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# Agricultural Chemical Usage 2005 Fruit Summary

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**WASHINGTON, Dec. 28, 2006** - The *2005 Fruit Chemical Usage* publication released on July 26, 2006 by USDA's National Agricultural Statistics Service (NASS) is being reissued due to corrections in the data. Several active ingredients published in the "Program States" data tables for "Area Applied" and "Total Applied" were updated from the previous report. This problem has impacted the following crops: apples, blueberries, sweet cherries, tart cherries, grapefruit, grapes All, oranges, peaches, pears, raspberries and tangerines.

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## Overview

This publication is the ninth Fruit Summary in the series of “**Agricultural Chemical Usage**” reports issued by the United States Department of Agriculture’s National Agricultural Statistics Service (USDA-NASS). This report contains statistics for on-farm use of agricultural chemicals and pest management practices from producers of targeted fruit crops. Chemical application rates listed by active ingredient are also featured in this publication. The agricultural chemical use estimates in this report focus on the acreage treated with herbicides, insecticides, fungicides, and other pesticides for selected fruit crops. Other publications that have statistics for on-farm agricultural chemical usage have focused on agricultural chemical use for field crops (May 2006) and distribution rates of agricultural chemicals to selected field and vegetable crops (December 2005). Chemical use information for vegetables is collected in even numbered years, while fruit information is collected in odd numbered years. More details about these publications and others may be found on the USDA website at [http://www.nass.usda.gov/Statistics\\_by\\_Subject/Environmental/index.asp](http://www.nass.usda.gov/Statistics_by_Subject/Environmental/index.asp).

Information in this report is provided from a survey funded by the USDA Pesticide Data Program. The purpose of the Pesticide Data Program is to provide reliable pesticide use statistics and to enhance the quality of information on pesticide residues in food. Multiple agencies within the USDA administer this program. This data series addresses the increased public interest in agricultural chemical use and provides the means for government agencies to respond effectively to food safety and water quality issues.

This report includes chemical usage information for 24 targeted fruit crops in 13 States. The States surveyed were: California, Florida, Georgia, Michigan, New Jersey, New York, North Carolina, Oregon, Pennsylvania, South Carolina, Texas, Washington, and Wisconsin. The targeted crops were: apples, apricots, avocados, blackberries, blueberries, sweet cherries, tart cherries, dates, figs, grapefruit, grapes, kiwifruit, lemons, nectarines, olives, oranges, peaches, pears, plums, prunes, raspberries, tangelos, tangerines, and temples. Additional tables containing the 5 most commonly applied active ingredients for apples, blueberries, and peaches have been included in this publication. Each of these commodities has at least 5 States in the survey program.

California’s fruit crop chemical usage data are reported to the county agriculture commissioner’s office by producers. The data are forwarded to the state where they are then obtained for inclusion in this publication. Some pesticides are labeled for control of more than one type of pest, i.e., as an insecticide and as a fungicide. In these instances, the active ingredient is listed under the pesticide class for which it was predominantly used. This report excludes pesticides used for seed treatments and postharvest applications to the commodity. Spot treatments, which account for a very small percentage of total applications, are mentioned only in the “Active Ingredients and Publication Status” tables.

The Active Ingredient and Publication Status tables are provided to show all active ingredients reported in the Program States. The publication status is determined by confidentiality rules. In order to publish data for an active ingredient, there must be a minimum of 5 reports for the specific active ingredient at the summary level (by crop, by State or all Program States). If there are 5 or more reports, then the active ingredient data are published and designated as a "P" in the table. In cases where there are not enough reports to publish usage data for a given active ingredient, an "\*" appears in the table. This means the active ingredient was reported, but there was not a sufficient number of reports. However, there are certain instances where the "Program States" total data was suppressed so that a major active ingredient could then be published at the individual State level. If the publication status is blank, then there were no reports for the active ingredient for that Program State.

**AGRICULTURAL CHEMICAL USE SURVEY COVERAGE**

Crop	2005			2003		
	States in Survey	Reports Summarized	U.S. Acreage Included	States in Survey	Reports Summarized	U.S. Acreage Included
	Number		Percent	Number		Percent
Apples	8	1287	80	7	1154	77
Apricots	1	62	92	1	56	98
Avocados	1	176	90	1	134	93
Blackberries	1	112	100	1	118	100
Blueberries	5	555	81	5	497	85
Cherries, Sweet	4	758	96	4	629	100
Cherries, Tart	3	260	84	2	244	78
Dates	1	49	100	1	38	100
Figs	1	34	100	1	27	100
Grapefruit	3	354	99	3	313	99
Grapes, All	3	295	95	4	410	100
Grapes, Raisin	1	154	100	1	78	100
Grapes, Table	1	70	100	1	44	100
Grapes, Wine	1	244	94	1	198	100
Kiwifruit	1	53	100	1	56	100
Lemons	1	132	75	1	110	81
Nectarines	1	75	97	1	63	100
Olives	1	102	100	1	115	100
Oranges	2	512	98	2	488	100
Peaches	7	617	82	7	628	87
Pears	3	414	94	3	373	97
Plums	1	102	100	1	91	100
Prunes	1	120	100	1	89	100
Raspberries	2	123	100	2	154	75
Tangelos	1	66	100	1	90	100
Tangerines	2	210	86	2	207	94
Temples	1	32	100	1	44	100

## Highlights

**Apples:** Eight States covering 80 percent of the U.S. acreage, were included in the 2005 survey for apples: California, Michigan, New York, North Carolina, Oregon, Pennsylvania, Washington, and Wisconsin. Herbicides were applied to 43 percent of the apple acreage. The most utilized herbicides were **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) on 33 percent of the acres, followed by **Paraquat** on 15 percent of the acres. Insecticides were applied to 92 percent of the surveyed acreage. The most common insecticides applied were: **Azinphos-methyl**, on 63 percent of the acres; **Carbaryl**, applied to 56 percent of the acreage; and **Petroleum distillate**, applied to 53 percent of the acreage. Fungicides were used on 86 percent of the acreage. The most commonly used fungicides were **Mancozeb** and **Myclobutanil**, both applied to 40 percent of the acreage; followed by **Sulfur** and **Captan**, applied to 35 and 34 percent, respectively. Other Chemicals were used to treat 56 percent of the acreage. **NAA** and **Ethephon** were the two most commonly used Other Chemicals applied to 29 and 22 percent of the acres, respectively.

**Apricots:** California was the only State surveyed for apricots and accounted for 92 percent of all the U.S. acreage. Herbicides were applied to 46 percent of the acreage. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) was applied to 43 percent of the acres. Insecticides were applied to 74 percent of the acreage. The most utilized insecticides were: **Lambda-cyhalothrin**, on 38 percent of the acres; **Esfenvalerate** and **Petroleum distillate** were applied to 26 and 22 percent of acreage, respectively. Fungicides were applied to 80 percent of the acreage. **Copper hydroxide** was the most commonly utilized fungicide, applied to 56 percent of the acreage; followed by **Cyprodinil**, applied to 52 percent; and **Iprodione** which was applied to 40 percent of the acreage.

**Avocados:** For the 2005 crop year, California accounted for 90 percent of all the U.S. acreage in avocados and was the only State surveyed. Herbicides were applied to 33 percent of the avocado acreage. The only herbicides reported were **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) used on 31 percent of the acres, and **Simazine**, on 5 percent. Insecticides were used on 40 percent of the surveyed acres. **Abamectin** and **Petroleum distillate** were the most commonly used insecticides applied to 33 and 15 percent of the acreage, respectively. Other Chemicals were applied on 24 percent of the acres. **Strychnine** was the most commonly used Other Chemical, applied to 19 percent of the acres.

**Blackberries:** Oregon was surveyed for blackberries and accounted for 100 percent of all acreage in the United States. Herbicides and fungicides were applied to 71 percent of the acreage, while 65 percent of the acreage received insecticide treatments. The herbicides **Diuron** and **Paraquat** were the most utilized herbicides, as they were applied to 40 and 34 percent of the acreage, respectively. **Carbaryl** was the most common insecticide used on 24 percent of the acreage; followed by **Bifenthrin**, applied to 20 percent of the acres. The leading fungicides were **Calcium polysulfide** on 39 percent of the acres; followed by **Cyprodinil** and **Fludioxonil**, both applied to 33 percent of the acres.

**Blueberries:** Herbicides were applied to 59 percent of the blueberry acreage in the following States: Georgia, Michigan, New Jersey, North Carolina, and Oregon. Insecticides and fungicides were applied to 85 percent of the acres, while 13 percent of the acreage was treated with Other Chemicals. Major herbicides used were **Diuron** and **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate), both applied to 21 percent of the acreage; followed by and **Terbacil**, applied to 17 percent of the acreage. **Phosmet** was the most commonly applied insecticide, at 40 percent; followed by **Malathion** and **Azinphos-methyl**, used to treat 38 and 31 percent of the acreage, respectively. **Fenbuconazole** was the most widely used fungicide and was applied to 50 percent of the acreage, followed by **Captan**,



which was applied to 47 percent of acres. **Gibberellic acid** was the most commonly used Other Chemical, applied to 8 percent of the acres.

