.340	0.208	12
Thiophanate	0.155	0.750	1.440	0.714	34
Thiophanate-methyl	0.137	0.525	1.244	0.756	34
Trifloxystrobin	0.054	0.054	0.054	0.056	6
Other Chemicals					
Hydrogen peroxide	0.874	2.250	2.250	2.019	10
Metaldehyde	3.871	3.871	3.871	3.826	2

Nursery Propagation or Lining-out Stock:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Herbicides					
Glyphosate iso. salt	0.469	1.295	2.237	1.229	19
Fungicides					
Chlorothalonil	1.051	1.640	1.770	1.585	24
Thiophanate-methyl	*	0.487	1.244	0.723	25

* Rate per acre is less than 0.0005 pounds

Broadleaf Evergreens:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Insecticides					
Acephate	0.130	1.218	1.610	1.057	23
Fungicides					
Chlorothalonil	1.500	3.272	3.272	3.042	7
Copper hydroxide	0.500	1.035	1.875	1.228	26

Coniferous Evergreens:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Herbicides					
Glyphosate iso. salt	0.525	1.388	2.288	1.497	25
Oxyfluorfen	1.000	1.982	1.982	1.796	12
Insecticides					
Acephate	0.750	0.970	0.970	0.959	4
Chlorpyrifos	0.572	0.947	1.063	0.970	16
Fungicides					
Chlorothalonil	0.900	1.694	3.000	1.863	35

Deciduous Shade Trees:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Herbicides					
Glyphosate iso. salt	0.188	0.750	1.500	0.968	19
Oryzalin	0.078	1.000	3.000	1.503	35
Insecticides					
Acephate	0.053	0.435	0.974	0.485	42
Fungicides					
Chlorothalonil	0.823	3.545	8.511	4.066	33
Copper hydroxide	0.267	0.525	1.600	0.686	31

Deciduous Flowering Trees:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Insecticides					
Acephate	0.518	0.750	0.917	0.753	19

Deciduous Shrubs:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Insecticides					
Acephate	0.035	0.488	1.295	0.516	26
Fungicides					
Chlorothalonil	1.200	3.858	3.858	3.561	14
Mancozeb	0.672	0.672	0.672	0.688	4

Christmas Trees:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Herbicides					
Atrazine	1.000	2.571	4.000	2.451	35
Glyphosate iso. salt	0.375	0.750	1.500	0.903	12
Hexazinone	0.282	1.012	1.029	0.828	14
Oxyfluorfen	0.206	0.500	1.000	0.566	16
Simazine	1.000	1.059	2.000	1.408	13
Sulfometuron methyl	0.049	0.098	0.098	0.089	8
Insecticides					
Carbaryl	0.800	1.000	1.186	0.966	8
Chlorpyrifos	0.500	1.000	1.000	0.920	10
Fungicides					
Chlorothalonil	0.420	1.500	3.000	1.615	27

Other Woody Ornamentals and Vines:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Insecticides					
Acephate	0.487	0.487	2.250	0.750	45
Fungicides					
Chlorothalonil	0.469	1.121	1.753	1.304	30
Copper hydroxide	0.400	0.400	1.050	0.585	34
Mancozeb	0.576	1.125	2.000	1.207	12

All Floriculture:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Herbicides					
Diquat dibromide	0.260	0.465	1.462	0.588	27
Glyphosate iso. salt	0.377	2.277	3.000	1.841	16
Isoxaben	0.494	0.627	0.998	0.657	7
Oryzalin	0.500	2.028	3.636	1.944	26
Oxyfluorfen	0.234	1.500	2.141	1.339	21
Trifluralin	0.750	1.975	2.996	1.896	18
Insecticides					
Abamectin	0.004	0.009	0.018	0.009	11
Acephate	0.275	0.512	1.069	0.708	16
Acetamiprid	0.047	0.133	0.333	0.201	29
Azadirachtin	0.014	0.028	0.047	0.030	7
Beauveria bassiana	0.357	0.421	0.644	0.453	8
Bifenazate	0.031	0.214	0.555	0.265	14
Bifenthrin	0.025	0.083	0.168	0.096	13
Buprofezin	0.280	0.507	1.050	0.567	11
Carbaryl	0.250	1.000	1.600	1.154	6
Chlorfenapyr	0.044	0.079	0.153	0.095	11
Chlorpyrifos	0.219	0.500	0.900	0.581	11
Cyfluthrin	0.011	0.062	0.500	0.202	37
Cyromazine	0.117	0.231	0.577	0.326	26
Diazinon	0.417	0.813	0.889	0.753	6
Dicofol	0.403	0.500	0.824	0.539	6
Diflubenzuron	0.016	0.063	0.094	0.072	17
Dimethoate	0.188	0.500	2.667	0.906	29
Dinotefuran	0.092	0.110	0.230	0.178	30
Endosulfan	0.375	0.750	0.975	0.717	24
Etoxazole	0.022	0.031	0.094	0.047	15
Fenbutatin-oxide	0.250	0.250	1.333	0.481	44
Fenpropathrin	0.150	0.188	0.301	0.222	10
Fluvalinate	0.046	0.159	0.301	0.156	9
Hexythiazonx	0.063	0.063	0.200	0.112	21
Imidacloprid	0.031	0.058	0.266	0.113	22
Lambda-cyhalothrin	0.023	0.031	0.070	0.045	46
Malathion	0.625	1.250	3.909	1.609	14
Methiocarb	0.417	0.848	2.188	0.943	22
Neem oil, clar. hyd.	1.775	1.775	5.769	3.485	40
Novaluron	0.026	0.039	0.122	0.062	25
Permethrin	0.075	0.100	0.200	0.134	14
Petroleum distillate	3.500	7.880	22.444	13.263	20
Piperonyl butoxide	0.127	0.306	0.324	0.265	13
Potassium salts	0.758	4.259	4.259	3.284	19
Pymetrozine	0.078	0.110	0.273	0.158	15
Pyrethrins	0.001	0.006	0.032	0.016	31
Pyridaben	0.188	0.225	0.483	0.290	10
Pyridine	0.054	0.080	0.117	0.098	12
S-Kinoprene	0.378	0.505	0.604	0.493	10
Spinosad	0.047	0.078	0.186	0.105	11

See footnote(s) at end of table.

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All Floriculture:
Rate per Application Distribution,
Program States, 2006 - continued

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Insecticides (continued)					
Spiromesifen	0.023	0.124	0.246	0.136	15
Thiamethoxam	0.023	0.023	0.076	0.046	47
Fungicides					
Azoxystrobin	0.001	0.101	0.263	0.136	33
Butanone	0.031	0.118	0.326	0.145	17
Captan	0.750	1.000	2.003	1.384	14
Chlorothalonil	0.806	1.125	3.733	1.686	12
Copper hydroxide	0.350	0.500	1.350	0.717	28
Copper resinate	0.049	0.152	0.195	0.148	15
Copper sulfate	0.016	0.083	0.169	0.090	14
Dimethomorph	0.086	0.195	0.506	0.301	21
Etridiazole	0.838	4.500	4.500	3.590	16
Fenhexamid	0.096	0.447	0.851	0.476	29
Fludioxonil	0.116	1.000	1.000	0.877	12
Fosetyl-al	0.680	2.400	5.224	2.796	13
Iprodione	0.276	0.625	1.184	0.809	10
Mancozeb	0.938	1.180	2.250	1.464	7
Mefenoxam	0.043	0.253	0.764	0.394	17
Metalaxyl	0.016	0.016	0.192	0.069	65
Myclobutanil	0.081	0.110	0.218	0.136	11
PCNB	0.206	0.820	5.750	2.409	34
Piperalin	0.535	0.898	1.500	0.988	13
Potassium bicarbon.	0.476	2.308	4.091	2.295	10
Propiconazole	0.030	0.030	0.122	0.075	33
Streptomycin	0.074	0.100	0.283	0.131	14
Sulfur	0.950	1.500	6.047	3.225	29
Tebuconazole	0.141	0.281	0.281	0.234	9
Thiophanate	0.250	0.250	0.938	0.568	24
Thiophanate-methyl	0.500	1.758	3.750	2.105	23
Trifloxystrobin	0.043	0.067	0.122	0.129	40
Other Chemicals					
Acequinocyl	0.043	0.098	0.404	0.142	25
Ancymidol	0.002	0.003	0.003	0.003	14
Chlormequat chloride	0.365	1.500	3.700	1.753	25
Daminozide	0.463	2.125	7.696	3.020	30
Ethephon	0.047	0.342	0.998	0.577	24
Hydrogen peroxide	0.155	0.408	4.499	1.470	70
Metaldehyde	0.493	0.892	3.501	1.418	19
Paclobutrazol	*	0.007	0.050	0.024	48
Uniconazole	0.001	0.009	0.034	0.012	33

* Rate per acre is less than 0.0005 pounds

Cut Flowers:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Insecticides					
Abamectin	0.006	0.011	0.018	0.012	4
Acephate	0.300	0.591	1.282	0.805	18
Acetamiprid	0.099	0.172	0.172	0.152	9
Azadirachtin	0.021	0.031	0.047	0.033	8
Bifenazate	0.101	0.330	1.000	0.482	21
Pymetrozine	0.110	0.110	0.301	0.158	20
Pyridine	0.067	0.079	0.121	0.097	15
Spinosad	0.072	0.089	0.155	0.104	8
Fungicides					
Azoxystrobin	0.001	0.001	0.210	0.075	66
Chlorothalonil	0.886	0.942	1.414	1.068	13
Fenhexamid	0.133	0.545	0.701	0.534	18
Fosetyl-al	0.200	1.550	2.866	1.784	16
Iprodione	0.312	0.561	1.031	0.768	15
Mancozeb	0.421	0.871	1.119	0.947	7
Mefenoxam	0.029	0.319	0.764	0.380	37
Myclobutanil	0.086	0.110	0.168	0.124	8
Piperalin	0.673	0.898	1.248	0.941	9
Thiophanate-methyl	0.083	0.377	1.400	0.581	83

Flowering Plants:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Insecticides					
Abamectin	0.006	0.009	0.019	0.010	12
Acephate	0.375	0.974	1.461	1.067	7
Acetamiprid	0.047	0.125	0.523	0.281	58
Azadirachtin	0.018	0.032	0.061	0.039	19
Bifenazate	0.063	0.303	0.746	0.364	48
Bifenthrin	0.030	0.089	0.351	0.134	17
Chlorpyrifos	0.130	0.821	2.591	1.189	27
Cyfluthrin	0.017	0.062	0.699	0.133	52
Dinotefuran	0.100	0.177	0.529	0.244	21
Fluvalinate	0.012	0.169	0.458	0.186	21
Imidacloprid	0.048	0.075	0.245	0.129	26
Pymetrozine	0.090	0.227	0.307	0.214	10
Pyridine	0.057	0.101	0.135	0.100	11
Spinosad	0.078	0.186	0.186	0.161	11
Fungicides					
Azoxystrobin	0.098	0.170	0.223	0.161	10
Chlorothalonil	0.876	1.528	5.033	2.201	27
Copper hydroxide	0.327	0.332	1.000	0.522	31
Copper sulfate	0.050	0.073	0.177	0.095	21
Etridiazole	0.263	1.634	3.200	1.672	33
Fenhexamid	0.338	0.620	1.581	0.784	10
Fludioxonil	0.230	0.752	1.344	0.811	18
Fosetyl-al	0.320	3.407	8.225	4.125	21
Iprodione	0.491	0.990	1.231	0.993	11
Mancozeb	0.750	0.933	2.220	1.214	20
Mefenoxam	0.037	0.074	1.015	0.312	41
Myclobutanil	0.108	0.149	0.413	0.212	14
PCNB	0.820	1.365	3.616	2.570	49
Thiophanate	0.180	0.500	12.922	1.874	59
Thiophanate-methyl	0.468	0.744	2.455	1.456	27
Other Chemicals					
Chlormequat chloride	0.555	1.584	4.833	2.082	19
Daminozide	2.803	4.250	8.377	4.902	17
Ethephon	0.038	0.483	1.623	0.647	32
Metaldehyde	0.800	0.892	3.501	1.587	30
Paclobutrazol	0.003	0.041	0.072	0.044	16

Bedding Plants:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Insecticides					
Abamectin	0.005	0.010	0.019	0.012	11
Acephate	0.177	0.974	1.936	1.001	15
Acetamiprid	0.070	0.082	0.328	0.176	24
Azadirachtin	0.003	0.024	0.052	0.024	17
Bifenazate	0.125	0.262	0.416	0.287	21
Bifenthrin	0.017	0.025	0.125	0.063	37
Chlorpyrifos	0.412	0.425	2.423	0.829	49
Cyfluthrin	0.020	0.050	0.237	0.087	26
Dinotefuran	0.056	0.124	0.813	0.295	37
Imidacloprid	0.031	0.060	0.308	0.143	17
Potassium salts	0.858	2.144	5.510	2.525	41
Pymetrozine	0.074	0.156	0.249	0.172	11
Pyrethrins	0.001	0.001	0.031	0.013	29
Pyridine	0.024	0.054	0.302	0.143	51
Spinosad	0.047	0.069	0.255	0.109	26
Fungicides					
Azoxystrobin	0.095	0.160	0.446	0.220	24
Chlorothalonil	0.606	1.606	8.079	3.554	34
Copper sulfate	0.027	0.060	0.208	0.090	31
Etridiazole	0.478	2.579	3.571	2.234	28
Fenhexamid	0.096	0.096	0.974	0.333	61
Fludioxonil	0.069	0.116	0.930	0.679	54
Fosetyl-al	0.680	0.957	7.471	2.528	40
Iprodione	0.250	1.000	3.062	1.338	20
Mancozeb	0.240	1.269	3.834	1.930	26
Mefenoxam	0.078	0.497	0.567	0.529	13
Thiophanate	0.125	0.628	2.725	1.119	37
Thiophanate-methyl	0.234	0.994	5.247	2.261	24
Other Chemicals					
Chlormequat chloride	0.300	0.761	2.715	1.093	19
Daminozide	0.309	2.125	6.269	2.410	15
Ethephon	0.109	0.342	0.749	0.453	18
Paclobutrazol	0.007	0.007	0.140	0.036	49
Uniconazole	0.001	0.017	0.044	0.016	25