**Cherries, Sweet:** Growers in four program States (California, Michigan, Oregon, and Washington) applied herbicides, ranging from 47 percent in California and Washington to 27 percent in Oregon. The most commonly applied herbicides were **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) and **Paraquat**, which were applied to 29 and 20 percent of the acreage, respectively. Insecticides and fungicides were applied to 80 percent of the acreage. A wide array of insecticides were used, which included **Petroleum distillate**, applied to 41 percent of the acreage; **Azinphos-methyl**, on 29 percent; and **Carbaryl** and **Spinosad**, on 28 percent of the acres. The leading fungicides used were **Pyraclostrobin**, applied to 46 percent of the acreage; followed by **Boscalid** and **Sulfur**, both applied to 40 percent of the acreage. Other Chemicals were applied to 49 percent of the acreage. **Gibberellic acid** was the most commonly utilized Other Chemical, applied to 33 percent of the acreage; followed by **Ethephon** applied to 10 percent of the acreage.

**Cherries, Tart:** Michigan, New York, and Wisconsin were the only three States surveyed for tart cherries. Herbicides were used to treat 42 percent of the acres, with **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) being the most utilized active ingredient covering 34 percent of the acres, followed by **Simazine**, used to treat 16 percent of the acres. Insecticides were used on 84 percent of the acreage with **Azinphos-methyl** and **Phosmet** being the most commonly used active ingredients, at 61 and 54 percent, respectively. Fungicides were applied to 88 percent of the acreage. The most commonly used fungicides were **Chlorothalonil**, **Sulfur**, and **Tebuconazole** on 77, 63, and 54 percent of the acreage, respectively. Other Chemicals were applied to 75 percent of the acreage. **Ethephon** was the most commonly used Other Chemical, applied to 69 percent of the acres.

**Dates:** For the 2005 crop year, California accounted for 100 percent of the U.S. acreage in dates. Herbicides were applied to 23 percent of the acreage with **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) being the only reported active ingredient with publishable data covering 22 percent of the acreage. Insecticides were used on 10 percent of the surveyed acres. **Malathion** and **Hexythiazox** were the only active ingredients applied as insecticides, at 8 and 7 percent, respectively. There were insufficient reports to publish any other usage data.

**Figs:** California accounted for 100 percent of the estimated U.S. acreage. Herbicides were used to treat 70 percent of California's fig acreage. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) and **Oxyfluorfen** were the primary herbicides reported at 66 and 42 percent, respectively.

**Grapefruit:** Growers in three program States (California, Florida, and Texas) applied herbicides to 74 percent of the acres. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) and **Diuron**, were applied to 68 and 44 percent of the acres, respectively. Insecticides were applied to 76 percent of the acreage. The most commonly used insecticides were **Petroleum distillate**, **Abamectin**, and **Sulfur**, and on 66, 58, and 33 percent of the acreage, respectively. Fungicides were used on 80 percent of the acreage. The leading fungicides used were **Copper hydroxide**, on 62 percent of the acres; **Fenbuconazole**, on 22 percent; and **Azoxystrobin**, on 20 percent of the acreage. Other Chemicals were applied to 18 percent of the acreage, with **Spirodiclofen** being the most utilized Other Chemical, applied to 13 percent of the acres.

**Grapes, All:** Three Program States (California, New York, and Washington) were surveyed for grapes. Herbicides were used to treat 57 percent of the acreage. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) at 44 percent applied, was the most widely used herbicide, followed by **Oxyfluorfen** and **Simazine**, which was applied to 23 and 20 percent of the acreage, respectively.

Insecticides were applied to 43 percent of the acres, **Petroleum distillate** being the most commonly applied insecticides at 9 percent, followed by **Fenpropathrin** and **Imidacloprid**, both of which were applied to 8 percent of the acres, respectively. Fungicides were applied to 77 percent of the acres. **Sulfur** was the most commonly applied fungicide, at 69 percent; followed by **Copper hydroxide** used to treat 24 percent of the acreage; and followed by **Trifloxystrobin**, the next most utilized insecticide, applied to 21 percent of the acres. Other Chemicals were used to treat 15 percent of the acres. The most commonly used Other Chemicals were **Cyanamid**, **Sodium tetrathiocarb**, **Tetradecen-1-OL (Z)**, and **Tetradecen-1-yl (E)**, all of which were applied to 1 percent of the acres.

**Grapes, Raisin:** California was the only State surveyed for chemicals used on raisin grapes. Herbicides were applied to 48 percent of the acreage. The leading herbicides used were **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate), on 37 percent of the acres, **Simazine** on 29 percent, and **2,4-D, dimethylamine salt** on 16 percent of the acreage. Insecticide, fungicide, and Other Chemical applications were made to 32, 67, and 20 percent of the acreage, respectively. **Cryolite** was the most commonly applied insecticide, at 12 percent; followed by **Benzoic acid** and **Bifenazate**, both used to treat 8 percent of the acreage. The more commonly used fungicides were **Sulfur**, **Copper hydroxide**, and **Triflumizole** covering 65, 19, and 13 percent of the acreage, respectively. **Gibberellic acid** was the most commonly used Other Chemical and was applied on 19 percent of the acreage.

**Grapes, Table:** California's table grape growers applied herbicides, insecticides, and fungicides on 50, 52, and 74 percent of their acreage, respectively. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) and **Paraquat** were the primary herbicides used on 36 and 20 percent of the acres, respectively. **Spinosad**, **Chlorpyrifos**, and **Bt subsp. kurstaki** were the most popular insecticides, at 32, 14, and 12 percent, respectively. **Sulfur** was the most commonly applied fungicide, at 68 percent; followed by **Copper hydroxide** at 52 percent, and **Boscalid** and **Pyraclostrobin**, both used to treat 38 percent of the acreage. Other Chemicals were applied to 54 percent of the acreage. **Gibberellic acid** was applied to 53 percent of the acreage, followed by **Ethephon**, which was applied to 16 percent of acres.

**Grapes, Wine:** For the 2005 crop year, California accounted for 94 percent of all acreage in wine grapes and was the only State surveyed. California's wine grape growers applied herbicides, insecticides, and fungicides on 61, 44, and 83 percent of their acreage, respectively. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) at 47 percent applied, was the most widely used herbicide, followed by **Oxyfluorfen** and **Simazine**, which were applied to 32 and 18 percent of the acres, respectively. **Petroleum distillate** was the most commonly utilized insecticide, applied to 12 percent of the acreage; followed by **Fenpropathrin**, applied to 9 percent; and **Benzoic acid** and **Imidacloprid**, both applied to 8 percent of the acreage. Other Chemicals were applied to 7 percent of the acreage, with **Strychnine** being applied to 3 percent of the acres.

**Kiwifruit:** California was surveyed for kiwifruit and accounted for 100 percent of all the acreage grown in the United States. Herbicides were applied to 44 percent of the acres. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) and **Paraquat** were the primary herbicides used on 33 and 28 percent of the acres, respectively. Insecticides were applied to 26 percent of the acreage. **Petroleum distillate** was the leading insecticide, as it was applied to 17 percent of the acreage.

**Lemons:** For the 2005 crop year, California accounted for 75 percent of the acreage in lemons and was the only State surveyed. Herbicides were applied to 62 percent of the acreage. The leading herbicides used were **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) on 58 percent of the acres, **Diuron** on 13 percent, and **Simazine** on 10 percent. Insecticides were used on 52 percent of the

acreage. The more commonly used insecticides were **Petroleum distillate** and **Chlorpyrifos**, covering 38 and 22 percent of the acreage, respectively. Fungicides were used on 30 percent of California's acres. **Copper hydroxide** and **Copper sulfate** were the primary fungicides used on 12 and 11 percent of the acres, respectively. Other Chemicals were applied to 46 percent of the acreage. **Metaldehyde** was applied to 27 percent of the acreage, followed by **Gibberellic acid** on 24 percent of the acres.

**Nectarines:** California was the only State surveyed for nectarines. Herbicides were used to treat 61 percent of California's nectarine acreage. Major herbicides used were **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate), applied to 55 percent of the acreage; followed by **2,4-D, dimethylamine salt**, applied to 30 percent; and **Oxyfluorfen**, applied to 27 percent of the acres. Insecticides were applied to 64 percent of the acreage, while fungicides were applied to 77 percent of the acres. The most commonly used insecticides were **Esfenvalerate**, **Petroleum distillate**, and **Formetanate hydroxide**, covering 49, 43, and 40 percent of the acreage, respectively. The most utilized fungicides were **Sulfur**, **Iprodione**, and **Copper hydroxide** on 58, 34, and 33 percent of the acreage, respectively. Other Chemicals were applied to 5 percent of the acreage.

**Olives:** California's olive growers applied herbicides, insecticides, fungicides to 47, 11, and 23 percent of their acreage, respectively. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate), at 42 percent applied, was the most widely used herbicide, followed by **Simazine**, which was applied to 18 percent of the acres. **Copper hydroxide** was the leading fungicide, as it was applied to 14 percent of the acreage. Other Chemicals were applied to 19 percent of the acreage however, there were insufficient reports to publish any active ingredient's data.