Foliage Plants:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Insecticides					
Abamectin	0.004	0.009	0.013	0.008	18
Acephate	0.382	0.512	1.069	0.667	18
Bifenazate	0.021	0.136	0.314	0.191	28
Bifenthrin	0.026	0.100	0.119	0.090	13
Carbaryl	0.250	0.500	1.600	0.812	22
Chlorpyrifos	0.500	0.800	1.300	0.726	12
Cyfluthrin	0.012	0.050	0.131	0.052	31
Imidacloprid	0.031	0.047	0.266	0.127	41
Spinosad	0.023	0.115	0.166	0.095	26
Fungicides					
Chlorothalonil	0.750	3.000	4.201	2.612	20
Copper hydroxide	0.350	0.500	1.350	0.724	31
Fosetyl-al	1.315	2.400	4.000	2.547	18
Mancozeb	0.563	1.124	2.025	1.247	16
Mefenoxam	0.058	0.228	0.688	0.371	35
Thiophanate	0.300	0.576	4.227	1.086	30
Thiophanate-methyl	0.234	7.500	7.500	4.664	40

Cut Cultivated Greens:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Insecticides					
Carbaryl	0.500	1.200	1.600	1.314	10
Chlorpyrifos	0.219	0.500	0.900	0.526	16
Fungicides					
Chlorothalonil	0.810	1.031	1.500	1.144	9
Mancozeb	1.125	1.475	2.250	1.585	8
Tebuconazole	0.141	0.281	0.281	0.234	9
Thiophanate	0.250	0.250	0.500	0.322	7

Non-production Areas:
Rate per Application Distribution,
Program States, 2006

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	Pounds Per Acre	*Pounds Per Acre*	*Pounds Per Acre*	*Pounds Per Acre*	
Herbicides					
2,4-D, BEE	0.500	0.500	1.000	0.591	12
Butoxyethyl triclopy	0.250	0.250	0.500	0.296	12
Glyphosate iso. salt	0.234	1.521	1.521	1.227	21
Oryzalin	0.025	1.410	2.857	1.662	22

Restricted Use

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 statistics in this section refer to use of active ingredients by nursery and floriculture operations in the six Program States: California, Florida, Michigan, Oregon, Pennsylvania, and Texas.

The agricultural chemical usage data in this Restricted Use Summary are summarized by active ingredient. 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 five reports for the specific active ingredient at the summary level.

Highlights: In 2006, **Paraquat** was a restricted use herbicide applied to nursery and floriculture crops in the six Program States. A total of 300 pounds of **Paraquat** was applied to nursery and floriculture crops

In terms of total amount applied, **Chlorpyrifos,** at 95,300 pounds, was the top restricted use insecticide reported in 2006. A total of 28,400 pounds of **Chlorpyrifos** was applied to coniferous evergreens, 20,800 pounds to Christmas trees, and 22,900 pounds to cut cultivated greens. A total of 20,700 pounds of **Diazinon** was applied, with 11,400 pounds applied to coniferous evergreens.

Methyl bromide and **Chloropicrin** were the top two Other Chemicals summarized. Of the 309,300 pounds of **Methyl bromide** applied to nursery and floriculture crops in the Program States, cut flowers received 137,000 pounds. A total of 65,000 pounds of **Chloropicrin** was also applied to cut flowers.

Restricted Use Pesticides
by Rate per Acre and Total Applied
Program States, 2006

Active Ingredient	All Nursery and Floriculture		All Nursery	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds	*1,000 Pounds*	*Pounds*	*1,000 Pounds*
Herbicides				
Atrazine			2.156	14.3
Paraquat	0.547	0.3	0.514	0.2
Insecticides				
Abamectin	0.010	*	0.010	*
Azinphos-methyl			0.187	0.1
Bifenthrin	0.082	2.5	0.079	1.5
Chlorpyrifos	0.773	95.3	0.941	64.0
Cyfluthrin	0.049	0.4	0.049	0.4
Deltamethrin			0.050	*
Diazinon	0.578	20.7	0.529	14.5
Diflubenzuron	0.044	0.5	0.052	0.2
Disulfoton	2.521	0.2		
Esfenvalerate			0.036	0.2
Ethoprop	4.704	0.9		
Fenbutatin-oxide	0.548	3.1	0.890	0.8
Lambda-cyhalothrin	0.050	8.5	0.050	8.4
Lindane	0.107	0.1		
Methidathion	0.474	3.7	0.451	1.9
Methiocarb	0.905	3.8	0.622	0.3
Methomyl	0.732	1.0	0.739	0.9
Permethrin	0.126	5.7	0.150	0.1
Other Chemicals				
Chloropicrin	119.243	235.5	50.049	56.6
Methyl bromide	142.579	309.3	101.924	132.0
Strychnine			0.003	*
Zinc phosphide	0.114	*		

See footnote(s) at end of table.

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Restricted Use Pesticides
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Transplants for Commercial Vegetable & Strawberry Production		Nursery Propagation or Lining-out Stock	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds	*1,000 Pounds*	*Pounds*	*1,000 Pounds*
Insecticides				
Abamectin	0.009	*		
Bifenthrin			0.087	0.1
Chlorpyrifos			0.657	0.9
Diazinon			0.497	0.5
Esfenvalerate			0.034	0.1
Permethrin	0.087	*		

See footnote(s) at end of table. --continued

Restricted Use Pesticides
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Broadleaf Evergreens		Coniferous Evergreens	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds	*1,000 Pounds*	*Pounds*	*1,000 Pounds*
Herbicides				
Atrazine			0.891	1.0
Insecticides				
Bifenthrin	0.154	0.2	0.071	0.2
Chlorpyrifos	1.033	4.3	1.007	28.4
Deltamethrin	0.037	*		
Diazinon	0.512	1.0	0.502	11.4
Diflubenzuron			0.061	0.2
Esfenvalerate			0.031	*
Lambda-cyhalothrin	0.037	*	0.051	8.3
Methiocarb	0.667	*		

See footnote(s) at end of table. --continued

Restricted Use Pesticides
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Deciduous Shade Trees		Deciduous Flowering Trees	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds	*1,000 Pounds*	*Pounds*	*1,000 Pounds*
Insecticides				
Bifenthrin	0.072	0.5	0.062	0.1
Chlorpyrifos	0.559	1.8	0.962	2.0
Diazinon	0.911	0.4		

See footnote(s) at end of table. --continued

Restricted Use Pesticides
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Deciduous Shrubs		Fruit and Nut Plants	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds	*1,000 Pounds*	*Pounds*	*1,000 Pounds*
Insecticides				
Abamectin			0.010	*
Bifenthrin	0.079	0.3		
Chlorpyrifos	1.569	1.5	0.855	1.0
Lambda-cyhalothrin	0.019	*		
Methiocarb	0.949	*		

See footnote(s) at end of table. --continued

Restricted Use Pesticides
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Christmas Trees		Palms	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds	*1,000 Pounds*	*Pounds*	*1,000 Pounds*
Herbicides				
Atrazine	2.451	12.7		
Insecticides				
Bifenthrin	0.073	0.1	0.105	*
Chlorpyrifos	0.926	20.8	0.576	1.4
Cyfluthrin	0.049	0.4		
Diazinon	0.815	0.6	2.002	0.2
Diflubenzuron	0.032	*		
Esfenvalerate	0.034	*		
Methiocarb			0.574	*

See footnote(s) at end of table. --continued

Restricted Use Pesticides
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Ornamental Grasses		Other Woody Ornamentals and Vines	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds	*1,000 Pounds*	*Pounds*	*1,000 Pounds*
Insecticides				
Bifenthrin			0.141	0.1
Chlorpyrifos			0.906	0.7
Methiocarb			0.625	*

See footnote(s) at end of table. --continued

Restricted Use Pesticides
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	All Floriculture		Cut Flowers	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds	*1,000 Pounds*	*Pounds*	*1,000 Pounds*
Herbicides				
Paraquat	0.898	*		
Insecticides				
Abamectin	0.012	*		
Bifenthrin	0.088	1.0	0.133	*
Chlorpyrifos	0.567	31.3	0.585	2.1
Cyfluthrin	0.006	*		
Diazinon	0.743	6.2	0.945	0.3
Diflubenzuron	0.039	0.2		
Fenbutatin-oxide	0.481	2.2		
Lambda-cyhalothrin	0.045	*	0.037	*
Methidathion	0.501	1.8		
Methiocarb	0.943	3.5	0.970	0.3
Methomyl	0.671	0.1		
Permethrin	0.126	5.6	0.199	0.2
Other Chemicals				
Chloropicrin	212.067	179.0	113.584	65.0
Methyl bromide	205.148	177.2	236.636	137.0

See footnote(s) at end of table. --continued

Restricted Use Pesticides
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Flowering Plants		Bedding Plants	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds	*1,000 Pounds*	*Pounds*	*1,000 Pounds*
Insecticides				
Bifenthrin	0.127	0.2	0.051	0.2
Chlorpyrifos	1.316	1.2	0.829	0.7
Cyfluthrin	0.007	*	0.004	*
Diazinon	0.743	0.3		
Lambda-cyhalothrin	0.055	*		
Methiocarb	2.013	1.4	0.917	0.3

See footnote(s) at end of table. --continued

Restricted Use Pesticides
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Foliage Plants		Floriculture Propagation Material	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds	*1,000 Pounds*	*Pounds*	*1,000 Pounds*
Insecticides				
Bifenthrin	0.085	0.4	0.078	*
Chlorpyrifos	0.679	4.2		
Diazinon	0.734	5.6		
Fenbutatin-oxide	0.907	1.3		
Methidathion	0.501	1.8		
Methiocarb	0.570	1.2	1.396	0.2

See footnote(s) at end of table.

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Restricted Use Pesticides
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Cut Cultivated Greens		Herbaceous Perennials	
	Rate per Acre	Total Applied	Rate per Acre	Total Applied
	Pounds	*1,000 Pounds*	*Pounds*	*1,000 Pounds*
Insecticides				
Bifenthrin	0.140	0.2	0.171	*
Chlorpyrifos	0.526	22.9		
Fenbutatin-oxide	0.282	0.9		
Permethrin	0.121	5.2		

See footnote(s) at end of table.

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Restricted Use Pesticides
by Rate per Acre and Total Applied
Program States, 2006 - continued

Active Ingredient	Non-production Areas	
	Rate per Acre	Total Applied
	Pounds	*1,000 Pounds*
Herbicides		
Paraquat	0.464	0.2
Insecticides		
Bifenthrin	0.012	*
Chlorpyrifos	0.660	3.1
Diazinon	0.636	*
Other Chemicals		
Chloropicrin	104.351	97.9
Methyl bromide	220.366	212.8

* Total applied is less than 50 pounds.

Integrated Pest Management Practice

Overview: The following tables present data on pest management practices that respondents used on nursery and floriculture operations in 2006. Questions were placed into one of four pest management categories: Prevention, Avoidance, Monitoring, or Suppression. The actual questions used to collect these data are shown in the survey instrument. It is important to note that the practice of good pest management techniques is site-specific in nature, and individual tactics are principally determined by the particular crop/pest/environment scenario.

The data are published by: Percent of Operations Utilizing Practice. These percentages are published at the Program State and State levels. For all the crops in this survey, the percentages refer only to operations.

Highlights: Pruning/removing infected plants or plant parts was the most commonly reported pest management practice for prevention, used by 82 percent of the nursery and floriculture operations. The next most commonly used prevention practice was detecting the presence of weeds, insects, or diseases by inspecting incoming stock, used by 68 percent of the operations in the sample.

For avoidance practices, elevating plants was used by 54 percent of the nursery and floriculture operations. The second most common avoidance practice was using sterilized growing media, used by 52 percent of the operations sampled.

For monitoring practices, scouting for pests by conducting general observations while performing routine tasks was the most common, used by 82 percent of the operations. In addition, 60 percent of the operations monitored weather data to assist in making pesticide application decisions.

The most widely used pest suppression practices were utilizing ground covers, mulches, or other physical barriers such as gravel, weed mats, etc. and using greenhouse ventilation. Each of these practices was used on 65 percent of the operations. Modifying temperatures was used on 51 percent of the operations.