**Oranges:** California and Florida growers applied herbicides to 85 percent of the orange acreage. The two herbicides used most were **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate), on 78 percent of the acreage, and **Diuron**, on 46 percent of the acres. Insecticides were reported on 81 percent of the acreage. A wide variety of insecticides were used, but the most commonly used were **Petroleum distillate**, **Chlorpyrifos** and **Abamectin** on 66, 17, and 16 percent of the acreage, respectively. Fungicides were used on 59 percent of the acreage, with **Copper hydroxide** being the most utilized, covering 34 percent of the acreage. Other Chemicals were applied to 11 percent of the acreage, with **2,4-D, isopropyl ester** being the most commonly used on 8 percent of the acres.

**Peaches:** In the seven program States (California, Georgia, Michigan, New Jersey, Pennsylvania, South Carolina, and Texas) herbicides were applied to 52 percent of the acreage, while 79 percent of the acreage was treated with insecticides and fungicides. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate), at 40 percent applied, was the most widely used herbicide, followed by **Simazine** and **2,4-D, dimethylamine salt**, which were applied to 18 and 16 percent of the acres, respectively. The insecticide **Phosmet** was applied to 46 percent of the acreage, followed by **Esfenvalerate** on 37 percent, and **Petroleum distillate** on 28 percent of the acres. **Sulfur** was the most utilized fungicide, covering 57 percent of the acreage, followed by **Propiconazole** which was applied to 30 percent of the acres. Other Chemicals were applied to 10 percent of the acreage. The most commonly used Other Chemicals were **E-8-Dodecenyl acetat**, **Z-8-Dodecanol**, and **Z-8-Dodecen acetate**, all of which were applied to 7 percent of the acres.

**Pears:** Three program States, California, Oregon, and Washington, were surveyed for pears. Herbicides were used to treat 42 percent of the acres, with **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) being the most utilized active ingredient covering 37 percent of the acres. Insecticides were applied to 92 percent of the acres. A wide variety of insecticides were used, but the most commonly used were **Petroleum distillate**, **Abamectin**, and **Acetamiprid** on 83, 66, and 40 percent of the acreage, respectively. Fungicides were applied to 86 percent of the acreage. The

leading fungicides used were **Sulfur** and **Triflumizole**, both of which were applied to 40 percent of the acres, followed by **Mancozeb**, which was applied to 39 percent of the acres. Other Chemicals were used to treat 52 percent of the acreage, with **NAA** being the most utilized Other Chemical, applied to 29 percent of the acres, followed by **Dodecadien-1-ol**, which was applied to 18 percent of the acreage.

**Plums:** California was the only State surveyed for plums and accounted for 100 percent of all the plum acreage grown in the United States. Herbicides were applied to 67 percent of the acres. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) was the most commonly applied herbicide, being used on 60 percent of the acreage. Insecticides were applied to 57 percent of the acreage. **Esfenvalerate** was the most commonly utilized insecticide, applied to 43 percent of the acreage; followed by **Petroleum distillate**, applied to 41 percent; and **Chlorpyrifos** and **Phosmet**, both applied to 11 percent of the acreage. Fungicides were applied to 45 percent of the acreage. **Propiconazole** and **Sulfur** were the two most commonly used fungicides applied to 21 and 17 percent of the acres, respectively. Other Chemicals were applied to 1 percent of the acreage.

**Prunes:** California's prune growers applied herbicides to 60 percent of the acreage, while 55 percent of the acreage received insecticide and fungicide treatments. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate), at 52 percent, was the most commonly applied herbicide, followed by **Oxyfluorfen**, which was applied to 25 percent of the acres. The two insecticides used most were **Petroleum distillate**, on 38 percent of the acreage, and **Esfenvalerate**, on 29 percent of the acres. **Sulfur** was the leading fungicide, as it was applied to 31 percent of the acres, followed by **Captan** and **Propiconazole**, applied to 23 and 21 percent, respectively. The only active ingredient published for Other Chemicals was **Strychnine**, at 3 percent.

**Raspberries:** Oregon and Washington were the only States surveyed for raspberries. Herbicides were used to treat 90 percent of the acres, with **Paraquat** being the most utilized active ingredient covering 76 percent of the acres, followed by **Simazine** used to treat 53 percent of the acres. Insecticides were used on 82 percent of the acreage, with **Bifenthrin** and **Diazinon** being the most commonly used active ingredients, at 70 and 44 percent, respectively. Fungicides were applied to 93 percent of the acreage. The most commonly applied fungicides were **Cyprodinil** and **Fludioxonil**, both active ingredients were used to treat 83 percent of the acres, followed by **Captan**, used to treat 81 percent of the acres. Other Chemicals were applied to 3 percent of the acreage.

**Tangelos:** For the 2005 crop year, Florida accounted for 100 percent of all the U.S. acres in tangelos. Herbicides were applied to 84 percent of the tangelo acreage. **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate) was used on 79 percent of the acres, followed by **2,4-D, isopropylamine salt**, on 45 percent of the acres. Insecticides were used on 95 percent of the surveyed acres. **Petroleum distillate** and **Abamectin** continue to be the most commonly used insecticides being applied on 85 and 62 percent of the acreage, respectively. Fungicides were used on 86 percent of the acreage. **Copper hydroxide** and **Azoxystrobin** were the most commonly used fungicides applied to 41 and 30 percent of the acres, respectively. Other Chemicals were applied to 8 percent of the acres.

**Tangerines:** California and Florida growers applied herbicides to 78 percent of the tangerine acreage. The two herbicides used most were **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate), on 68 percent of the acreage, and **Diuron**, on 32 percent of the acres. Insecticides were more widely used, applied to 73 percent of the acreage. Major insecticides used were **Petroleum distillate**, on 53 percent of the acres; **Sulfur** on 19 percent; and **Diflubenzuron** on 9 percent of the acreage. Fungicides were applied to 61 percent of the acreage. **Copper hydroxide** was the most commonly used fungicide, applied to 43 percent of the acres, followed by **Azoxystrobin** and **Mefenoxam**, applied to 28 and 12 percent, respectively. Other Chemicals were applied to 22 percent

of the acreage. **Gibberellic acid** was applied to 7 percent of the acreage, followed by **2,4-D, isopropyl ester** on 6 percent of the acres.

**Temples:** Florida was the only State surveyed for temples. Herbicides were used to treat 88 percent of Florida's temple acreage. The most common herbicides applied were **Glyphosate isopropylamine salt** (formerly recorded as Glyphosate), **2,4-D, isopropylamine salt**, and **Diuron** covering 69, 44, and 30 percent of the acreage. Insecticides and fungicides were applied to 89 percent of the acreage. **Petroleum distillate** and **Abamectin** were the most commonly used insecticides, at 78 and 29 percent, respectively. Fungicides were applied to 89 percent of the acres. **Azoxystrobin** and **Copper hydroxide** were the primary fungicides used on 51 and 36 percent of the acres, respectively.

**Apples: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States								
	ALL	CA	MI	NY	NC	OR	PA	WA	WI
Herbicides									
2,4-D	*						P	*	
2,4-D, BEE	P		*	*			*		
2,4-D, dieth sal	P	*	*	P	*	*	P	*	
2,4-D, dimeth. salt	P	*	P	P	*	P	P	P	*
Alachlor	*		*					*	
Atrazine	*							*	
Carfentrazone-ethyl	P		*	*				P	
Cycloate	*							*	
Dichlobenil	*							*	
Diquat dibromide	*								*
Diuron	P	*	P	P	*	P	P	P	*
Fenoxaprop-p-ethyl	*						*		
Flumioxazin	*							*	
Glufosinate-ammonium	P	*				*		P	*
Glyphosate	*							*	*
Glyphosate amm. salt	*				*		*		*
Glyphosate iso. salt	P	P	P	P	P	P	P	P	P
Hexazinone	*							*	
Isoxaben	*							*	
MSMA	*							*	
Napropamide	*	*						*	
Norflurazon	P	*	*	*		P	P	P	*
Oryzalin	P	*	P	*		P		P	
Oxyfluorfen	P	P	*			*		P	*
Paraquat	P	P	P	P	P	P	P	P	P
Pendimethalin	P	*		*			*	P	
Picloram, K salt	*							*	
Rimsulfuron	*						*		
Sethoxydim	*	*		*	*				
Simazine	P	P	P	P	*	P	P	P	P
Sulfosate	P			P		*	*		*
Terbacil	P		P	P	*	*	P		*
Thifensulfuron	*						*		
Trifluralin	*		*						

See footnote(s) at end of table.