Pest Management Practices
Percent of Operations Utilizing Practice
Program States, 2006

Practice	CA	FL	MI	OR	PA	TX	Total
Prevention Practices:							
Detect the presence of weeds, insects, or diseases by inspecting incoming stock?	55	74	72	52	78	66	68
Using water management practices such as drainage or treatment of retention water?	42	39	37	19	24	47	33
Pruning/removing infected plants or plant parts?	78	80	90	70	92	89	82
Tilling, mowing, or burning of field or greenhouse borders, lanes, etc?	55	65	70	55	71	69	64
Sanitizing benches or other platform devices between uses?	44	71	68	39	57	40	56
Sanitizing ground covers between uses?	24	56	54	20	34	39	39
Santizing containers between uses?	52	51	47	31	47	59	48
Avoidance Practices:							
Use insect or disease resistant plant varieties?	40	46	48	23	53	59	45
Using trap vegetation?	7	2	3	2	2	1	3
Using pheromones to disrupt insect mating?	5	1	2	3	3	2	3
Adjusting row spacing or direction?	33	71	39	29	42	53	47
Elevating plants?	29	70	62	27	47	85	54
Adjusting plant density?	33	64	54	23	56	74	51
Using sterilized growing media?	36	57	68	27	58	70	52
Using greenhouse screening?	25	63	39	22	23	39	37
Monitoring Practices:							
Conducting general observations while performing routine tasks?	82	85	79	87	85	66	82
Performing deliberate scouting activities on a scheduled basis?	27	53	21	17	14	39	31
Keep records on weed, insect, or disease levels?	22	18	23	27	35	19	24
Use pheromones to monitor insects by trapping?	10	3	7	9	4	3	6
Soil analysis?	21	29	12	14	14	26	20
Plant tissue analysis?	17	25	11	12	16	26	18
Using trap indicator plants?	12	4	8	5	6	1	6
Use of insect traps?	33	14	34	23	23	28	25
Monitor weather data to assist in making pesticide application decisions?	38	69	52	61	72	50	60

--continued

Pest Management Practices
Percent of Operations Utilizing Practice
Program States, 2006 - continued

Practice	CA	FL	MI	OR	PA	TX	Total
Suppression Practices:							
Using beneficial organisms (insects, nematodes, or fungi)?	26	13	10	8	14	17	14
Using biological pesticides (BotaniGard, Conserve, etc.)?	22	18	13	7	25	21	18
Modifying temperatures?	28	51	79	42	48	71	51
Modifying hothouse/greenhouse relative humidity?	32	45	70	39	44	74	47
Using greenhouse ventilation?	44	64	82	55	68	84	65
Using plant tissue dryness management such as minimizing overhead irrigation to reduce leaf wetness time?	30	68	61	28	44	55	49
Utilizing ground covers, mulches, or other physical barriers such as gravel, weed mats, etc?	49	82	80	37	62	64	65
Use of insect traps?	25	18	29	13	18	16	20
Rotate or tank mix pesticides for the primary purpose of keeping pests from becoming resistant to pesticides?	37	57	42	35	62	56	49
Apply pesticides mostly on: [1]							
A preventative schedule?	39	55	24	41	47	33	43
Scouting data compared to university or extension infestation guidelines?	3	7	9	4	5	1	5
Scouting data and your established thresholds?	38	25	55	44	42	33	38
Others?	20	14	12	12	6	33	14
Obtain most of its pesticides from: [1]							
Chemical dealer?	89	88	87	88	81	60	84
Chemical manufacturer?	2	1	1	1	1	*	1
Other?	8	11	11	11	19	40	15
Mostly get recommendations for pest control/pesticde use from: [1]							
Farm supply dealer/chemical dealer?	47	53	36	62	35	36	47
University/extension personnel /material?	4	13	22	16	39	5	17
Commercial scouting service/crop consultant/pest control advisor?	5	5	2	3	3	*	3
Other growers/producers?	8	14	15	3	10	5	10
Producer association/newsletter/trade magazines?	2	2	8	3	4	2	3
Employee pest advisor?	9	3	2	2	1	4	3
Custom applicator?	3	*	*	*		1	1
Other?	23	10	14	11	8	47	15

* Percent is less than 0.5.
[1] May not add due to rounding.

Survey and Estimation Procedures

Survey Procedures: Agricultural chemical usage data for nursery and floriculture were collected on the 2007 Nursery and Floriculture Chemical Use Survey (NFCUS). The scope of nursery products included: transplants for commercial vegetable and strawberry production, propagation or lining-out stock, broadleaf evergreens, coniferous evergreens, deciduous shade trees, deciduous flowering trees, deciduous shrubs, fruit and nut plants, Christmas trees, palms, ornamental grasses and other woody ornamentals. The scope of floriculture products included: cut flowers, flowering plants (potted), bedding plants (flats, potted, or hanging baskets), foliage plants (potted or hanging baskets), propagation material, cut cultivated greens, and herbaceous perennials. Chemical applications to non-production areas were also included. Excluded from the survey were aquatic plants, bulbs, flower seed plants, mushrooms, rhizomes, sod, tubers, and vegetable seed plants (See Crop Categories and Descriptions).

Data collection for the NFCUS occurred primarily during the months of March to July 2007 and included the States of California, Florida, Michigan, Oregon, Pennsylvania, and Texas. There were 4,154 samples drawn from the NASS List Sampling Frame. The operator(s) of each firm was personally interviewed to collect data on all chemical applications in 2006.

The sample design was a Multivariate Probability Proportional to Size (MPPS) design. MPPS was used to assure that the value of sales for all targeted crops was included when computing the operation's probability of selection. First, each operation was assigned a probability of selection for every item of interest. The probabilities of selection were calculated as proportional to size, where the measure of size was the gross value of sales for targeted crops. Then, the maximum of these probabilities was identified and used in selecting the sample. The sample design was not targeted toward estimation of any specific active ingredient at the State level. In general, the more frequently an active ingredient was used within a State, the more accurate the chemical use estimates will be.

It is common in nursery and floriculture production, to make a single chemical application to an area which contains multiple types of plant material. A single chemical application can also be made to multiple types of areas such as in a shade structure and/or in the open. Therefore, for each chemical application, respondents were asked "What was it mostly applied to?" and "Where was it mostly applied?" The data were summarized based on the "mostly" response.

Data were also collected on pest management practices at the operation level. Due to the diversity of production practices corresponding with products produced, some pest management questions were not applicable for a specific operation. When the respondent coded the practice as NA (not applicable) that entry was excluded for the calculation of percent of operations using the practice. These percentages are based on “applicable” practices.

Estimation procedures: The use of agricultural chemicals in the nursery and floriculture industry is very different when compared with other sectors of agriculture (field crop, fruit, livestock, vegetable, etc.). Chemical applications to nursery and floriculture commodities are predominately made on a "spot" (small area) basis. Chemical applications are frequently made by chemigation, foggers, aerosols, misters, smokers, root dipping, or drenching of soil. Application rates can be based on teaspoon(s) per pot, per 1,000 cubic feet of greenhouse space, per length of row, or per cubic yard of soil. For this publication, all application rates were converted to rate per acre and all application methods were included in these calculations.

The same production area can be used to produce different types of plant material, or multiple "turns" of the same plant material within the calendar year. Trees may be planted in rows with significant row widths but the space between trees receives no chemical application. Due to these, and other unique circumstances, estimates on "percent of area applied", "number of applications", and "rate per crop year", are not available.

Data were summarized by the production categories listed in "Survey Procedures." The production categories were aggregated to estimate active ingredient use data at the "All Nursery", "All Floriculture", and "All Nursery and Floriculture" levels. Estimates of active ingredients applied to non-production areas are not included in the "All Nursery", "All Floriculture", or "All Nursery and Floriculture" data.

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 manufacturers' recommendations and with data from other operators using the same product. Following this review, product information is 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 add due to independent rounding of the published values.

Estimates in the "Percent of Operations" tables by applicator, by where applied, and by method of application were derived as a percentage of operations engaged in the production of the stated category such as "Fruit and Nut Plants", or "Cut Flowers", or "All Nursery." They are not percentages based on "All Nursery and Floriculture Operations", with the exception of that stated category. Also, they are not estimates on "percent of total applications." They are based on one reported chemical application on a particular production category by a particular type of applicator, or by "where applied" category, or by "method of application."

Some products are labeled for control of pests across pesticide classes; for example, as an insecticide and as a fungicide. In these instances, the active ingredient is listed under the pesticide class for which it is predominately used.

Reliability

The survey was designed so that the estimates are statistically representative of active ingredient use on nursery and floriculture crops. The reliability of these survey results is affected by sampling variability and non-sampling errors.

Since all operations producing nursery and/or floricultural crops are not included in the sample, survey estimates are subject to sampling variability. The sampling variability expressed as a percent of the estimate is called the coefficient of variation (cv). Sampling variability of the estimates differed considerably by chemical and production category. In general, the more often the active ingredient was applied, the smaller the sampling variability. For example, estimates of a commonly used active ingredient such as Glyphosate isopropylamine salt will exhibit less variability than a rarely used chemical such as Ziram. For more commonly used active ingredients, cv's for the rate of application range from 5 to 50 percent. Other active ingredient cv's range from 50 to 100 percent.

Non-sampling errors can occur in complete censuses as well as sample surveys. They are caused by the inability to obtain correct information from each person surveyed, differences in interpreting questions or definitions, and mistakes in coding or processing the data. Special efforts are taken at each step of the survey to minimize non-sampling errors.

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 a pesticide active ingredient applied to an acre of land. Rate per application is the average number of pounds applied per acre in one application.

Avoidance: May be practiced when pest populations exist in a field or site but the impact of the pest on the crop can be avoided through some cultural practice. Examples of avoidance tactics include crop rotation such that the crop of choice is not a host for the pest, choosing cultivars with genetic resistance to pests, using trap crops, choosing cultivars with maturity dates that may allow harvest before pest populations develop, fertilization programs to promote rapid crop development, and simply not planting certain areas of fields where pest populations are likely to cause crop failure. Some tactics for avoidance and prevention strategies may overlap.

The following pest management questions were categorized as avoidance practices:

In 2006, did your operation use insect or disease resistant plant varieties?

In 2006, did your operation control weeds, insects, or disease by

…using trap vegetation?

…using pheromones to disrupt insect mating?

…adjusting row spacing or direction?

…elevating plants?

…adjusting plant density?

…using sterilized growing media?

…using greenhouse screening?

Beneficial insects and organisms: Insects collected and introduced into locations because of their value in biologic control as prey on harmful insects and parasites.

Biological pesticides: Chemicals which are derived from plants, fungi, bacteria, or other non-man-made synthesis and which can be used for pest control. Certain microorganisms including bacteria, fungi, viruses, and protozoa that are effective in controlling target pests.

Chemigation: Application of an agricultural chemical by injecting it into irrigation water.

Common name: The common name is an officially recognized name for an active ingredient. This report shows active ingredient by common name.

Floriculture: The production, cultivation and distribution of cut flowers, flowering potted plants, bedding plants, foliage plants, propagative floriculture material, cut cultivated greens, and herbaceous perennials.

Fungi: A lower form of parasitic plant life which often reduces crop production and/or lowers the grade quality of its host.

Ground cover: A fabric used to control moisture loss, warm the soil, control weeds, and/or prevent soil erosion in greenhouses and fields.

Insect traps: Devices that are used to monitor or directly reduce insect populations. They contain a food, visual lure, chemical attractant, or pheromone to attract pests.

Mechanism of Action (MOA): The method/biological pathway the pesticide uses to kill the pest.

Monitoring: Includes proper identification of pests through systematic sampling or counting or other forms of scouting. Also, weather monitoring to predict levels of pest populations or to determine the most effective time to make pesticide applications, and soil testing where appropriate.

The following pest management practices questions were categorized as monitoring practices:

In 2006, did your operation scout or monitor for pests by…

…conducting general observations while performing routine tasks?

…deliberately going to the growing areas specifically for scouting activities?

In 2006, did your operation keep electronic or written records on weed, insect, or disease levels?

In 2006, did your operation use pheromones to monitor insects by trapping?

In 2006, did your operation detect the presence of weeds, insects, diseases or pathogens…

…by soil analysis?

…plant tissue analysis?

…using trap indicator plants?

…use of insect traps?

In 2006, did your operation monitor weather data to assist in determining when to make pesticide application decisions?

Natural shade area: An area of trees or other plants used to prevent sunburn or sun scalding to susceptible floricultural commodities like coleus or impatiens.

Nursery: Any place where plants, shrubs, and trees are grown either for transplanting or as grafting stock.

Operation: Defined for purposes of this survey as one who produced and sold $10,000 worth of product in 2006.

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, desiccants, rooting compounds, and disinfectants, and rodenticides are included as other chemicals.

Pheromone: A chemical substance produced by an insect which serves as a stimulus to other individuals of the same species for one or more behavioral responses.

Prevention: The practice of keeping a pest population from infesting a crop or field. It includes such tactics as using pest-free seeds and transplants, alternative tillage approaches such as no-till or minimum till, choosing cultivars with genetic resistance to insects or disease, irrigation scheduling to avoid situations conducive to disease development, cleaning equipment and implements after completing field work, using field sanitation procedures, and eliminating alternate hosts or sites for insect pests and disease organisms.

The following pest management questions were categorized as prevention practices:

In 2006, did your operation detect the presence of weeds, insects, diseases, or pathogens by inspecting incoming stock?

In 2006, did your operation control weeds, insects, or diseases by…

…using water management practices such as controlled drainage or treatment of retention water?

…pruning out or removing infected plants or plant parts?

…tilling, mowing, or burning of field or greenhouse borders, lanes, etc.?

…sanitizing benches or other platform devices between uses?

…sanitizing ground covers between uses?

…sanitizing containers between uses?

Rate per acre: "Rate per Acre" is the average number of pounds of a pesticide's active ingredient applied in one application to an acre of land regardless of the number of times a particular acre was treated at the same rate.

Shade Structures: (i.e. Shade Cloth, Slats) Structures used to provide some shade from direct sunlight, but do not provide control over temperature and humidity as other types of coverings.

Suppression: Reducing the presence or spread of pests. Suppression tactics include making adjustments in cultural practices such as narrow row spacings or optimized in-row plant populations, using cover crops or mulches, or using crops with allelopathic potential in the rotation. Physical suppression tactics may include cultivation or mowing for weed control, baited or pheromone traps for certain insects, and temperature management or exclusion devices for insect and disease management. Biological pesticides and controls, including mating disruption for insects, can be considered as alternatives to conventional pesticides. Determining pest thresholds and alternating pesticide active ingredients to avoid resistance buildup are suppression methods which minimize pesticide use.

The following pest management questions were categorized as suppression practices:

In 2006, did your operation control weeds, insects, or disease by…

…using beneficial organisms (insects, nematodes, or fungi)?

…using biological pesticides (BotaniGard, Conserve, Gnatrol, Nemasys, etc.)?

…modifying temperature?

…modifying hothouse/greenhouse relative humidity?

…using greenhouse ventilation?

…using plant tissue dryness management such as minimizing overhead irrigation to reduce leaf wetness time?

…utilizing ground covers, mulches, or other physical barriers such as gravel, weed mates, etc.?

…rotating or tank mixing pesticides (*use pesticides with different mechanisms of action)* for the primary purpose of keeping pests from becoming resistant to pesticides?

…use of insect traps?

Trap indicator plants: Plants that are used strategically to trap or catch and determine the presences of pests before they can harm a commercial crop.

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 pesticide class, common name, 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 nursery and floriculture crops and NASS does not mean to promote use of any specific trade name.

Pesticide Class, Common Names, and Trade Names, 2006

Class	Common Names	Tradenames
H	(2-Meth-4-chlor)propionic acid	Gordon's Trimec Granules
H	1-(4,6Dimethoxypyrimidin	Maverick
H	2,4-D	Banvel 720, Gordon's Trimec Granules, HardBall, Unison
H	2,4-D, 2-ethylhexyl ester	006 Weed Killer, 2,4-D L.V. 4 Ester (3.84 lbs/ g), 2,4-D LV 6, 2,4-D LV6, Cleanout, Low Vol 4 Ester Weed Killer, Weed Rhap Low Volatile
H	2,4-D, butoxyethyl ester	Crossbow
H	2,4-D, diethanolamine salt	Weedar 64A
H	2,4-D, dimethylamine salt	2,4-D Amine, 2,4-D Amine 4, Brash, Dri-Clean, Formula 40, Pro Grade Par 3 (aka Triamine), Saber, Trimec, Triplet SF Selective Herbicide, Weed Rhap A-4D, Weed-B-Gon, Weedmaster
H	2,4-D, triisopropanolamine sal	Triplet Low Odor
H	2,4-DP, dimethylamine salt	2,4-D Amine 4CA, Pro Grade Par 3 (aka Triamine)
H	2,4-DP-p, 2-ethylhexyl ester	Cleanout
I	Abamectin	Abba, Agri-Mek 0.15EC, Avid 0.15 EC, Quali-Pro Abamectin 0.15 EC
I	Acephate	Acephate 75 WSP, Acephate 97UP, Address 75 WSP, Orthene, Orthene 50%, Orthene 75 S, Orthene 75 WSP, Orthene 97, Orthene PT 1300 DS, Orthene Turf, Tree & Ornamental Spray 97, Orthene Turf, Tree & Ornamental WSP, Ortho Isotox Insect Killer, Ortho Rose & Floral Spray, Othenex Garden Insect & Disease Control, PT 1320 Total Release, Payload 15G, Pinpoint 15G, Precise Nursery Systemic Insecticide, Tame/ Orthene TR
O	Acequinocyl	Kanemite 15 SC, Shuttle 15 SC
I	Acetamiprid	Assail 30 SG, Assail 70WP, TriStar 70 WSP
O	Acibenzolar-S-Methyl	Actigard, Blockade 50WG
H	Acifluorfen, sodium salt	Manifest B&G
H	Alachlor	Bullet, Partner WDG
I	Aldicarb	Temik 15G
O	Alkyl dim. benzyl ammonium	NAC 7
O	Alkyl dim. ethylbenzyl amm	Do-It-All, Gamma-Mene II, Green-Shield,

See footnote(s) at end of table. --continued

Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
	Alkyl dim. ethylbenzyl amm - Cont.	Prescription Treatment Green-Shield CA, R.D. 20
O	Alkyl dimethyl benzyl 50%	Consan Triple Action 20, Triathlon
O	Alkyl dimethyl benzyl 60%	Consan Triple Action 20, Do-It-All, Gamma-Mene II, Green-Shield, Naccosan B-20, Physan 20, Prescription Treatment Green-Shield CA, R.D. 20, Triathlon
O	Alkyl dimethyl ethyl benzyl	Consan Triple Action 20, Physan 20, Triathlon
I	Aluminum phosphide	Fumitoxin Tablets (55%), Weevil-cide Pellets, Weevil-cide Tablets
O	Aminopyridine	Avitrol Corn Chops, Avitrol Double Strength Corn Chops
H	Amitrole	Amitrol-T
O	Amm. Soap Higher Fatty Acids	Hinder Deer & Rabbit Repellent
H	Ammonium benzadox	Topcide
F	Ampelomyces quisquales isolate	AQ 10 Biofungicide
O	Ancymidol	A-Rest Solution
F	Anilazine	Spectro Turf Fungicide
I	Aprocarb	No Bugs M'Lady Shelf Paper
H	Asulam, sodium salt	Asulox
H	Atrazine	AAtrex 4L, Atrazine 4L, Atrazine 90DF, Bromox + Atrazine, Bullet, Liberty ATZ
I	Azadirachtin	Align XL (EC), Aza-Direct, Azatin XL, Azatin-EC, Azatrol EC, Bollwhip 4.5, Ecozin 3% EC, Margosan-O, Meen, Neemazad' 0.25ec Botanical Insecticide, Neemix 4.5, Ornazin 3% EC, SuperNeem 4.5-B
I	Azinphos-methyl	Guthion 2L, Guthion 35% WP, Guthion Solupak 50%
F	Azoxystrobin	Abound, Heritage (Turf & Ornamental), Heritage Maxx, Heritage TL, Quadris
F	Bacillus pumilus (QST 2808)	Ballad BioFungicide Plus
F	Bacillus subtilis (QST 713)	Rhapsody ASO
F	Bacillus subtilus	Companion, Rhapsody AS Biofungicide, Serenade Biofungicide (WP), Serenade MAX, Serenade WP Biofungicide
F	Basic copper sulfate	Bonide Garden Dust, C-O-C-S WDG, Cuprofix Disperss
F	Basic cupric zinc sulfate comp	Zinc Coposil 20 Dust
I	Beauveria bassiana	BotaniGard 22WP, Mycotrol Botanigard ES, Mycotrol O, Naturalis L (For Turf & Ornamental)

See footnote(s) at end of table. --continued

Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
I	Bendiocarb	Closure 76WP, Dycarb 76 WP, Turcam (76%WP)(Turf & Ornamental)
H	Benefin	Turf Fertilizer w/ Team Pro, XL 2G
F	Benomyl	Benlate, Benlate 50 DF, Benlate SP, Benomyl WP
H	Bensulide	Prefar 4E
H	Bentazon	Basagran (For Turf & Ornamental), Manifest B&G
I	Benzoic acid	Intrepid 2F, Intrepid 80 WSP
O	Benzyladenine	Fascination Plant Growth Regulator, Fresco, Perlan PGR, Promalin PGR
I	Beta-cyfluthrin	Tempo Ultra WP
I	Bifenazate	Acramite 50WS, Floramite (WSB), Floramite SC, Floramite SC/ LS
I	Bifenthrin	Attain Total Release, Bifenthrin 2EC, Biflex SFR, Brigade WSB 10WP, Capture 2EC, Discipline 2EC, Empower 2, Meace GC 7.9% Flowable, Onyx, TALSTAR LAWN & TREE FLOWABLE INSECTICIDE, Talstar 10 WP Ornamental, Talstar Flowable, Talstar Nursery Flowable, Talstar Nursery Granular, Talstar PL Granular, Talstar TC Flowable, Up-Star Gold, Verdicon Bisect CG, Wisdom Flowable
F	Boscalid	Endura (70WG), Pristine
O	Brodifacoum	D-con Ready Mixed Bait Bits, Havoc -XT Blok Kills Rats & Mice, Havoc rodenticide Bait Pack (Pellets), Talon-G Rodenticide Bait Pack, Weatherblok Bait
H	Bromacil	006 Weed Killer, Krovar I DF
O	Bromadiolone	Contrac All-Weather Blox, Contrac Rat & Mouse Bait, Contrac Rodenticide, Maki Paraffin Blocks, Maki Paraffinized Pellet Rat Bait, Maki Rat and Mouse Bait Packs
H	Bromoxynil	Brominal, Buctril (2EC), Moxy 2E
H	Bromoxynil heptanoate	Bromac Advanced, Buctril 4EC
H	Bromoxynil octanoic acid ester	Bromac Advanced, Bromox + Atrazine, Buctril 4EC
I	Bt subsp. aizawai	Agree WG, XenTari Biological Insecticide (DF), Xentari WDG
I	Bt subsp. israelensis	Gnatrol, Gnatrol DG, M-Trak Bioinsecticide, Raven, Vectobac AS

See footnote(s) at end of table.

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Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
I	Bt subsp. kurstaki	Condor, Crymax WDG, Dipel 10G, Dipel 2X (WP), Dipel 4L, Dipel DF, Dipel ES, Javelin (FC), Javelin ECB, Javelin WG, Javelin WP, Lepinox WDG, MVP Bioinsecticide, MVP II Bioinsecticide, Thuricide 48 LV, Thuricide Bt
I	Buprofezin	Applaud 70WP, Centaur, Courier, Talus Insect Growth Regulator
F	Butanone	Strike 25 WDG
O	Butenoic acid hydrochloride	ReTain
H	Butoxyethyl triclopyr	Crossbow, Turflon Ester
O	Cacodylic acid	Broadside
I	Cacodylic acid, sodium salt	Broadside
F	Calcium polysulfide	Lime Sulfur Solution, Lime-Sulfur Solution, Polysul, Sulforix, Tetrasul 4s5
I	Canola oil	NEU1161 (aka Takedown), Pyola
O	Capsaicin	Hot Pepper Wax, Hot Sauce Animal Repellent
F	Captan	Captan 50W, Captan 80-WP, Captec 4L, Rockland Fruit Tree Spray
I	Carbaryl	Carbaryl 1EC, Carbaryl 4L, Carbaryl 5% Bait, Carbaryl 50W, Carbaryl 80 WDG, Carbaryl 90DF, Sevin 10% Granules, Sevin 2F, Sevin 4F, Sevin 5% Dust, Sevin 50W, Sevin 80S, Sevin 80WSP, Sevin Bait (5%), Sevin Brand RP2, Sevin Brand RP4, Sevin SL, Sevin XLR Plus
I	Carbofuran	Furadan 4F
H	Carfentrazone-ethyl	Aim (40% WDG), Shark
I	Chitin	Clandosan 618 Nematicide
I	Chlorfenapyr	Pylon
H	Chlorimuron-ethyl	Reliance STS SP
O	Chlormequat chloride	Cycocel Plant Growth Regulant
F	Chloroneb	Teremec SP, Terraneb SP Turf Fungicide
O	Chloropicrin	Chloropicrin 100, MBC 67-33, MBC-33, Methyl Bromide 50% & Chloropicrin 50%, Methyl Bromide 57% & Chloropicrin 43%, Methyl Bromide 67% & Chloropicrin 33%, Methyl Bromide 75% & Chloropicrin 25%, Methyl Bromide 98% & Chloropicrin 2%, Pic-Clor 60, TERR-O-GAS, TM-442(aka Chloropicrin), Telone C-35,

See footnote(s) at end of table. --continued

Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
	Chloropicrin - Cont.	Tri-Con [75] 25, Tri-con [67]33
F	Chlorothalonil	Applause 720, Bravo 500, Bravo 720, Bravo 90DG, Bravo Ultrex, Bravo Weather Stik, Bravo ZN, Chloronil 720, Chlorostar IV, Chlorothalonil 4L, Concorde, Consyst WDG, Countdown L&G, Daconil 2787 Flowable, Daconil 2787 Multipurpose, Daconil 2787 WDG, Daconil Ultrex (Turf & Ornamental), Daconil Weather Stik (Turf & Ornamental), Daconil Zn Flowable (Turf & Ornamental), Echo 500 Turf & Ornamental, Echo 720, Echo 75 WDG Turf & Ornamental, Echo 90DF, Echo Lite, Ensign 720 / Bravo 720, Equus 500 ZN, Equus 720, Equus 720 SST, Equus DF, Exotherm Termil, Ferti-Lome Broad Spectrum Liq. Fungicide, Ferti-Lome Rose Spray, Fung-Oil Multi_purpose Fungicide RTU, Lesco Two-Some Flowable, Manicure 6 Flowable, PathGuard 6F, Ridomil Gold Bravo L (7008 & 7286), Ridomil Gold/ Bravo (WP), Spectro 90 WDG, Tattoo C, Terranil 6L, Terranil Zn
I	Chlorpyrifos	Aqua-sect, Chlorpyrifos 2E, Chlorpyrifos 4E AG, Duraguard ME, Duraplex TR, Dursban (1EC), Dursban 1% Granules, Dursban [1] 2G, Dursban 2% Granular, Dursban 2.5G, Dursban 2E, Dursban 4E, Dursban 50W, Dursban 50W Nursery, Dursban 50W in WSP (Turf & Ornamental), Dursban Pro (2L), Dursban Turf, Govern 4E, Lorsban 15G, Lorsban 4E, Lorsban 50W, Lorsban 75WG, Nufos 4E, Torpedo, Warhawk, Whirlwind, Yuma 4E
H	Chlorsulfuron	Landmark XP herbicide, Telar DF, Telar Herbicide
I	Cinnamaldehyde	Cinnacure A3005, Cinnamite, Valero
I	Clarified hydrophobic neem oil	NeemGard, Triact 70 (T & O), Trilogy
H	Clethodim	Arrow 2EC, Conclude Xtra, Envoy, Intensity, Prism, Select 2 EC
I	Clofentezine	Apollo 42%, Apollo SC, Ovation SC

See footnote(s) at end of table. --continued

Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
H	Clomazone	Strategy
H	Clopyralid	Confront, Lontrel (For Turf & Ornamental), Reclaim, Stinger (3EC)
I	Clothianidin	Celero 16 WSG
F	Copper (metallic)	Bordeaux
F	Copper ammonium complex	Copper-Count-N, Kop-R-Spray (EC)
F	Copper chloride hydroxide	Nu-Cop WDG
H	Copper ethanolamine complex	Cutrine-Plus
F	Copper hydroxide	Blue Shield 50 WP, Blue Shield WP, Champ Flowable, Champ Formula 2, Champ Formula II DF WSP, Champ Plus, Champion [20] 20 (WP), Champion WP, GX-569 Fungicide/ Bactericide, Junction (DF), Kocide 101 (WP), Kocide [20] 20, Kocide 2000, Kocide 4.5 LF, Kocide 606 (aka Kocide 4.5LF), Kocide DF, Kocide LF, Mankocide, Nu-Cop 3L, Nu-Cop 50DF, Nu-Cop 50WP
F	Copper octanoate	NEU1140F Copper Soap
F	Copper oxide	Nordox (WP), Nordox 75 WG
F	Copper oxychloride	C-O-C-S WDG
F	Copper oxychloride sulfate	C-O-C-S 15 Sulfur 25, C-O-C-S 50WP, Oxycop Dust #3
F	Copper resinate	Camelot, Copper Fungicide 4E, Prescription Treatment Camelot, Tenn-Cop 4E, Tenn-Cop 5E
F	Copper sulfate	Basicop, Copper Sulfate, Copper Sulfate Powdered Bluestone, Magna-Bon Pro-Teck, Phyton 27
I	Cryolite	Cryolite 96 Dust, Kryocide
O	Cyclopropene,1-methyl-	EthylBloc Technology
I	Cyfluthrin	Bayer Multi-Insect Killer Concentrate, Baythroid 2 (EC), Countdown EC Premise, Decathlon 20 WP Greenhouse & Nursery, Discus, Duraplex TR, Renounce 20WP, Tempo 1% Dust, Tempo 2, Tempo 20 WP, Tempo SC Ultra
F	Cymoxanil	Tanos
I	Cypermethrin	Cynoff WP Insecticide, Demon TC, Up-Cyde 2.5 EC
F	Cyprodinil	Switch 62.5WG, Vangard WG
I	Cyromazine	Citation (WP), Trigard (75W), Trigard OMC
O	Cytokinins	GoldenGro R

See footnote(s) at end of table.