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**Apples: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States								
	ALL	CA	MI	NY	NC	OR	PA	WA	WI
Insecticides									
Abamectin	P	P	P	P		P	P	P	*
Acephate	*						*		
Acetamiprid	P	P	P	P	P	P	P	P	P
Aluminum phosphide	P	*						*	
Azadirachtin	*				*			P	
Azinphos-methyl	P	P	P	P	P	P	P	P	P
Benzoic acid	P	P	P	P	P	P	P	P	*
Bifenazate	P	P	*	*	P	P	*	P	*
Bifenthrin	*				*				
Boric acid	*							*	
Bt subsp. kurstaki	P	*	P	P	*	P	P	P	
Bt. (Berliner)	*							*	
Buprofezin	*							*	
Canola oil	*			*					
Carbaryl	P	P	P	P	P	P	P	P	P
Chlorpyrifos	P	P	P	P	P	P	P	P	P
Clofentezine	P		P	*	P	*	P	P	*
Clothianidin	*							*	
Cyd-X Granulo. Virus	P		P			*	*	P	
Cyfluthrin	*					*			
Deltamethrin	*		*						
Diazinon	P	P	*	*	*	P	P	P	P
Diiflubenzuron	*			*					
Dimethoate	P	*	P	*	P	P	P	*	
Disulfoton	*					*		*	
Endosulfan	P	*	P	P	*	P	P	P	*
Esfenvalerate	P	P	P	P	*	P	P	*	P
Ethyl parathion	*							*	
Etoxazole	P		P	P		*	P	P	*
Fenamiphos	*			*		*			
Fenbutatin-oxide	P	*	P			*		P	
Fenpropathrin	P	P	P	P	P	*	P	P	*
Fenpyroximate	P		P			*	*	P	
Formetanate hydro.	P	*				*	*	P	
Gamma-cyhalothrin	P			P			P		
Hexythiazox	P		P	P	*	*	P	P	P
Imidacloprid	P	P	P	P	P	P	P	P	P
Indoxacarb	P	*		P	P		P	*	P
Kaolin	P	P			*	P		P	*
Lambda-cyhalothrin	P	*	P	P		*	P	P	
Malathion	P				*	*		*	P
Methidathion	P	*					P	*	

See footnote(s) at end of table.

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**Apples: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States								
	ALL	CA	MI	NY	NC	OR	PA	WA	WI
<b>Insecticides (continued)</b>									
Methomyl	P		P	P	*	*	P	*	*
Methoxychlor	P				*				*
Methyl bromide	*						*	*	
Methyl parathion	*					*		*	
Naled	*								*
Neem oil, clar. hyd.	*							*	
Novaluron	P		P			P	P	P	
Oxamyl	P		*	*	*	*	P	*	P
Permethrin	P		P	P	*	*	P	*	*
Petroleum distillate	P	P	P	P	P	P	P	P	P
Petroleum oil	P		*	*	*	*	P	*	P
Phosmet	P	P	P	P	P	P	P	P	P
Piperonyl butoxide	*							*	
Potassium salts	*							P	*
Propargite	*	*						*	
Pyrethrins	P	*	*	*		*		*	
Pyridaben	P	*	P	P	*	P	P	P	P
Pyriproxyfen	P	P				P	*	P	*
Rotenone	*		*			*			
Spinosad	P	*	P	P		P	*	P	*
Tebufenozide	*					*			
Thiacloprid	P		P		*	P	P	P	*
Thiamethoxam	P		P	P	P		*	P	*
<b>Fungicides</b>									
Azoxystrobin	*			*		*			
Bacillus pumilus	P							P	
Bacillus subtilis	P	*	P	*	*			*	
Basic copper sulfate	P	*	P	P	*	*	P	*	*
Benomyl	P		*	*	*		*	*	P
Borax Decahydrate	*					*			
Boscalid	P		*		P	P	P	P	*
Butanone	P		P	*				*	
Calcium polysulfide	P	P	P		*	P		P	*
Captan	P	*	P	P	*	P	P	P	P
Chlorothalonil	P		*	*	*	*	P	*	
Copper amm. complex	*								*
Copper chloride hyd.	*		*	*					
Copper hydroxide	P	P	P	P	P	P	P	P	P
Copper oxide	P	*				*		P	
Copper oxychlo. sul.	P		P	P			P		P
Copper oxychloride	P	*	P	P	*		P		*

See footnote(s) at end of table.

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**Apples: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States								
	ALL	CA	MI	NY	NC	OR	PA	WA	WI
Fungicides (continued)									
Copper resinate	P			*	P		*		
Copper sulfate	P		P	*	P	*	P	*	P
Cyprodinil	P	P	P	*	P	P	P	*	P
Dinocap	*							*	
Dodine	P		*	*	P	P	P	*	*
Fenarimol	P	P	P	P	P	P	P	P	P
Fenbuconazole	P		*				*	*	*
Ferbam	*		*		*			*	
Fludioxonil	*					*			
Fosetyl-al	P	*	*			P		P	
Kresoxim-methyl	P	*	P	P	*	P	P	P	P
Mancozeb	P	P	P	P	P	P	P	P	P
Maneb	P	*	*		*	*	*	P	P
Mefenoxam	P					*	*	P	
Metiram	P		P	P	P	*	P	*	*
Myclobutanil	P		P	P	P	P	P	P	P
Oxytracycline	P	*	P			*		P	
PCNB	*					*		P	
Phosphorous acid	*						*		
Potassium Phosphate	*			*					
Potassium bicarbon.	P	*		*		P		P	
Propiconazole	*		*				*		
Pseudomonas fluores.	P	*				*		P	
Pyraclostrobin	P		*		P	P	P	P	*
Pyrimethanil	P		P			*	P	*	*
Quintec	*							*	
Streptomycin	P	P	P	P	P	P	P	P	P
Streptomycin sulfate	P		P	P	P	*	*	*	*
Sulfur	P	P	P	P	*	P	P	P	*
Tebuconazole	*						*	*	*
Thiophanate-methyl	P		P	P	P	P	P	P	P
Thiram	P		P	P	*	*	P	P	
Triadimefon	P		P	*	*	*	*	P	
Trichoderma harz.	*							*	
Trifloxystrobin	P	P	P	P	P	P	P	P	P
Triflumizole	P	*		*		P	*	P	*
Vinclozolin	*							*	*
Ziram	P	*	P	P	P	P	P	P	*

See footnote(s) at end of table.

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**Apples: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States								
	ALL	CA	MI	NY	NC	OR	PA	WA	WI
Other Chemicals									
Acequinocyl	P		*			*	*		
Benzyladenine	P	P	P	P	*	P	P	P	*
Butenoic Acid Hydro.	P		P	P	*	*	P	P	P
Capsaicin	*						*		
Chlorophacinone	P						*	*	
Chloropicrin	*						*	*	
Cytokinins	*					*		P	
DNOC	*							*	
Dichloropropene	*	*						*	
Diphacinone	*							*	
Dodecadien-1-ol	P	P	*			*		P	
Dodecanol	P	*	*					P	
E-8-Dodecenyl acetat	*		*					*	
Ethephon	P	*	P	*	*	P	P	P	*
Gibberellic acid	P		*	P	*	*	P	P	
Gibberellins A4A7	P	*	P	P		P	P	P	*
Harpin protein	*				*	*			
Hexadecenal	*							*	
Hexadecenyl acetate	*							*	
Hydrogen peroxide	*		*						
Mepiquat pentaborate	*							*	
Metaldehyde	*		*	*					
Metam-sodium	*							*	
Methyl anthranilate	*							*	
Mineral oil	*							*	
Monocarbamide dihyd.	*			*				*	
NAA	P	P	P	P	P	P	P	P	P
NAA, Potassium salt	P					P	*	P	
NAD	P	P	*	*		P	*	P	*
Octadecadien (E,Z)	P					P		P	
Octadecadien (Z,Z)	P					P		P	
Prohexadione calcium	P	*	P	P	*	P	P	P	P
Spirodiclofen	P		P			*		*	
Strychnine	*	*						*	
Tetradecanol	P	*	*					P	
Tetradecen-1-OL (Z)	P		*			*		*	
Tetradecen-1-yl (E)	*					*			
Tridecen-1-YL-Acetat	*							*	
Tridecenyl acetate	*							*	
Z-8-Dodecanol	*		*					*	
Z-8-Dodecen acetate	*		*					*	
Zinc phosphide	P		*	P		*	*	P	

P Usage data are published for this active ingredient.

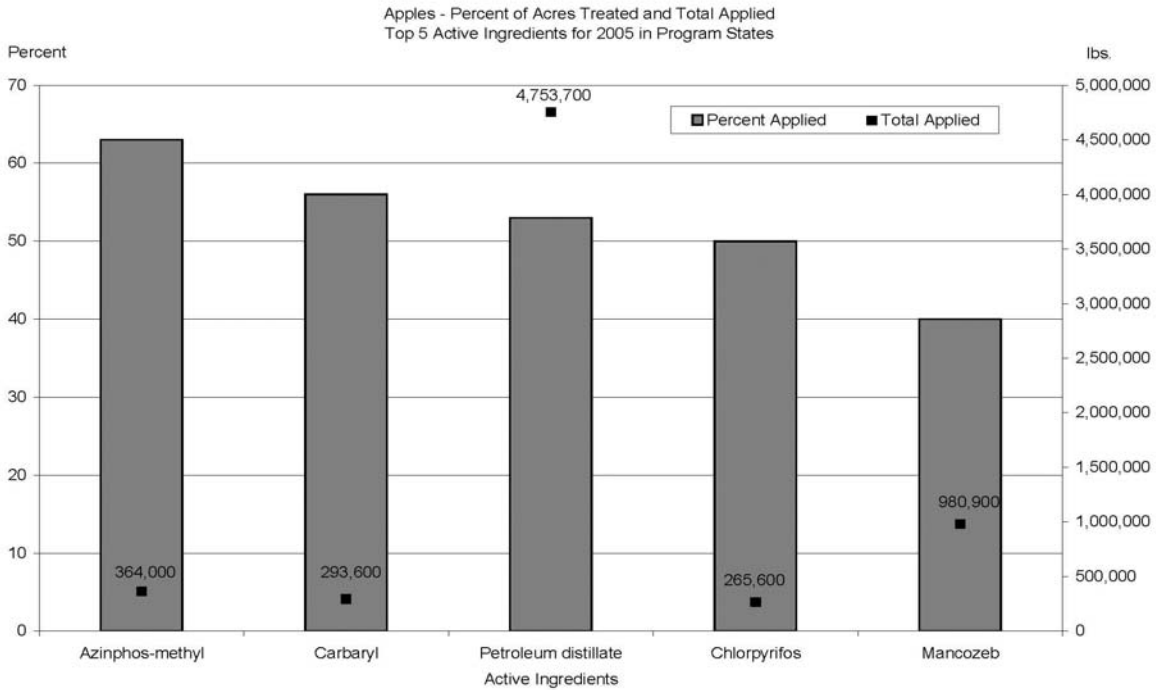
\* Usage data are not published for this active ingredient.

**Apples: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide <sup>1</sup>		Fungicide <sup>1</sup>		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	25,000	40	22.0	69	568.5	57	103.9	19	7.5
MI	40,500	30	23.6	93	346.7	92	971.8	40	2.8
NY	45,000	55	63.6	93	627.0	95	1,235.4	63	2.8
NC	6,800	11	1.0	93	230.2	93	197.8	16	0.1
OR	6,500	38	11.0	91	290.1	88	68.3	72	93.0
PA	21,800	41	31.1	90	418.9	85	329.7	43	2.3
WA	155,000	45	242.9	96	4,559.9	86	2,290.3	68	164.1
WI	5,800	39	6.5	88	51.4	89	105.4	21	0.1
Total	306,400	43	401.7	92	7,092.7	86	5,302.6	56	272.7

<sup>1</sup> Total Applied excludes Bt's (*Bacillus thuringiensis*) and other biologicals.

Quantities are not available because amounts of active ingredient are not comparable between products.



**Apples: Agricultural Chemical Applications,  
Program States, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, BEE	*	1.0	0.338	0.338	0.3
2,4-D, dieth sal	1	1.2	0.675	0.810	3.1
2,4-D, dimeth. salt	11	1.3	0.838	1.062	37.1
Carfentrazone-ethyl	*	1.1	0.020	0.022	( <sup>2</sup> )
Diuron	6	1.2	1.363	1.626	29.3
Glufosinate-ammonium	1	1.2	0.662	0.774	1.7
Glyphosate iso. salt	33	1.6	0.938	1.499	153.8
Norflurazon	6	1.5	1.943	2.845	53.5
Oryzalin	1	1.2	2.555	3.036	9.1
Oxyfluorfen	2	1.1	0.731	0.813	4.8
Paraquat	15	1.2	0.717	0.881	39.3
Pendimethalin	*	1.0	1.569	1.579	2.1
Simazine	10	1.2	1.477	1.775	55.3
Sulfosate	1	1.3	1.396	1.810	4.5
Terbacil	1	1.1	0.519	0.575	2.0
<b>Insecticides</b>					
Abamectin	4	1.3	0.013	0.017	0.2
Acetamiprid	31	1.4	0.111	0.153	14.5
Aluminum phosphide	1	2.0	0.706	1.396	3.0
Azinphos-methyl	63	2.4	0.784	1.875	364.0
Benzoic acid	28	1.5	0.199	0.305	25.6
Bifenazate	4	1.1	0.433	0.459	6.1
Bt subsp. kurstaki	16	1.6	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Carbaryl	56	1.4	1.206	1.723	293.6
Chlorpyrifos	50	1.2	1.483	1.728	265.6
Clofentezine	6	1.1	0.161	0.170	2.9
Cyd-X Granulo. Viru <sup>4</sup>	6	1.8			
Diazinon	6	1.8	0.889	1.601	27.4
Dimethoate	1	1.5	0.640	0.946	3.6
Endosulfan	11	1.2	1.411	1.705	58.5
Esfenvalerate	11	1.6	0.038	0.060	2.0
Etoxazole	9	1.3	0.078	0.098	2.7

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Insecticides (continued)</b>					
Fenbutatin-oxide	1	1.1	0.739	0.786	3.1
Fenpropathrin	14	1.9	0.212	0.412	18.0
Fenpyroximate	2	1.0	0.067	0.069	0.5
Formetanate hydro.	7	1.1	0.719	0.769	16.2
Gamma-cyhalothrin	3	2.3	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Hexythiazox	4	1.0	0.126	0.127	1.4
Imidacloprid	29	1.5	0.053	0.079	6.9
Indoxacarb	5	1.3	0.091	0.119	1.8
Kaolin	5	1.3	31.912	42.259	690.6
Lambda-cyhalothrin	8	1.6	0.043	0.068	1.6
Malathion	*	2.8	0.682	1.937	0.5
Methidathion	*	1.4	0.804	1.104	1.4
Methomyl	4	1.8	0.598	1.104	14.6
Methoxychlor	*	2.9	0.462	1.354	0.1
Novaluron	13	1.9	0.119	0.229	9.2
Oxamyl	1	2.2	0.300	0.673	1.7
Permethrin	3	1.2	0.174	0.215	1.9
Petroleum distillate	53	2.0	14.497	29.422	4,753.7
Petroleum oil	2	1.9	8.471	15.687	78.8
Phosmet	33	2.4	1.558	3.695	369.0
Pyrethrins	*	1.2	0.010	0.012	( <sup>2</sup> )
Pyridaben	16	1.3	0.234	0.300	14.4
Pyriproxyfen	5	1.1	0.096	0.105	1.5
Spinosad	39	1.3	0.109	0.142	16.8
Thiacloprid	8	1.8	0.121	0.220	5.3
Thiamethoxam	3	1.1	0.070	0.074	0.6
<b>Fungicides</b>					
Bacillus pumilus	1	1.6	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Bacillus subtilus <sup>4</sup>	1	1.2			
Basic copper sulfate	3	1.1	0.865	0.970	10.1
Benomyl	1	1.2	0.614	0.742	3.1
Boscalid	9	1.1	0.015	0.016	0.4

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Butanone	1	2.3	0.066	0.150	0.5
Calcium polysulfide	17	1.4	17.466	24.653	1,317.4
Captan	34	5.3	1.683	8.879	908.8
Chlorothalonil	*	1.3	1.399	1.761	2.0
Copper hydroxide	17	1.1	2.169	2.424	127.1
Copper oxide	*	2.5	2.485	6.218	5.2
Copper oxychlor. sul.	3	1.0	2.590	2.663	23.4
Copper oxychloride	3	1.1	2.425	2.619	24.1
Copper resinate	*	1.1	0.221	0.238	0.2
Copper sulfate	1	1.0	1.089	1.139	3.6
Cyprodinil	3	1.5	0.122	0.186	1.7
Dodine	2	1.6	1.026	1.681	8.4
Fenarimol	16	1.5	0.064	0.093	4.6
Fenbuconazole	*	1.9	0.058	0.110	( <sup>2</sup> )
Fosetyl-al	2	1.1	2.472	2.718	16.8
Kresoxim-methyl	17	2.0	0.105	0.214	10.8
Mancozeb	40	3.2	2.488	7.999	980.9
Maneb	1	1.8	2.404	4.279	12.7
Mefenoxam	*	1.1	0.453	0.478	0.3
Metiram	10	3.3	2.510	8.296	262.8
Myclobutanil	40	1.7	0.109	0.187	22.7
Oxytetracycline	12	1.2	0.186	0.224	8.1
Potassium bicarbon.	1	1.2	2.125	2.465	8.5
Pseudomonas fluores.	2	1.3	0.267	0.336	2.0
Pyraclostrobin	9	1.1	0.001	0.001	( <sup>2</sup> )
Pyrimethanil	3	1.5	0.193	0.283	2.7
Streptomycin	14	2.0	0.148	0.299	12.8
Streptomycin sulfate	2	1.7	0.242	0.413	2.1
Sulfur	35	1.7	5.652	9.790	1,039.5
Thiophanate-methyl	21	3.2	0.376	1.190	76.8
Thiram	5	2.9	1.916	5.561	79.5
Triadimefon	4	1.5	0.157	0.241	3.3
Trifloxystrobin	29	1.6	0.060	0.098	8.8

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Triflumizole	30	1.5	0.284	0.414	38.5
Ziram	15	2.3	2.615	5.893	266.5
Other Chemicals					
Acequinocyl	1	1.0	0.243	0.250	0.4
Benzyladenine	19	1.1	0.041	0.046	2.7
Butenoic Acid Hydro.	8	1.0	0.078	0.081	2.0
Chlorophacinone	*	1.7	0.001	0.001	( <sup>2</sup> )
Dodecadien-1-ol	3	1.3	0.174	0.225	1.9
Dodecanol	1	1.1	0.014	0.017	( <sup>2</sup> )
Ethephon	22	1.3	0.544	0.686	46.1
Gibberellic acid	2	1.3	0.018	0.023	0.1
Gibberellins A4A7	14	1.1	0.026	0.029	1.3
NAA	29	1.3	0.023	0.030	2.7
NAA, Potassium salt	10	1.1	0.025	0.027	0.8
NAD	7	1.1	0.046	0.049	1.1
Octadecadien (E,Z)	7	1.0	0.388	0.403	8.2
Octadecadien (Z,Z)	7	1.0	5.430	5.640	114.1
Prohexadione calcium	16	1.3	0.198	0.259	12.5
Spirodiclofen	1	1.0	0.243	0.246	1.1
Tetradecanol	1	1.1	0.003	0.003	( <sup>2</sup> )
Tetradecen-1-OL (Z)	*	1.3	0.089	0.119	0.1
Zinc phosphide	3	1.4	0.118	0.161	1.4

\* Area applied is less than 0.5 percent.