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Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
H	DCPA	Dacthal Flowable, Dacthal W-75
O	Daminozide	B-Nine SP, B-Nine WSG, Dazide WSG
O	Dazomet	Basamid Granular
O	Decenol	Checkmate PTB-XL, Checkmate SF-200
O	Decenyl acetate	Checkmate PTB-XL, Checkmate SF-200
I	Deltamethrin	DeltaDust, DeltaGard T&O 5 SC Insecticide, Deltagard GC
O	Dialkyl methyl benzyl 60%	Naccosan B-20
I	Diazinon	D-264 EC500, D-z-n Diazinon 14G, D-z-n Diazinon 50W, D-z-n Diazinon AG500 (4E), D.Z.N. 5.0 EW, Diazinon 14G, Diazinon 25% Spray (2EC), Diazinon 4E, Diazinon 5 Granules, Diazinon 50W, Diazinon AG500 (4E), Diazinon AG600 WBC, Diazinon Ultra, Ferti-Lome Rose Spray, Knox Out 2FM, KnoxOut GH, KnoxOut NL, Spectracide 25
H	Dicamba	Banvel 720, Cleanout, Gordon's Trimec Granules, Resolve SG
H	Dicamba, dimethylamine salt	3-Way Weed and Feed, Brash, Horsepower Spot Weed Killer, Trimec, Triplet Low Odor, Triplet SF Selective Herbicide, Weedmaster
H	Dicamba, sodium salt	Distinct (aka Overdrive), Rave
H	Dichlobenil	Barrier Ornamental Landscaping, Casoron 4G, Casoron 50W
O	Dichloropropene	Pic-Clor 60, Telone C-35, Telone II
I	Dichlorvos	Fulex DDVP Fumigator, GH-19, Shelltox Aerosol Insecticide
F	Dicloran	Botran 5F, Botran 75W, Diclor, Sclerban 75 WDG
I	Dicofol	Dicofol 4 E, Kelthane 35 (WP), Kelthane 50 (WP), Kelthane EC, Kelthane MF
I	Dicrotophos	Bidrin 8
O	Didecyl dim. amm. chloride	Anti-Growth Algaecide Concentrate, NAC 7
I	Dienochlor	Pentac Aqua-Flow, Pentac WP
O	Diethyl-2-ethylamine	Ecolyst
I	Diflubenzuron	Adept (WSB), Dimilin 25W, Dimilin 2F, Dimilin 2L, Dimilin 4L (For Mushrooms/ Ornamentals), Dimilin 4L (For Use On Forests)

See footnote(s) at end of table.

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Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
H	Diflufenzopyr-sodium	Distinct (aka Overdrive)
O	Dikegulac-sodium	Atrimmec Plant Growth Regulator
I	Dimethoate	Cygon 2-E, Cygon 267, Digon 400, Dimate 4EC, Dimethoate 2.67 EC, Dimethoate 25WP, Dimethoate 400, Dimethoate 4EC
F	Dimethomorph	Acrobat 50WP, Acrobat MZ, Ardent 50WP Fungicide, Stature
F	Dinocap	Karathane WD
I	Dinotefuran	Safari 20 SG, Venom, Venom 20 SG
O	Dioctyl dim. amm. chloride	NAC 7
O	Diphacinone	Ditrac All-Weather Cake, Ditrac Tracking Powder, P.C.Q. Pelleted Rodent Bait, Ramik Bars, Ramik Brown, Ramik Green
H	Diquat dibromide	Diquat, Diquat Herbicide, Reglone, Reward Landscape & Aquatic, Roundup QuikPRO
F	Disodium tetraborate decahydra	Prevam Ultra
I	Disulfoton	Advanced Garden 2-in-1 Systemic RTU, Di-Syston 15% G, Di-Syston 2% G, Terraclor Super X plus Di-Syston EC
H	Dithiopyr	Dimension, Dimension 270-G
H	Diuron	Direx 4L, Direx 80DF, Diuron 4L, Diuron 80W, Karmex DF, Karmex IWC (Turf & Ornamental), Karmex IWC 4L (Turf & Ornamental), Karmex XP, Krovar I DF, Sprakil SK-26, Velpar AlfaMax
F	Dodemorph acetate	Milban EC
F	Dodine	Syllit 65W, Syllit FL
O	E,E-8, 10-Dodecadien-1-ol	CHECKMATE CM HAND APPLIED DISPENSER
O	E-8-Dodecenyl acetate	Checkmate SF-200, Isomate - OFM TT
H	EPTC	Eptam 7-E
I	Emamectin benzoate	Proclaim
I	Endosulfan	Endosulfan 3EC, Endosulfan 50W, Fulex Thiodan Insecticidal Smoke, Phaser (3EC), Thiodan 2 C.O. EC, Thiodan 3EC, Thiodan 50WP, Thionex (Thiodan) 3EC, Thionex 50W
I	Esfenvalerate	Asana XL, Ortho Bug-B-Gon
H	Ethalfluralin	Strategy
O	Ethephon	Ethrel Plant Regulator (2EC), Florel Brand G/ R Plant Growth Regulator, Florel Brand Growth Regulator, Florel Plant Growth Regulator

See footnote(s) at end of table. --continued

Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
I	Ethoprop	Mocap 10G, Mocap EC
I	Ethoxy. secondary alcohols	Safe-T Green (SM-9)
I	Ethyl parathion	Aqua 8 Parathion, Ethyl Parathion 8E, Paraspray 6-3, Parathion 4-EC, Parathion 4L
I	Etoxazole	Secure Miticide, TetraSan 5 WDG, Zeal Miticide
F	Etridiazole	Banrot 40 WP, Banrot 8G, Terraclor Super X 18.8G, Terraclor Super X Granular Soil Fungicid, Terraclor Super X plus Di-Syston EC, Terrazole CA, Truban 25 EC, Truban 30% Wettable Powder
F	Famoxadone	Tanos
O	Farnesol	Stirrup M (Biocontrol agent)
O	Fatty acids	Off-Shoot-O
F	Fenamidone	Reason 500 SC
I	Fenamiphos	Nemacur 3 Turf, Nemacur 3E
F	Fenarimol	Lesco Two-Some Flowable, Rubigan A.S., Rubigan EC
F	Fenbuconazole	Enable 2F, Indar 75 WSP
I	Fenbutatin-oxide	Ortho Isotox Insect Killer, Othenex Garden Insect & Disease Control, Vendex 4L, Vendex 50WP
F	Fenhexamid	Decree 50 WDG (Ornamental), Elevate 50 WDG
I	Fenitrothion	Pestroy 4EC
I	Fenoxycarb	Award (Turf & Ornamental), Fenoxycarb 25WP, Logic, Precision 25 WP, Preclude Micro TR, Preclude PT 2100 TR
I	Fenpropathrin	Danitol 2.4 EC Spray, Tame 2.4 EC Spray, Tame/ Orthene TR
I	Fenpyroximate	Akari 5SC Miticide/ Insecticide, FujiMite
I	Fenvalerate	Pydrin 2.4EC
F	Ferbam	Ferbam Granuflo
I	Fipronil	Regent 1.5G
I	Flonicamid	Aria Insecticide, Carbine 50 WG
H	Fluazifop-P-butyl	Fusilade 2000 (1EC), Fusilade DX, Fusilade II Turf & Ornamental, Ornamec (For Turf & Ornamental)
F	Fludioxonil	Hurricane (Ornamental), Medallion (WSP), Switch 62.5WG
H	Flufenacet	Axiom DF, Domain DF

See footnote(s) at end of table.

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Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
H	Flumetsulam	Flumetsulam 80 WDG
H	Flumioxazin	Broadstar Herbicide, Chateau Herbicide SW, SureGuard Herbicide
O	Flurprimidol	Cutless 50 W, Topflor Ornamental Growth Regulator
F	Flutolanil	Contrast 70WSP, ProStar 50WP, Prostar 70WP, SysStar WDG
I	Fluvalinate	Mavrik Aquaflow Insecticide
H	Fomesafen	Reflex
O	Forchlorfenuron	KT-30 Plant Growth Regulator
F	Fosetyl-al	Aliette WDG (For Crop Protection), Aliette WDG (For Turf & Ornamental), Prodigy 80 DG
O	Garlic oil	Allityn Insect Repellent, Envirepel, Garlic Barrier AG
O	Gibberellic acid	Falgro 20SP, Falgro 4L, Florgib 4L, GibGro 4LS, PGR-IV Plus, ProGibb 4%, RyzUp
O	Gibberellins A4A7	Fascination Plant Growth Regulator, Fresco, Perlan PGR, Promalin PGR
H	Glufosinate-ammonium	Finale, Liberty ATZ, Rely Herbicide
H	Glyphosate	Touchdown CF, Touchdown Herbicide, Touchdown Pro, Touchdown Total
H	Glyphosate isopropylamine salt	Accord, Accord Concentrate (aka Glypro), Accord SP (aka NAF-545), Aquamaster, Aquaneat Aquatic Herbicide, Buccaneer, Buccaneer Plus, ClearOut 41 Plus, Cornerstone, Cornerstone Plus, Credit, Eraser Systemic Weed & Grass Killer, Gly Star Original, Gly Star Plus, Gly-4 Plus, Glyfos Herbicide, Glyfos Pro, Glyfos X-TRA, Glyphomax, Glyphomax Plus, Glyphomax XRT, Glyphosate 4 (Turf & Ornamental), Glyphosate 41% Plus, Glyphosate Original, Hi-Yield Killzall, Honcho, Honcho Plus, Kill 2, KleenUP Pro, Mad Dog Glyphosate, Mirage (4EC), Mirage Plus, Prokoz Glyphosate Prod II, Prosecutor Pro, Protocol, Ranger (2EC), Ranger Pro, Rascal, Rascal Plus, Rattler, Razor (For Turf & Ornamental), Remuda Full Strength, Rodeo, Roundup Custom,

See footnote(s) at end of table.

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Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
	Glyphosate isopropylamine salt - Cont.	Roundup Export, Roundup L & G, Roundup L&G RTU, Roundup Original, Roundup Original II, Roundup Original Max, Roundup Pro (T & O), Roundup Pro Concentrate (T & O), Roundup ProDry, Roundup QuikPRO, Roundup Super Concentrate, Roundup Ultra, Roundup Ultra Max, Roundup UltraMax II, Roundup WSD, Roundup Weather Max, Ruler 4EC, Silhouette Herbicide, Supersate, Wise Up Plus Glyphosate Herbicide
H	Glyphosate potassium salt	RT Master II
H	Halosulfuron	Manage (75%), Permit, Sandea, Sedgehammer Turf Herbicide, Sempra CA, Sempra CA Herbicide
O	Harpin protein	Messenger STS
O	Hexadecenal	Checkmate DBM-F
O	Hexadecenyl acetate	Checkmate DBM-F
H	Hexazinone	Velpar (90SP), Velpar AlfaMax, Velpar DF, Velpar L, Westar
I	Hexythiazonx	Hexygon DF, Hexygon Ovicide/ Miticide, Onager, Savey 2E (aka Onager), Savey 50 WP
O	Hydantoin, dimethyl	Dantchlor TBS-2
O	Hydantoin, methyl	Dantchlor TBS-2
I	Hydramethylnon	Amdro Granular
O	Hydrogen peroxide (dioxide)	Oxidate, Zerotol, Zerotol Algaecide
H	Imazamethabenz	Assert SG
H	Imazapyr, isopropylamine salt	Arsenal
H	Imazaquin	Steel
H	Imazethapyr	Resolve SG, Steel
H	Imazethapyr, ammonium salt	Pursuit
I	Imidacloprid	AE F106464 00 SC43 A4, Admire 2 Flowable, Admire Pro, Alias 2F Flowable, Discus, Imidacloprid 75WSB, Marathon 1%G, Marathon 60WP, Merit 1G Greenhouse and Nursery, Merit 2, Merit 2 Greenhouse & Nursery Insecticide, Merit 2.5G (T & O), Merit 60 WSP, Merit 75 WP, Merit WSP, Provado 1.6 Flowable, Provado Solupak (75WSP), Widow, Zenith 75 WSP
O	Indole-3-butyric acid	Dip 'n Grow, GoldenGro R, Hormex Rooting Powder No. 16,

See footnote(s) at end of table. --continued

Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
	Indole-3-butyric acid - Cont.	Hormex Rooting Powder No. 30, Hormex Rooting Powder No. 8, Hormex X, Hormodin 1, Hormodin 2, Hormodin 3, PGR-IV Plus, Rhizopon AA Water Soluble Tablets, Wood's Rooting compound
I	Indoxacarb	Avaunt Insecticide
F	Iprodione	Chipco 26019 (USE - 7271), Chipco 26019 Flo Fungicide, Chipco 26019 Fungicide, Iprodione 4L, Iprodione Pro 2SE (Turf & Ornamental), Lesco 18 Plus (Turf & Ornamental), Rovral 4 Flowable, Rovral Fungicide (50WP), Rovral WG, Sextant (Turf & Ornamental)
O	Iron phosphate	Sluggo
I	Isopropyl Salicylate	Oftanol Insecticide
H	Isoxaben	Gallery 75 Dry Flowable, Showcase, Snapshot 2.5TG, Snapshot 80DF, Turf Fertilizer w/ Team Pro
I	Jojoba oil	Detur
I	Kaolin	Kaolin, Surround WP
I	Kinoprene	Enstar 5E
F	Kresoxim-methyl	Cygnus, Sovran
H	Lactofen	Cobra (2E)
I	Lambda-cyhalothrin	Battle GC, Chemsico Insecticide Concentrate 5L, Karate (1EC), Lambda-T, Scimitar CS, Scimitar G&N Insecticide WSP, Scimitar GC, Scimitar Greenhouse Insecticide in WSP, Scimitar WP, Taiga Z, Warrior, Warrior 1EC
I	Lindane	Isotox Lindane Spray No 200, Lindane 20%EC
H	Linuron	Linex 4L, Linex 50DF, Lorox DF
H	MCPA, 2-ethylhexyl ester	Bromac Advanced, Stampede CM
H	MCPA, dimethylamine salt	3-Way Weed and Feed, Horsepower Spot Weed Killer
H	MCPP (Mecoprop), DMA salt	3-Way Weed and Feed, Pro Grade Par 3 (aka Triamine), Trimec, Weed-B-Gon
H	MCPP-P (Mecoprop-P), DMA Salt	Triplet Low Odor, Triplet SF Selective Herbicide
H	MSMA	Broadside, Daconate 6 (EC)
I	Malathion	Atrapa 5E, Atrapa ULV, Cythion 8 Aquamul,

See footnote(s) at end of table.