<sup>1</sup> Bearing acreage in 2005 for the 8 Program States was 306,400 acres.

States included are CA, MI, NY, NC, OR, PA, WA, and WI.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

<sup>4</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.

**Apples: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Glyphosate iso. salt	30	2.2	0.756	1.691	12.7
Oxyfluorfen	10	1.2	0.473	0.590	1.4
Paraquat	13	1.3	0.559	0.744	2.3
Simazine	4	1.1	1.202	1.326	1.5
<b>Insecticides</b>					
Abamectin	10	1.2	0.012	0.015	( <sup>2</sup> )
Acetamiprid	27	1.9	0.132	0.255	1.7
Azinphos-methyl	33	1.6	1.318	2.069	17.1
Benzoic acid	21	3.0	0.240	0.714	3.7
Bifenazate	11	1.2	0.459	0.549	1.5
Carbaryl	27	1.1	1.719	1.846	12.4
Chlorpyrifos	15	1.2	1.620	1.926	7.3
Diazinon	3	1.2	1.796	2.115	1.7
Esfenvalerate	14	1.4	0.042	0.061	0.2
Fenpropathrin	24	1.4	0.351	0.505	3.1
Imidacloprid	4	1.3	0.091	0.120	0.1
Kaolin	5	1.8	33.468	61.797	81.7
Petroleum distillate	45	1.5	24.464	35.651	404.4
Phosmet	28	1.4	2.978	4.134	29.4
Pyriproxyfen	25	1.0	0.103	0.109	0.7
<b>Fungicides</b>					
Calcium polysulfide	8	1.3	15.653	20.934	42.5
Copper hydroxide	18	1.0	0.890	0.892	4.0
Cyprodinil	3	1.3	0.228	0.299	0.2
Fenarimol	5	1.6	0.083	0.132	0.2
Mancozeb	35	1.3	2.514	3.298	29.2
Streptomycin	17	2.8	0.125	0.351	1.5
Sulfur	6	1.9	5.420	10.249	14.8
Trifloxystrobin	38	1.4	0.075	0.105	1.0
<b>Other Chemicals</b>					
Benzyladenine	8	1.0	0.088	0.092	0.2

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Other Chemicals (continued)					
Dodecadien-1-ol	4	1.1	0.034	0.039	( <sup>2</sup> )
NAA	8	1.2	0.024	0.028	0.1
NAD	6	1.1	0.036	0.040	0.1

<sup>1</sup> Total acreage in 2005 for California was 25,000 acres.  
Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Apples: Agricultural Chemical Applications,  
Michigan, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	6	1.5	0.707	1.040	2.7
Diuron	9	1.1	1.403	1.487	5.5
Glyphosate iso. salt	25	1.2	0.733	0.895	9.0
Oryzalin	*	1.0	2.088	2.088	0.2
Paraquat	7	1.0	0.747	0.754	2.0
Simazine	5	1.1	1.359	1.476	3.1
Terbacil	3	1.0	0.486	0.495	0.6
<b>Insecticides</b>					
Abamectin	6	1.0	0.011	0.011	( <sup>2</sup> )
Acetamiprid	20	1.5	0.050	0.075	0.6
Azinphos-methyl	80	3.1	0.734	2.287	74.3
Benzoic acid	19	1.6	0.171	0.281	2.2
Bt subsp. kurstaki	7	1.4	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Carbaryl	29	1.4	0.988	1.428	16.9
Chlorpyrifos	63	1.2	0.972	1.165	29.7
Clofentezine	2	1.0	0.132	0.132	0.1
Cyd-X Granulo. Viru <sup>4</sup>	12	2.5			
Dimethoate	2	1.1	0.717	0.794	0.8
Endosulfan	6	2.2	1.443	3.193	8.2
Esfenvalerate	39	1.6	0.040	0.065	1.0
Etoxazole	27	1.1	0.082	0.089	1.0
Fenbutatin-oxide	2	1.0	0.676	0.676	0.6
Fenpropathrin	20	1.4	0.259	0.361	2.9
Fenpyroximate	3	1.0	0.038	0.039	( <sup>2</sup> )
Hexythiazox	2	1.0	0.112	0.112	0.1
Imidacloprid	24	1.6	0.051	0.080	0.8
Lambda-cyhalothrin	5	1.3	0.037	0.048	0.1
Methomyl	12	2.0	0.810	1.641	7.7
Novaluron	34	2.3	0.113	0.257	3.6
Permethrin	10	1.3	0.146	0.196	0.8
Petroleum distillate	11	1.2	18.791	22.641	98.0
Phosmet	57	2.5	1.521	3.820	88.6

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
Michigan, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides (continued)					
Pyridaben	36	1.1	0.243	0.265	3.9
Spinosad	14	1.1	0.111	0.125	0.7
Thiacloprid	31	1.6	0.134	0.217	2.7
Thiamethoxam	3	1.0	0.076	0.076	0.1
Fungicides					
Bacillus subtilus <sup>4</sup>	3	1.2			
Basic copper sulfate	4	1.2	1.200	1.407	2.5
Butanone	7	2.5	0.055	0.140	0.4
Calcium polysulfide	1	1.3	10.411	13.877	3.4
Captan	79	4.3	1.836	7.923	254.1
Copper hydroxide	11	1.3	1.287	1.621	7.3
Copper oxychloro. sul.	1	1.0	2.995	2.995	1.1
Copper oxychloride	3	1.0	3.483	3.483	4.3
Copper sulfate	3	1.0	1.104	1.116	1.1
Cyprodinil	8	1.8	0.090	0.158	0.5
Fenarimol	7	2.8	0.051	0.146	0.4
Kresoxim-methyl	23	1.9	0.109	0.205	1.9
Mancozeb	71	4.4	2.749	12.156	348.2
Metiram	21	3.7	2.764	10.110	85.4
Myclobutanil	30	2.3	0.094	0.217	2.7
Oxytetracycline	8	1.7	0.212	0.359	1.2
Pyrimethanil	7	1.3	0.255	0.324	1.0
Streptomycin	29	1.8	0.165	0.291	3.4
Streptomycin sulfate	5	2.1	0.261	0.556	1.0
Sulfur	19	4.1	4.032	16.640	127.5
Thiophanate-methyl	12	2.1	0.281	0.595	2.8
Thiram	10	3.2	2.070	6.531	26.2
Triadimefon	17	1.8	0.144	0.257	1.8
Trifloxystrobin	40	2.0	0.054	0.106	1.7
Ziram	35	2.4	2.695	6.355	89.7

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
Michigan, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Other Chemicals					
Benzyladenine	9	1.1	0.037	0.040	0.1
Butenoic Acid Hydro.	4	1.1	0.050	0.053	0.1
Ethephon	*	1.0	0.451	0.458	( <sup>2</sup> )
Gibberellins A4A7	2	1.4	0.012	0.017	( <sup>2</sup> )
NAA	20	1.2	0.016	0.019	0.2
Prohexadione calcium	9	1.9	0.121	0.225	0.8
Spirodiclofen	9	1.0	0.237	0.237	0.9

\* Area applied is less than 0.5 percent.

<sup>1</sup> Bearing acreage in 2005 for Michigan was 40,500 acres.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

<sup>4</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.

**Apples: Agricultural Chemical Applications,  
New York, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dieth sal	5	1.0	0.580	0.580	1.2
2,4-D, dimeth. salt	29	1.1	0.761	0.832	10.8
Diuron	14	1.0	1.453	1.519	9.4
Glyphosate iso. salt	42	1.2	0.843	1.014	19.2
Paraquat	11	1.1	0.535	0.574	2.8
Simazine	19	1.1	1.648	1.840	15.6
Sulfosate	5	1.3	1.177	1.567	3.4
Terbacil	2	1.1	0.346	0.392	0.3
<b>Insecticides</b>					
Abamectin	6	1.6	0.018	0.029	0.1
Acetamiprid	19	1.7	0.100	0.171	1.4
Azinphos-methyl	43	2.9	0.617	1.793	34.4
Benzoic acid	26	1.3	0.185	0.245	2.8
Bt subsp. kurstaki	37	2.1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Carbaryl	62	1.4	0.958	1.337	37.1
Chlorpyrifos	44	1.2	0.954	1.188	23.7
Endosulfan	29	1.1	1.070	1.211	16.0
Esfenvalerate	13	1.2	0.045	0.053	0.3
Etoxazole	15	1.0	0.078	0.080	0.5
Fenprothrin	51	2.3	0.191	0.438	10.0
Gamma-cyhalothrin	13	2.4	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Hexythiazox	7	1.0	0.079	0.079	0.2
Imidacloprid	26	1.9	0.043	0.079	0.9
Indoxacarb	17	1.2	0.089	0.104	0.8
Lambda-cyhalothrin	32	1.6	0.047	0.075	1.1
Methomyl	8	1.1	0.832	0.901	3.2
Permethrin	6	1.0	0.198	0.198	0.5
Petroleum distillate	50	1.8	9.239	16.454	372.6
Phosmet	67	2.6	1.334	3.464	103.9
Pyridaben	20	1.0	0.163	0.164	1.5
Spinosad	35	1.1	0.076	0.086	1.4
Thiamethoxam	10	1.0	0.064	0.064	0.3

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
New York, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Fungicides</b>					
Basic copper sulfate	7	1.0	0.729	0.729	2.3
Captan	94	5.6	1.758	9.928	418.4
Copper hydroxide	41	1.1	2.574	2.738	50.4
Copper oxychlor. sul.	14	1.0	2.843	2.843	17.4
Copper oxychloride	7	1.0	2.568	2.568	8.2
Fenarimol	7	1.1	0.036	0.039	0.1
Kresoxim-methyl	24	2.0	0.131	0.258	2.7
Mancozeb	79	3.8	2.390	9.044	320.6
Metiram	24	2.6	3.207	8.400	89.8
Myclobutanil	23	2.0	0.133	0.266	2.8
Streptomycin	34	2.3	0.142	0.325	5.0
Streptomycin sulfate	4	1.0	0.275	0.275	0.4
Sulfur	48	2.4	4.372	10.380	225.2
Thiophanate-methyl	67	3.0	0.389	1.163	35.0
Thiram	9	1.4	2.221	3.170	12.2
Trifloxystrobin	46	1.8	0.063	0.110	2.3
Ziram	21	1.8	2.029	3.690	34.5
<b>Other Chemicals</b>					
Benzyladenine	7	1.4	0.032	0.045	0.1
Butenoic Acid Hydro.	4	1.1	0.035	0.037	0.1
Gibberellic acid	1	1.3	0.008	0.010	( <sup>3</sup> )
Gibberellins A4A7	5	1.0	0.007	0.007	( <sup>3</sup> )
NAA	58	1.6	0.008	0.012	0.3
Prohexadione calcium	11	1.7	0.054	0.092	0.4
Zinc phosphide	4	1.0	0.169	0.169	0.3

<sup>1</sup> Bearing acreage in 2005 for New York was 45,000 acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Apples: Agricultural Chemical Applications,  
North Carolina, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Glyphosate iso. salt	5	1.4	0.562	0.807	0.3
Paraquat	8	1.6	0.369	0.590	0.3
<b>Insecticides</b>					
Acetamiprid	22	1.5	0.126	0.187	0.3
Azinphos-methyl	66	2.6	0.707	1.822	8.2
Benzoic acid	67	2.2	0.192	0.425	1.9
Bifenazate	1	1.0	0.337	0.337	( <sup>2</sup> )
Carbaryl	27	1.3	1.373	1.737	3.2
Chlorpyrifos	34	1.1	1.045	1.131	2.6
Clofentezine	8	1.0	0.072	0.072	( <sup>2</sup> )
Dimethoate	18	1.6	0.647	1.052	1.3
Fenpropathrin	18	1.9	0.217	0.405	0.5
Imidacloprid	4	1.1	0.061	0.066	( <sup>2</sup> )
Indoxacarb	14	1.6	0.094	0.149	0.1
Petroleum distillate	88	1.1	30.681	33.591	201.1
Phosmet	41	2.3	1.475	3.346	9.2
Thiamethoxam	14	1.3	0.089	0.112	0.1
<b>Fungicides</b>					
Boscalid	22	1.5	0.014	0.022	( <sup>2</sup> )
Copper hydroxide	23	2.1	1.789	3.769	5.8
Copper resinate	5	1.1	0.319	0.337	0.1
Copper sulfate	4	1.4	0.928	1.320	0.4
Cyprodinil	19	1.5	0.190	0.277	0.4
Dodine	42	1.6	1.320	2.051	5.8
Fenarimol	38	2.8	0.046	0.127	0.3
Mancozeb	59	3.3	2.424	7.946	31.7
Metiram	48	4.0	2.142	8.481	27.5
Myclobutanil	66	3.3	0.110	0.368	1.7
Pyraclostrobin	22	1.5	0.001	0.001	( <sup>2</sup> )
Streptomycin	32	2.5	0.121	0.303	0.7
Streptomycin sulfate	19	2.0	0.181	0.369	0.5

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
North Carolina, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Thiophanate-methyl	73	5.5	0.478	2.623	13.0
Trifloxystrobin	21	2.6	0.051	0.136	0.2
Ziram	44	4.2	2.610	11.018	33.0
Other Chemicals					
NAA	10	1.2	0.024	0.029	( <sup>2</sup> )

<sup>1</sup> Bearing acreage in 2005 for North Carolina was 6,800 acres.

<sup>2</sup> Total applied is less than 50 lbs.



**Apples: Agricultural Chemical Applications,  
Oregon, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	29	1.1	0.602	0.659	1.2
Diuron	17	1.1	0.508	0.538	0.6
Glyphosate iso. salt	35	1.5	1.335	2.033	4.6
Norflurazon	16	1.0	0.672	0.703	0.7
Oryzalin	10	1.1	1.908	2.103	1.3
Paraquat	16	2.8	0.331	0.923	1.0
Simazine	4	1.0	1.729	1.729	0.4
<b>Insecticides</b>					
Abamectin	2	1.0	0.013	0.013	( <sup>2</sup> )
Acetamiprid	23	1.3	0.135	0.170	0.3
Azinphos-methyl	27	2.0	0.994	1.939	3.4
Benzoic acid	40	1.2	0.241	0.297	0.8
Bifenazate	9	1.0	0.477	0.483	0.3
Bt subsp. kurstaki	3	1.2	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Carbaryl	52	1.7	0.840	1.387	4.7
Chlorpyrifos	63	1.0	1.886	1.975	8.1
Diazinon	15	1.6	1.136	1.858	1.8
Dimethoate	12	1.1	0.613	0.647	0.5
Endosulfan	10	1.0	1.800	1.844	1.2
Esfenvalerate	4	1.4	0.058	0.082	( <sup>2</sup> )
Imidacloprid	44	1.4	0.055	0.077	0.2
Kaolin	4	2.0	21.293	42.918	11.6
Novaluron	12	1.2	0.160	0.193	0.1
Petroleum distillate	85	3.6	12.677	45.311	249.9
Phosmet	20	1.7	2.081	3.515	4.7
Pyridaben	6	1.1	0.264	0.283	0.1
Pyriproxyfen	29	1.3	0.109	0.144	0.3
Spinosad	11	1.6	0.113	0.177	0.1
Thiacloprid	41	1.0	0.185	0.189	0.5

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
Oregon, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Fungicides</b>					
Boscalid	6	1.1	0.041	0.046	( <sup>2</sup> )
Calcium polysulfide	7	1.8	40.567	74.421	35.0
Captan	6	4.1	1.046	4.236	1.5
Copper hydroxide	7	1.5	3.392	4.999	2.4
Cyprodinil	4	1.2	0.215	0.262	0.1
Dodine	5	2.6	1.116	2.853	0.9
Fenarimol	9	1.7	0.054	0.089	0.1
Fosetyl-al	6	1.6	3.007	4.712	1.7
Kresoxim-methyl	26	1.0	0.127	0.133	0.2
Mancozeb	20	2.6	3.082	8.163	10.7
Myclobutanil	69	1.8	0.141	0.246	1.1
Potassium bicarbon.	4	1.2	1.978	2.309	0.6
Pyraclostrobin	6	1.1	0.002	0.002	( <sup>2</sup> )
Streptomycin	9	2.1	0.185	0.383	0.2
Sulfur	20	1.1	5.181	5.821	7.5
Thiophanate-methyl	4	1.5	0.792	1.173	0.3
Trifloxystrobin	21	2.0	0.065	0.130	0.2
Triflumizole	19	1.6	0.278	0.438	0.5
Ziram	2	1.5	3.667	5.671	0.7
<b>Other Chemicals</b>					
Benzyladenine	24	1.0	0.031	0.031	( <sup>2</sup> )
Ethephon	24	1.1	0.443	0.509	0.8
Gibberellins A4A7	24	1.0	0.030	0.031	( <sup>2</sup> )
NAA	48	1.3	0.025	0.032	0.1
NAA, Potassium salt	3	1.2	0.077	0.094	( <sup>2</sup> )
NAD	22	1.2	0.036	0.044	0.1
Octadecadien (E,Z)	47	1.0	2.002	2.002	6.1
Octadecadien (Z,Z)	47	1.0	28.033	28.033	85.3
Prohexadione calcium	10	1.3	0.136	0.177	0.1