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Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
	Malathion - Cont.	Fyfanon, Malathion 25 WP, Malathion 5 EC (56%), Malathion 5 EC (57%), Malathion 50% EC, Malathion 55, Malathion 8E, Malathion Aquamul (8E), Malathion Methoxychlor Spray, Malathion Spray 50%, Malathion ULV 9.7lbs. (95%), Rockland Fruit Tree Spray
O	Maleic hydrazide	Royal Slo-Gro
F	Mancozeb	Acrobat MZ, Clevis, Dithane 75DF Rainshield (For T & O), Dithane DF Rainshield, Dithane DF/ 70, Dithane F-45 Rainshield, Dithane M-45 (WP), Dithane M-45 Flowable M, Dithane WF (For Turf & Ornamental), Dithane WSP, Fore FloXL, Fore Turf & Ornamental, Fore WSP, Junction (DF), Mancozeb 80% WP, Mancozeb Broad Spectrum Fungicide, Mankocide, Manzate 200 DF, Manzate 200 WP, Manzate 75DF, Manzate Flowable, Penncozeb (80WP), Penncozeb 75DF, Pentathlon DF, Pentathlon LF, Protect DF (For Turf & Ornamental), Protect T/ O WSB (ForTurf and Ornamental), Ridomil Gold MZ, Ridomil MZ58, Stature, Zyban Contact Fungicide, Zyban WP, Zyban WSB
F	Maneb	MF-4 (L), Maneb 75DF, Maneb 80W, Maneb Lawn & Garden, Hi-yield, Manex
H	Mecoprop-P-potassium	Acme MCPP Herbicide
F	Mefenoxam	Hurricane (Ornamental), Mefenoxam 2 AQ, Quell, Ridomil Gold Bravo L (7008 & 7286), Ridomil Gold EC, Ridomil Gold MZ, Ridomil Gold PC, Ridomil Gold WSP, Ridomil Gold/ Bravo (WP), Subdue 2EC, Subdue 2X WSP, Subdue GR, Subdue MAXX, Ultra Flourish
O	Mepiquat chloride	Mepex
F	Metalaxyl	Pythium Control, Ridomil 2E, Ridomil 5G, Ridomil MZ58, Subdue, Subdue 2E
O	Metaldehyde	Bug-Geta Slug and Snail Bait Pellets, Corry's Slug Bait (2% metaldahyde),

See footnote(s) at end of table.

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Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
	Metaldehyde - Cont.	Deadline Bullets, Deadline M-Ps, Metaldehyde 3.5G, Metaldehyde 4% Bait, Metaldehyde 7.5G, Metarex 4% Snail and Slug Bait, Slug-Fest Colloidal 25
O	Metam-potassium	K-Pam HL
O	Metam-sodium	Metam Sodium (32.7%) (For All Crops), Sectagon 42, Vapam HL (4.26 lb.)
I	Methidathion	Supracide 25WP, Supracide 2E
I	Methiocarb	Grandslam 75 WP, Mesurol 75-W, Mesurol Pro
I	Methomyl	Lannate L (1.8 lbs.), Lannate LV (2.4 lbs.), Lannate SP, Nudrin 1.8
I	Methoxychlor	Malathion Methoxychlor Spray, Rockland Fruit Tree Spray
O	Methyl bromide	Brom-O-Gas (99.5%), MBC 67-33, MBC-33, Methyl Bromide (75%), Methyl Bromide 50% & Chloropicrin 50%, Methyl Bromide 57% & Chloropicrin 43%, Methyl Bromide 67% & Chloropicrin 33%, Methyl Bromide 68.6%, Methyl Bromide 75% & Chloropicrin 25%, Methyl Bromide 98%, Methyl Bromide 98% & Chloropicrin 2%, Methyl Bromide 99.5, TERR-O-GAS, Tri-Con [75] 25, Tri-con [67] 33
I	Methyl parathion	Declare, Methyl Parathion 4EC, Paraspray 6-3
F	Metiram	Polyram 80 DF, Polyram 80WP
H	Metolachlor	Pennant Liquid, Prelude E W (EC)
H	Metribuzin	Axiom DF, Domain DF
I	Mevinphos	Durham Duraphos 400, Phosdrin 4EC
O	Mineral oil	Biocover UL
F	Mono-potassium salt	Alude Systemic Fungicide, Rampart Potassium Phosphite
O	Monocarbamide dihydrogensulfat	Wilthin
F	Myclobutanil	Clevis, Eagle 20EW, Eagle 40WP, Eagle 40WP Soecialty Herbicide, Eagle WSP, Immunox, Laredo EC, Nova 40W, Rally 40W, Rally 40WSP, Systhane WSP
I	Myrothecium verrucaria	DiTera DF Biological Nematicide, Ditera Biological Nematicide

See footnote(s) at end of table.

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Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
I	N-octy bicycloheptene dicarbo.	Pyreth-In Pt 1100, X-clude PT 1600A
O	NAD	Rootone Rooting Hormone
I	Naled	Dibrom 8 Emulsive, GH-18, Naled Technical
O	Naphthaleneacetic acid	Dip 'n Grow, GoldenGro R, Hormex X, Wood's Rooting compound
H	Napropamide	Devrinol 10-G, Devrinol 2-E, Devrinol 5-G, Devrinol 50-DF, Devrinol 50-DF Ornamental, Devrinol 50-WP, Devrinol 50WP Ornamental, PrePair (For Ornamental)
O	Napth. acetic acid, amm. salt	Liqui-Stik Concentrate
O	Nerolidol	Stirrup M (Biocontrol agent)
I	Nicotine	Black Leaf 40, Fulex Nicotine Fumigator
H	Norflurazon	Predict, Solicam DF
I	Novaluron	Pedestal, Rimon 10SC
O	Octyl decyl dim. ammonium	NAC 7
O	Orthosil	Gamma-Mene II
H	Oryzalin	Oryza AG, Oryza T&O, Oryzalin 4 A.S., Rout, Snapshot 80DF, Surflan 0.25 AS (T & O), Surflan 75WP, Surflan 85DF, Surflan A.S. Agricultural, Surflan AS Specialty (T & O), Surflan WDG Specialty Herbicide, Weed Stopper, XL 2G
H	Oxadiazon	Chipco Ronstar G, Kansel+ 20-2-13, Lasar Herbicide, Ornamental Herbicide III, PrePair (For Ornamental), Regal O, RegalStar II, Ronstar 50 WSP, Ronstar 50% WP, Ronstar G (T & O)
I	Oxamyl	Oxamyl 10% Granular, Vydate C-LV, Vydate L
F	Oxycarboxin	Plantvax 75W
I	Oxydemeton-methyl	MSR (2EC), Metasystox-R (2EC)
H	Oxyfluorfen	Goal 1.6E, Goal 2XL, Goaltender, Lasar Herbicide, OH 2, Oxyfluorfen 2 Herbicide, Progrow Ornamental (OH2), Regal O, Rout, Showcase
F	Oxytetracycline	Mycoshield (WP)
I	Oxythioquinox	Joust, Morestan 4, Morestan 4 Nursery
O	Paclobutrazol	Bonzi 50 WP, Bonzi Ornamental Growth Regulator, Paczol Ornamental Growth Regulator, Piccolo, Tide Paclo 0.4% Liquid

See footnote(s) at end of table.

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Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
H	Paraquat	Cyclone, Cyclone Concentrate, Gramoxone Extra, Gramoxone Inteon, Gramoxone Max, Gramoxone Super, Gramoxone Super Tres, Prelude E W (EC), Starfire (1.5L)
H	Pebulate	Tillam 6-E
O	Pelargonic acid	Scythe
H	Pendimethalin	Acumen, Corral 2.68 G, Hurdle 3.8 ACS, Ipimethalin-L, Kansel+ 20-2-13, Lesco Pre-M 0.86 Pendimethalin, OH 2, Pendant 3.3 EC herbicide, Pendimax 3.3, Pendimethalin, Pendulum 2G, Pendulum 3.3 EC, Pendulum AquaCap Herbicide, Pendulum WDG (For Turf & Ornamental), Progrow Ornamental (OH2), Prowl 3.3 EC, Prowl DG, Southern Weedgrass Control, Stealth, Steel, Stomp WDG, Super Turf Builder Plus Halts
F	Pentachloronitrobenzene	Defend 10G, PCNB 10% G, Ridomil Gold PC, Terraclor 15G, Terraclor 400, Terraclor 75WP, Terraclor Flowable, Terraclor Super X 18.8G, Terraclor Super X Granular Soil Fungicid, Terraclor Super X plus Di-Syston EC, Terraguard 50W, Turfcide 10% G, Turfcide 400
I	Permethrin	Ambush, Ambush 25W, Arctic 3.2 EC, Astro 3.2EC (For Turf & Ornamental), Eight Insect Control, Enforcer Mosquito & Flying Insect Kille, Immunox, Ortho Ant, Flea & Tick Killer, Perm-UP 3.2 EC, Permethrin 10 EWC, Permethrin 3.2 AG, Permethrin 3.2 EC, Pounce 25WP, Pounce 3.2EC, Pramex, Speckoz Permethrin Tc, Waylay 3.2 AG
I	Petroleum distillate	Citrus Soluble Oil, Gavicide Super 90, Horticultural Oil Insecticide, JMS Stylet-Oil, Mosquito Larvacide GB-1111, Oil, Saf-T-Side, Shelltox Aerosol Insecticide, Sunspray 11E, Sunspray 6E, Sunspray Ultra-Fine Spray Oil, Super 94 Spray Oil, Superior Oil, Supreme 415 Oil, Supreme Oil Spray, Volck Supreme Spray
I	Petroleum oil	Damoil, ProNatural All Season Spray Oil,

See footnote(s) at end of table. --continued

Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
	Petroleum oil - Cont.	PureSpray Green, Purespray Spray Oil 10E
I	Phenothrin	Sumithrin Greenhouse Spray
I	Phorate	Terraclor Super X Granular Soil Fungicid, Thimet 20-G
I	Phosmet	Imidan 50-WSB, Imidan 70 WSB (WP)
F	Phosphorous acid	Agri-Fos Systemic Fungicide, Fosphite Fungicide, Prophyt, Topaz
F	Piperalin	Pipron Liquid Concentrate
I	Piperonyl butoxide	Country Vet Farm Dairy CV-40-4D, Diatect Multipurpose Insecticide, Evergreen Crop Protection EC 60-6, Kicker, PBO-8 (EC), PT 1100 Pyrethrum TR, Perma Guard Garden and Plant, Pyrenone Crop Spray, Pyrenone Outdoor & Horticultural SEC, Pyreth-In Pt 1100, Pyrocide Emulsifiable 60-6, Pyronyl Crop Spray, Shelltox Aerosol Insecticide, TC 123 (Pyrethrum TR), X-clude PT 1600A
F	Potassium bicarbonate	FirstStep, Kaligreen (WP), MilStop Broad Spectrum Foliar Fungicide
I	Potassium salts	Insecticidal Soap 49.52CF, M-Pede, Pro-Mate Revoke, Ringer Attack Soap Concentrate, Safer Insecticidal Soap, Safer yard & Garden Insect Killer, Soap
H	Prodiamine	Barricade 4SC, Barricade 65WG, Barricade F, Calvalcade 65 WDG, Factor, Procade 65WDG, Quali-Pro Prodiamine 65 WDG, RegalStar II, Regalkade
O	Prohexadione calcium	Apogee PGR
H	Prometryn	Vegetable Pro
H	Pronamide	Kerb 50WP Specicalty (Turf & Ornamental)
F	Propamocarb hydrochloride	Banol, Previcur Flex, Tattoo C
H	Propanil	Stampede CM
I	Propargite	Comite, Omite 30WS, Omite 6E
H	Propazine	Propazine 4L
F	Propiconazole	Alamo Fungicide, Banner GL (For Turf & Ornamental), Banner MAXX (For Turf & Ornamental), Banner Pro (For Turf & Ornamental),

See footnote(s) at end of table. --continued

Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
	Propiconazole - Cont.	Bumper 14.3 EC, Bumper 41.8 EC, Orbit (3.6EC), Propiconazole E-Pro 14.3 MEC, Tilt, Tilt Plus
F	Pseudomonas fluorescens A506	Frostban B (71%WP)
I	Pymetrozine	Endeavor (WDG), Fulfill
F	Pyraclostrobin	Cabrio EG, Headline, Inisgnia Fungicide, Pristine
I	Pyrethrins	Bonide Garden Dust, Country Vet Farm Dairy CV-40-4D, Diatect Multipurpose Insecticide, Evergreen Crop Protection EC 60-6, Evergreen Growers Spray, Evergreen Growers Spray 7405, Kicker, NEU1161 (aka Takedown), PT 1100 Pyrethrum TR, Perma Guard Garden and Plant, PyGanic EC 1.4 II, PyGanic EC 5.0 II, Pyola, Pyrellin E.C., Pyrenone Crop Spray, Pyrenone Outdoor & Horticultural SEC, Pyreth-In Pt 1100, Pyrocide Emulsifiable 60-6, Pyronyl Crop Spray, Rotenone/ Pyrethrins EC, Safer yard & Garden Insect Killer, Shelltox Aerosol Insecticide, TC 123 (Pyrethrum TR), X-clude PT 1600A
I	Pyridaben	Desperado, Nexter, Sanmite 75 WP
I	Pyridine	Distance, Distance Fire Ant Bait
I	Resmethrin	Formula GH-60, Ortho Rose & Floral Spray, Resmethrin EC 26 Insect Spray, Torpedo
I	Rosemary oil	Hexacide
I	Rotenone	Bonide Garden Dust, Pyrellin E.C., Rotenone/ Pyrethrins EC
I	S-Kinoprene	Enstar II
I	S-Methoprene	Extinguish, Zoecon Altosid Briquets
H	S-Metolachlor	Dual II Magnum, Dual IIG Magnum, Medal II, Pennant Magnum
I	Sabadilla	Veratran D
I	Sesame Oil	Organocide
H	Sethoxydim	BASF Poast Herbicide, Conclude G (Poast), Manifest B&G, Poast, Poast Micro Flo, Rezult G
I	Silicon dioxide	Diatect Multipurpose Insecticide, Perma Guard Garden and Plant
H	Simazine	Princep 4G, Princep 4L, Princep Caliber 90,

See footnote(s) at end of table. --continued

Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
	Simazine - Cont.	Princep Liquid (For Turf & Ornamental), Sim-Trol 4L, Simazine 4L, Simazine 80W, Simazine 90DF
F	Sodium Percarbonate	Terracyte
O	Sodium chlorate	Knock'um Off
O	Sodium hypochlorite	Bleach (5.25%), Liquichlor 12.5
I	Soybean oil	Golden Citrus Natur'l Spray Oil
I	Spinosad	Conserve Fire Ant Bait, Conserve SC, Conserve SC Turf and Ornamental (1L), Entrust, GF-120 NF Naturalyte Fruit Fly Bait, SpinTor 2SC, Success, Tracer
O	Spirodiclofen	Envidor 2 SC
I	Spiromesifen	Judo, Oberon 2 SC
F	Streptomyces griseoviridis	Mycostop Biofungicide
F	Streptomyces lydicus WYEC 108	Actinovate SP
F	Streptomycin	Agri-Mycin 17, Agri-Strep (17WP), Agri-Strep 500 (50WP), Streptomycin 3000 Dust
F	Streptomycin sulfate	Bac-Master, Firewall 17 WP, Streptomycin sulfate
O	Strychnine	Gopher Getter AG Bait, Martin's Gopher Bait 50R, Strychnine Bait (.35%)
O	Sulfaquinoxaline	Raze Rat & Mouse Bait
H	Sulfentrazone	Spartan 4F
H	Sulfometuron methyl	Landmark XP herbicide, Oust (75G), Westar
H	Sulfosate	Touchdown 5
F	Sulfur	Bonide Garden Dust, C-O-C-S 15 Sulfur 25, Desperado, Kumulus DF, Microsperse Wettable Sulfur, Microthiol Disperss, Microthiol Disperss (USE-7449), Microthiol Special, Netonex Sulphur, Perk-Up Dusting Sulfur, Rockland Fruit Tree Spray, Sulfur 6L (52%), Sulfur DF (80%), Sulfur Dusting (90%), Sulfur Dusting (98%), Sulfur Flowable (6F), Sulfur Wettable Powder (95%), Super Six, Thiolux (80DF), Thiolux Jet
F	Tebuconazole	Elite 45 DF, Folicur 3.6 F
I	Tebufenozide	Confirm 2F
H	Tebuthiuron	Sprakil SK-26

See footnote(s) at end of table.

--continued

Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
H	Terbacil	Sinbar (80WP)
I	Tetraethyl dithiopyrophosphate	Fulex Dithio Insecticidal Smoke
O	Tetrasodium salt	Gamma-Mene II
F	Thiabendazole (TBZ)	Mertect 340-F, Terrazole 35% WP
I	Thiamethoxam	Flagship 25WG
H	Thiazopyr	Visor 2E (NOT in FL, GA, LA, TX)
O	Thidiazuron	Dropp SC
H	Thifensulfuron methyl	Reliance STS SP, X-TRA (Cheyenne container #1)
I	Thiodicarb	Larvin 80DF
F	Thiophanate	Banrot 8G, Cleary 3336 Turf Fungicide, Consyst WDG, Fungo 50WP Fungicide, Spectro 90 WDG, Spectro Turf Fungicide
F	Thiophanate-methyl	3336 F, 3336 G, 3336 WP, AllBan Flo (For Turf & Ornamental), Banrot 40 WP, Domain FL (For Turf & Ornamental), Duosan WSB, Fungo Flo, OHP 6672 4.5 L, OHP 6672 50W, SysStar WDG, Systec 1998 FL, Systec 1998 WDG, T-Methyl 70W WSB, T-Storm Flowable T&O, Thiophanate Methyl 4.5F AG, Tilt Plus, Topsin 4.5FL, Topsin M 5G, Topsin M 70WP, Topsin M 85 WDG, Topsin M WSB, Zyban Contact Fungicide, Zyban WP, Zyban WSB
F	Thiram	Rootone Rooting Hormone, Spotrete-F, Thiram 75WP
I	Tralomethrin	Scout 0.3 EC
F	Triadimefon	Bayleton 009 EC (For Turf & Ornamental), Bayleton 1.0% G, Bayleton 25, Bayleton 25 T&O, Bayleton 50 T&O WSP, Bayleton 50% DF, Strike 50 WDG
H	Triasulfuron	Rave
H	Tribenuron-methyl	X-TRA (Cheyenne container #1)
I	Trichlorfon	Dylox 80% SP
F	Trichoderma harzianum	F-Stop Biological Fungicide Planter, PlantShield, RootShield Drench, RootShield Granules, T-22 HC, T-22 Planter Box Bio. Fungicide
H	Triclopyr	Confront, Garlon 3A, Garlon 4, Pathfinder II, Remedy
H	Triethylamine triclopr	Horsepower Spot Weed Killer

See footnote(s) at end of table.

--continued

Pesticide Class, Common Names, and Trade Names, 2006 - Continued

Class	Common Names	Tradenames
F	Trifloxystrobin	Compass (For Turf & Ornamentals), Flint
F	Triflumizole	Procure 50WS
H	Trifluralin	Preen, Showcase, Snapshot 2.5TG, Treflan 5G, Treflan E.C., Treflan HFP, Trifluralin 10G, Trifluralin 4EC, Turf Fertilizer w/ Team Pro
F	Triforine	Funginex (1.6EC), Funginex Rose Disease Control, Ortho Rose & Floral Spray, Othenex Garden Insect & Disease Control
O	Trinexapac-ethyl	Palisade EC, Primo MAXX
O	Uniconazole	Sumagic
H	Vernolate	Reward (For Soybeans & Peanuts)
F	Vinclozolin	(USE 7516) Ronilan DF, Curalan EG, Ornalin FL, Ronilan EG, Ronilan FL, Vorlan DF
O	Warfarin	Raze Rat & Mouse Bait
O	Z-8-Dodecanol	Checkmate SF-200, Isomate - OFM TT
O	Z-8-Dodecenyl acetate	Checkmate SF-200, Isomate - OFM TT
I	Zeta-cypermethrin	Mustang
O	Zinc phosphide	ZP Rodent Bait AG, Zinc Phosphide Oat Bait
F	Ziram	Ziram 76 DF, Ziram Granuflo

Project 159 OMB No. 0535-0244 Approval Expires 9/30/2007

NURSERY AND FLORICULTURE CHEMICAL USE SURVEY
JANUARY 2007

NATIONAL AGRICULTURAL STATISTICS SERVICE

U.S Department of Agriculture
Rm. 5030, South Building
1400 Independence Avenue, S.W.
Washington, D.C. 20250-2000
1-800-727-9540 Fax: 202-690-2090

VERSION	POID	SUBTRACT	T-TYPE	TABLE	LINE
01	__ __ __ __ __ __ __ __ __ __	__ __	0	000	00

CONTACT RECORD		
DATE	TIME	NOTES

☐ [*Name and address verified and updated if necessary.*]

INTRODUCTION:

[*Introduce yourself, and ask for the operator. Rephrase in your own words.*]

We are collecting information on chemical applications for floriculture and nursery production in 2006 and need your help to collect complete and accurate data. Authority for collection of information on the Nursery and Floriculture Chemical Use Survey is Title 7, Section 2204 of the U.S. Code. This information will be used to compile and publish estimates on chemical use in floriculture and nursery production. Response to this survey is confidential and voluntary.

We encourage you to refer to your farm records during the interview.

1. **Were your total gross sales of floriculture crops greater than $10,000 in 2006?**

   ☐ **YES** ☐ **NO**

2. **Were your total gross sales of nursery crops and/or Christmas trees greater than $10,000 in 2006?**

   ☐ **YES** ☐ **NO**

   [**ENUMERATOR NOTE:** *If items 1 and 2 are NO, conclude the interview.*]

3. [*Complete PARTNER boxes below only if the operator is in a partnership.*]

POID __ __ __ __ __ __ __ __ __ __	**POID** __ __ __ __ __ __ __ __ __ __
PARTNER NAME	*PARTNER NAME*
ADDRESS	*ADDRESS*
CITY *STATE* *ZIP* *PHONE NUMBER*	*CITY* *STATE* *ZIP* *PHONE NUMBER*
POID __ __ __ __ __ __ __ __ __ __	**POID** __ __ __ __ __ __ __ __ __ __
PARTNER NAME	*PARTNER NAME*
ADDRESS	*ADDRESS*
CITY *STATE* *ZIP* *PHONE NUMBER*	*CITY* *STATE* *ZIP* *PHONE NUMBER*

CHEMICAL APPLICATIONS

These questions are about pesticide and chemical (***excluding*** *fertilizer*) applications.

1. **In 2006, for your floriculture and/or nursery operation, were any insecticides, herbicides, fungicides, nematicides, miticides, growth regulators, rooting compounds, soil fumigants or other chemicals applied?**

☐ **YES** – [*Complete table below.*] ☐ **NO** – [*Go to item 1 on page 18.*]

[**ENUMERATOR NOTE:** *In order to combine applications (column 10 greater than 1), the product/formulation, to what and where mostly applied, areas treated in size, amount applied, rate of application, method of application, and who made the application,* ***MUST*** *all be the same.*]

OFFICE USE EDIT TABLE	1 Incomplete 3 Valid Zero	314	OFFICE USE LINES IN TABLE	T-TYPE 1	TABLE 001	LINE 99	101

PRODUCTION CATEGORY CODES FOR COLUMN 4

NURSERY		FLORICULTURE	
1	Transplants for commercial vegetable and strawberry production	13	Cut flowers
2	Propagative nursery material or lining-out stock	14	Flowering plants (*potted*)
3	Broadleaf evergreens	15	Bedding plants (*flats, potted, hanging*)
4	Coniferous evergreens	16	Foliage plants (*potted or hanging*)
5	Deciduous shade trees	17	Propagative floriculture material
6	Deciduous flowering trees	18	Cut cultivated greens
7	Deciduous shrubs	19	Herbaceous perennials (*potted*)
8	Fruit and nut plants	20	Non-production area
9	Christmas trees		
10	Palms		
11	Ornamental grasses		
12	Other woody ornamentals and vines		
20	Non-production area		

LOCATION CODES FOR COLUMN 5

1	Greenhouse (*enclosed*)
2	Shade Structure (*frames, slat, saran, cloth, screen, non-enclosed greenhouse, etc.*)
3	Natural Shade Area (*palm, citrus, etc.*)
4	In The Open Production Area
5	Perimeter (*non-production areas*)

CHEMICAL PRODUCT NAME	LINE	1 What products were applied? [*Enter product code.*]	2 Was this product bought in liquid or dry form? [*Enter L or D.*]	3 Was this part of a tank mix? [*If tank mix, enter line number of first product in mix.*]	4 What was this chemical mostly applied to? [*Enter code from above.*] CODE	5 Where was this product mostly applied? [*Enter code from above.*] CODE
	01	301		302	303	304
	02	301		302	303	304
	03	301		302	303	304
	04	301		302	303	304
	05	301		302	303	304
	06	301		302	303	304
	07	301		302	303	304
	08	301		302	303	304
	09	301		302	303	304
	10	301		302	303	304
	11	301		302	303	304
	12	301		302	303	304

[*For pesticides not listed in Respondent Booklet, specify---*]

Line No.	Pesticide Type (*Herbicide, Insecticide, Fungicide, etc.*)	Tradename and Formulation	Form Purchased (*Liquid or Dry*)	EPA No.
_____	_____	_____	_____	_____

CHEMICAL APPLICATIONS

UNIT CODES FOR COLUMN 9

1	Pounds	28	Dry Ounces
12	Gallons	30	Grams
13	Quarts	40	Kilograms
14	Pints	41	Liters
15	Liquid Ounces	42	Milliliters
20	Teaspoons	50	Other, bags, WSP, etc.
21	Tablespoons		(*Specify unit & weight*_____)

METHOD CODES FOR COLUMN 11

1 Hand held back pack sprayer
2 Hand held wand/gun/boom from power hydraulic sprayers
3 Hand held granular shakers
4 Hand held granular rotary applicator (*whirly bird, belly grinder*)
5 Hand held foggers
6 Dusting
7 Overhead rail sprayers (*track sprayers*)
8 Root ball/container/cutting/flower dip
9 Drench
10 Stationary fogger, aerosols, misters, electrostatic sprayers, smokers
11 Tractor powered boom sprayer
12 Tractor powered air blast or mister
13 Aerial application
14 Chemigation
15 Machine injection, branded, broadcast, knifed in
16 Other, (*Specify*_____)

APPLICATOR CODES FOR COLUMN 12

1 Licensed operator/employee pesticide applicator
2 Unlicensed operator/employee under the direction of licensed applicator
3 Hired custom applicator (*Not an employee of operation*)
4 Other, (*Specify:*_____)

[ENUMERATOR NOTE: *CHEMICAL APPLICATIONS –when completing columns 6, 7 & 8 complete either columns 6 and 7* ***or*** *columns 6 and 8* ***or*** *columns 7 and 8.*]

LINE	6 How much area was treated? ACRES	OR	SQUARE FEET	7 What was the total amount applied per application?	8 How much was applied per acre OR per 1,000 square feet per application? RATE PER ACRE	OR	RATE PER 1,000 SQUARE FEET	9 UNIT [*Enter code from above.*] CODE	10 How many times was this applied? NUMBER	11 How was this product applied? [*Enter code from above.* CODE	12 Who made the application(s)? [*Enter code from above.*] CODE
01	305 .___		306	307 .___	308 .___ ___		309 .___ ___	310	311	312	313
02	305 .___		306	307 .___	308 .___ ___		309 .___ ___	310	311	312	313
03	305 .___		306	307 .___	308 .___ ___		309 .___ ___	310	311	312	313
04	305 .___		306	307 .___	308 .___ ___		309 .___ ___	310	311	312	313
05	305 .___		306	307 .___	308 .___ ___		309 .___ ___	310	311	312	313
06	305 .___		306	307 .___	308 .___ ___		309 .___ ___	310	311	312	313
07	305 .___		306	307 .___	308 .___ ___		309 .___ ___	310	311	312	313
08	305 .___		306	307 .___	308 .___ ___		309 .___ ___	310	311	312	313
09	305 .___		306	307 .___	308 .___ ___		309 .___ ___	310	311	312	313
10	305 .___		306	307 .___	308 .___ ___		309 .___ ___	310	311	312	313
11	305 .___		306	307 .___	308 .___ ___		309 .___ ___	310	311	312	313
12	305 .___		306	307 .___	308 .___ ___		309 .___ ___	310	311	312	313

NOTES AND CALCULATIONS:

PEST MANAGEMENT PRACTICES

T-TYPE	TABLE	LINE
0	000	00

1. **In 2006, did your operation scout or monitor for pests---**

a. By conducting general observations while performing routine tasks? — CODE 320

☐ YES – [*Enter code 1 then go to item 2.*] ☐ NO – [*Continue with item 1b.*]

b. By deliberately going to the growing areas specifically for scouting activities? — CODE 321

☐ YES – [*Enter code 1 then go to item 2.*] ☐ NO – [*Continue with item 2c.*]

2. **In 2006, did your operation---**

			CODE
a.	keep electronic or written records on weed, insect or disease levels?	YES = 1	323
b.	use pheromones to monitor insects by trapping?	YES = 1	328
c.	detect the presence of weeds, insects, diseases or pathogens by---		
	(i) soil analysis?	YES = 1	324
	(ii) plant tissue analysis?	YES = 1	325
	(iii) using trap indicator plants?	YES =1	326
	(iv) inspecting incoming stock?	NA = 4 YES = 1	327
	(v) use of insect traps?	NA = 4 YES = 1	355
d.	use insect or disease resistant plant varieties?	NA = 4 YES = 1	329
e.	control weeds, insects or disease by---		
	(i) using beneficial organisms (*insects, nematodes or fungi*)?	YES = 1	330
	(ii) using biological pesticides (*BotaniGard, Conserve, Gnatrol, Nemasys, etc.*)?	YES = 1	331
	(iii) using trap vegetation?	YES = 1	332
	(iv) using pheromones to disrupt insect mating?	YES = 1	333
	(v) using water management practices such as controlled drainage or treatment of retention water? (***Exclude** chemigation.*)	NA = 4 YES = 1	334
	(vi) pruning out or removing infected plants or plant parts?	YES = 1	335
	(vii) tilling, mowing, or burning of field or greenhouse borders, lanes, etc.?	YES = 1	336
	(viii) adjusting row spacing or direction?	NA = 4 YES = 1	337
	(ix) elevating plant?	NA = 4 YES = 1	338
	(x) adjusting plant density?	YES = 1	339
	(xi) use sterilized growing media?	NA = 4 YES = 1	340

PEST MANAGEMENT PRACTICES

2. **In 2006, did your operation---**(*continued*)

e. control weeds, insect or diseases by---

		CODE
(xii) sanitizing benches or other platform devices between uses?	NA = 4 ..... YES = 1	341
(xiii) sanitizing ground covers between uses?	NA = 4 ..... YES = 1	342
(xiv) sanitizing containers between uses?	NA = 4 ..... YES = 1	343
(xv) modifying temperature?	NA = 4 ..... YES = 1	344
(xvi) modifying hothouse/greenhouse relative humidity?	NA = 4 ..... YES = 1	345
(xvii) using greenhouse ventilation?	NA = 4 ..... YES = 1	346
(xviii) using greenhouse screening?	NA = 4 ..... YES = 1	347
(xix) using plant tissue dryness management such as minimizing overhead irrigation to reduce leaf wetness time?	NA = 4 ..... YES = 1	348
(xx) utilizing ground covers, mulches or other physical barriers such as gravel, weed mats, etc.?	NA = 4 ..... YES = 1	349
(xxi) use of insect traps?	NA = 4 ..... YES = 1	356
f. rotate or tank mix pesticides (*use pesticides with different mechanisms of action*) for the primary purpose of keeping pests from becoming resistant to pesticides?	YES = 1	350
g. monitor weather data to assist in determining when to make pesticide application decisions?	YES = 1	351

h. apply pesticides based **mostly** on--- [*Enter one code.*] .....

1 PREVENTIVE SCHEDULE?
2 SCOUTING DATA COMPARED TO UNIVERSITY OR EXTENSION INFESTATION GUIDELINES?
3 SCOUTING DATA AND YOUR ESTABLISHED THRESHOLDS?
4 OTHER? (*Specify:*_____)

CODE 352

3. **In 2006, where did your operation---**

a. obtain **most** of its pesticide--- [*Enter one code.*] .....

1 CHEMICAL DEALER?
2 CHEMICAL MANUFACTURER?
3 OTHER? (*Specify*_____)

CODE 353

b. **mostly** get recommendations for pest control or pesticide use--- [*Enter one code.*] .....

1 FARM SUPPLY DEALER/CHEMICAL DEALER
2 UNIVERSITY/EXTENSION PERSONNEL/MATERIALS?
3 COMMERCIAL SCOUTING SERVICE/CROP CONSULTANT/ PEST CONTROL ADVISOR?
4 OTHER GROWERS/PRODUCERS?
5 PRODUCER ASSOCIATION/NEWSLETTER/ TRADE MAGAZINE?
6 EMPLOYEE PEST ADVISOR?
7 CUSTOM APPLICATOR?
8 OTHER? (*Specify:*_____)

CODE 354

CONCLUSION

1. **Would you like to receive a copy of the results of this survey in the mail?**
   (*Results will also be available on the Internet at http://www.nass.usda.gov/*. . . . . YES = 1

CODE
099

[*Thank the respondent then review this questionnaire.*]

2. **Time spent collecting data----**. . . . . .

TOTAL ENUMERATION TIME	TOTAL TIME SPENT WITH OPERATOR or RESPONDENT
019 .___	012 .___

3. **SUPPLEMENTS USED**
   (*Record the total number of chemical supplements used to complete this interview.*). . . . . .

NUMBER
014

4. **ENUMERATOR NOTE:** *Please list names, title and contact information if other people were contacted for assistance in completing this questionnaire. Please record their name, address and phone number below.*]

NAME/TITLE: _____

PHONE: _____

ADDRESS: _____

Respondent's Name:_____ Telephone Number:_____ Date:_____

OFFICE USE

Response		Respondent		Mode		Enum.	Eval.	R. UNIT	Date MM DD YY	Office Use for POID
1-Comp 2-R 3-Inac 4-Office Hold	9901	1-Op/Mgr 2-Sp 3-Acct/Bkpr 4-Partner 9-Oth	9902	2-Tel 3-Face-to-Face	9903	098	100	921	9910 __ __ __ __ __ __	789 __ __ __ - __ __ __ __ - __ __ __

Dup Adj.	Optional
922 .___ ___ ___	002

S/E Name

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The time required to complete this information collection is estimated to average 60 minutes per response.

CROP CATEGORY CODES and DESCRIPTIONS (*Column 4*)

NURSERY

TRANSPLANTS for COMMERCIAL VEGETABLE and STRAWBERRY PRODUCTION	Code 1
Broccoli, cabbage, cauliflower, other crucifers	
Greens	
Peppers	
Strawberries for commercial production	
Tomatoes and other transplants for commercial production	

Propagative Nursery Material or Lining-Out Stock		Code 2
Cuttings	Tissue culture	
Lining-out stock	Understock	
Seedlings	Whips	
Root stock	Other	

Broadleaf Evergreens		Code 3
Azalea	Pieris	
Boxwood	Pittosporum	
Cotoneaster	Privet	
Euonymus	Rhododendron	
Holly	Viburnum	
Magnolia	Other	

Coniferous Evergreens			Code 4
Arborvitae	Fir	Spruce	
Balled & burlap Christmas tree	Hemlock	Yew	
Cedar (*Cedrus*)	Juniper	Other Conifers	
Cypress (*Cupressus*)	Pine		

Deciduous Shade Trees		Code 5
Ash	Maple, sugar	
Birch	Maple, other	
Honey Locust	Oak	
Linden	Poplar	
Maple, Japanese	Sweet gum	
Maple, Norway	Willow	

Deciduous Flowering Trees		Code 6
Amelanchier	Magnolia	
Crabapple	Ornamental cherry	
Crape myrtle	Ornamental pear	
Dogwood	Ornamental plum	
Golden rain	Redbud	
Hawthorn	Other	

NURSERY

Deciduous Shrubs		Code 7
Buddleias	Spireas	
Hibiscus	Viburnum	
Hydrangeas	Weigelas	
Lilacs	Winterberry	
Roses	Other	

Fruit and Nut Plants		Code 8
Citrus and subtropical fruit trees	Strawberry plants for home use	
Deciduous fruit and nut trees	Other small fruit & nut plants (*Blueberry, etc.*)	
Grapevines	Other	

Christmas Trees (*cut and to be cut*)		Code 9
Douglas Fir	Scotch pine	
Fraser Fir	Spruce	
Grand Fir	Virginia pine	
Leyland Cypress	White pine	
Noble Fir	Other	

Palms	Code 10
Include Palms used for outdoor landscaping	**Exclude** palms for indoor use

Ornamental Grasses (*Exclude sod, turf grass, or range grass*)	Code 11
Bamboo	
Grasses for the garden or landscape	
Sedges	
Reeds	

OTHER WOODY ORNAMENTALS and VINES	Code 12
Clematis, Climbing	
Ground Covers	
Other Vines	
Other	

CROP CATEGORY CODES and DESCRIPTIONS (*Column 4*)

FLORICULTURE

Cut Flowers		Code 13
Alstroemeria	Iris	
Carnations	Lisianthus	
Chrysanthemums, standard, pompon	Orchids	
Daffodil	Roses	
Daisy	Snapdragons	
Delphinium and larkspur	Tulips	
Gerbera Daisy	Zinnias	
Gladioli	Other	

Potted Flowering Plants		Code 14
African Violets	Kalanchoe	
Azaleas, finished florist	Lily, Easter	
Begonias	Orchids	
Chrysanthemums, florist (***exclude*** *hardy garden mums)*	Poinsettias	
Cyclamen	Potted spring flowering bulbs	
Hibiscus	Roses (*florist*)	
Hydrangea	Other	

Annual Bedding/Garden Plants (*Flats, Potted or Hanging Baskets*)		Code 15
Begonia	Pansy/Viola	
Coleus	Petunias	
Dusty Miller	Snapdragons	
Geraniums	Zinnias	
Impatiens	Herb culinary type (*not for commercial production*)	
Marigold	Vegetable type (*not for commercial production*)	
	Other	

Foliage Plants (*Potted or Hanging Baskets*)		Code 16
Cacti	Hedera (Ivy)	
Dracaena	Palms (*potted*)	
Ferns (*potted*)	Philodendron	
Ficus	Succulants	
	Other	

FLORICULTURE

Propagative Floriculture Material		Code 17
Bare root perennials	Plug Seedlings	
Bedding and flowering liners	Prefinished plants	
Cuttings	Production stock	
Foliage plant liners	Tissue Cultured Plantlets	
	Other	

Cut Cultivated Greens		Code 18
Asparagus Fern	Leather leaf ferns	
Coniferous evergreens	Myrtle	
Eucalyptus	Oregon/Sword Ferns	
Hedera (Ivy)	Pittosporum	
Holly	Podocarpus	
	Other	

Potted Herbaceous Perennials		Code 19
Astilbe	Hosta	
Chrysanthemum, hardy/garden	Iris	
Coral bells	Peony	
Daylily	Phlox	
Ferns, hardy/garden	Sedum	
	Other	

Non-Production Areas		Code 20
Aisles	Property perimeter	
Driveways	Walkways	
Greenhouse perimeter	Retail Sales Areas	
Office Space	Other	

	Exclude
Aquatic Plants	Rhizomes (*dried*)
Bulbs (*dried*)	Sod
Flower seed plants	Tubers (*dried*)
Mushrooms	Vegetable seed plants

Report Features

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