<sup>1</sup> Bearing acreage in 2005 for Oregon was 6,500 acres.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Apples: Agricultural Chemical Applications,  
Pennsylvania, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D	4	1.0	0.389	0.396	0.3
2,4-D, dieth sal	3	2.1	1.108	2.282	1.5
2,4-D, dimeth. salt	15	1.2	0.954	1.106	3.6
Diuron	12	1.3	1.418	1.843	5.0
Glyphosate iso. salt	17	1.2	1.041	1.211	4.5
Norflurazon	10	1.0	1.325	1.380	2.9
Paraquat	23	1.3	0.638	0.842	4.2
Simazine	18	1.0	1.806	1.835	7.2
Terbacil	5	1.1	0.759	0.806	0.9
<b>Insecticides</b>					
Abamectin	6	1.8	0.006	0.011	( <sup>2</sup> )
Acetamiprid	23	2.6	0.057	0.149	0.8
Azinphos-methyl	65	5.0	0.382	1.927	27.2
Benzoic acid	37	2.4	0.099	0.238	1.9
Bt subsp. kurstaki	3	1.3	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Carbaryl	34	1.5	0.641	0.987	7.4
Chlorpyrifos	36	1.4	0.692	0.941	7.3
Clofentezine	2	1.7	0.049	0.082	( <sup>2</sup> )
Diazinon	23	3.5	0.437	1.529	7.6
Dimethoate	2	2.8	0.685	1.927	0.8
Endosulfan	4	1.9	0.453	0.878	0.7
Esfenvalerate	22	1.7	0.021	0.036	0.2
Etoxazole	31	1.9	0.073	0.139	0.9
Fenpropathrin	20	2.0	0.116	0.235	1.0
Gamma-cyhalothrin	17	2.0	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Hexythiazox	1	1.1	0.167	0.188	0.1
Imidacloprid	25	1.5	0.025	0.038	0.2
Indoxacarb	6	1.7	0.047	0.079	0.1
Lambda-cyhalothrin	6	1.3	0.023	0.028	( <sup>2</sup> )
Methidathion	2	1.4	0.391	0.546	0.3
Methomyl	21	2.3	0.266	0.601	2.7
Novaluron	32	3.3	0.067	0.221	1.5

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
Pennsylvania, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Insecticides (continued)</b>					
Oxamyl	8	1.9	0.248	0.472	0.8
Permethrin	7	1.4	0.248	0.345	0.5
Petroleum distillate	50	1.7	14.455	25.168	276.5
Petroleum oil	11	2.2	11.318	24.587	56.7
Phosmet	36	3.8	0.732	2.798	22.2
Pyridaben	2	2.1	0.130	0.278	0.1
Thiacloprid	16	4.1	0.071	0.289	1.0
<b>Fungicides</b>					
Basic copper sulfate	20	1.2	0.582	0.682	3.0
Boscalid	2	1.2	0.083	0.103	0.1
Captan	68	6.9	0.945	6.487	95.5
Chlorothalonil	1	1.8	1.512	2.663	0.6
Copper hydroxide	6	2.3	1.261	2.915	3.7
Copper oxychlo. sul.	9	1.1	1.908	2.155	4.4
Copper oxychloride	20	1.2	2.039	2.393	10.5
Copper sulfate	6	1.0	1.205	1.205	1.5
Cyprodinil	11	1.4	0.086	0.118	0.3
Dodine	5	1.8	0.393	0.707	0.7
Fenarimol	5	3.4	0.046	0.158	0.2
Kresoxim-methyl	43	4.2	0.064	0.271	2.6
Mancozeb	51	5.8	1.375	7.925	88.0
Metiram	18	5.5	1.175	6.514	26.0
Myclobutanil	36	3.3	0.055	0.181	1.4
Pyraclostrobin	2	1.3	( <sup>3</sup> )	0.001	( <sup>2</sup> )
Pyrimethanil	27	1.6	0.169	0.274	1.6
Streptomycin	11	1.9	0.085	0.158	0.4
Sulfur	4	1.6	1.816	2.824	2.5
Thiophanate-methyl	51	5.5	0.204	1.129	12.6
Thiram	18	5.1	1.465	7.419	29.9
Trifloxystrobin	17	3.3	0.038	0.128	0.5
Ziram	25	4.6	1.661	7.651	41.5

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
Pennsylvania, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Other Chemicals					
Benzyladenine	8	1.4	0.034	0.049	0.1
Butenoic Acid Hydro.	1	1.0	0.072	0.074	( <sup>2</sup> )
Ethephon	23	2.0	0.191	0.380	1.9
Gibberellic acid	1	1.7	0.019	0.033	( <sup>2</sup> )
Gibberellins A4A7	4	1.6	0.010	0.016	( <sup>2</sup> )
NAA	20	1.2	0.013	0.016	0.1
Prohexadione calcium	1	3.0	0.093	0.275	0.1

<sup>1</sup> Bearing acreage in 2005 for Pennsylvania was 21,800 acres.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Apples: Agricultural Chemical Applications,  
Washington, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	9	1.5	0.948	1.379	18.5
Carfentrazone-ethyl	*	1.2	0.026	0.032	( <sup>2</sup> )
Diuron	2	1.6	1.501	2.379	8.1
Glufosinate-ammonium	1	1.1	0.843	0.908	1.3
Glyphosate iso. salt	37	1.8	0.997	1.752	101.1
Norflurazon	10	1.6	2.078	3.267	48.2
Oryzalin	1	1.2	2.778	3.376	6.6
Oxyfluorfen	2	1.0	0.832	0.838	2.3
Paraquat	17	1.2	0.833	0.984	26.5
Pendimethalin	1	1.0	2.136	2.158	1.9
Simazine	9	1.4	1.297	1.776	23.9
<b>Insecticides</b>					
Abamectin	2	1.1	0.013	0.014	( <sup>2</sup> )
Acetamiprid	41	1.2	0.128	0.149	9.4
Azadirachtin	2	1.1	0.033	0.037	0.1
Azinphos-methyl	72	1.8	0.965	1.752	196.4
Benzoic acid	28	1.2	0.233	0.277	12.1
Bifenazate	6	1.0	0.408	0.419	3.8
Bt subsp. kurstaki	18	1.3	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Carbaryl	71	1.4	1.327	1.919	210.1
Chlorpyrifos	58	1.1	1.849	2.084	186.7
Clofentezine	10	1.0	0.173	0.179	2.7
Cyd-X Granulo. Viru <sup>4</sup>	9	1.5			
Diazinon	5	1.0	1.577	1.636	13.3
Endosulfan	10	1.1	1.753	1.917	30.8
Etoxazole	1	1.0	0.084	0.087	0.2
Fenbutatin-oxide	1	1.1	0.665	0.722	1.4
Fenpropathrin	*	1.5	0.357	0.525	0.3
Fenpyroximate	3	1.0	0.072	0.075	0.4
Formetanate hydro.	13	1.1	0.722	0.772	15.6
Hexythiazox	4	1.0	0.147	0.148	1.0
Imidacloprid	36	1.4	0.059	0.081	4.6

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
Washington, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Insecticides (continued)</b>					
Kaolin	10	1.3	32.032	40.430	597.2
Lambda-cyhalothrin	3	1.7	0.039	0.067	0.4
Novaluron	12	1.2	0.176	0.211	4.0
Petroleum distillate	64	2.2	14.329	31.548	3,133.6
Phosmet	15	1.4	2.775	3.758	87.1
Potassium salts	1	1.2	7.407	8.801	10.5
Pyridaben	15	1.5	0.252	0.380	8.6
Pyriproxyfen	4	1.1	0.086	0.091	0.6
Spinosad	62	1.3	0.113	0.152	14.6
Thiacloprid	2	1.1	0.192	0.217	0.6
Thiamethoxam	1	1.0	0.080	0.083	0.1
<b>Fungicides</b>					
Bacillus pumilus	2	1.6	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Boscalid	16	1.0	0.013	0.013	0.3
Calcium polysulfide	33	1.4	17.302	24.420	1,235.8
Captan	1	1.2	3.605	4.447	9.8
Copper hydroxide	14	1.0	2.456	2.472	53.1
Copper oxide	*	2.5	3.577	8.989	4.4
Fenarimol	24	1.2	0.072	0.088	3.3
Fosetyl-al	4	1.1	2.421	2.591	14.5
Kresoxim-methyl	10	1.1	0.143	0.153	2.3
Mancozeb	20	1.2	3.848	4.495	139.4
Maneb	1	1.1	3.129	3.531	7.7
Mefenoxam	*	1.0	0.371	0.378	0.2
Myclobutanil	51	1.3	0.119	0.156	12.5
Oxytetracycline	20	1.1	0.184	0.211	6.4
PCNB	1	1.0	0.057	0.057	0.1
Potassium bicarbon.	1	1.1	2.282	2.432	5.6
Pseudomonas fluores.	4	1.2	0.295	0.356	2.0
Pyraclostrobin	16	1.0	0.001	0.001	( <sup>2</sup> )
Streptomycin	3	1.0	0.222	0.226	1.2
Sulfur	47	1.3	7.030	8.995	656.2

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
Washington, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Fungicides (continued)</b>					
Thiophanate-methyl	8	1.0	0.930	0.931	11.4
Thiram	1	1.3	3.741	4.861	10.4
Triadimefon	4	1.1	0.189	0.213	1.3
Trifloxystrobin	22	1.2	0.065	0.077	2.6
Triflumizole	57	1.4	0.286	0.415	36.5
Ziram	8	1.1	4.754	4.993	60.4
<b>Other Chemicals</b>					
Benzyladenine	31	1.1	0.041	0.045	2.1
Butenoic Acid Hydro.	13	1.0	0.084	0.087	1.8
Cytokinins	3	1.4	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Dodecadien-1-ol	4	1.3	0.199	0.264	1.8
Dodecanol	1	1.2	0.019	0.022	( <sup>2</sup> )
Ethephon	39	1.2	0.595	0.719	43.2
Gibberellic acid	2	1.1	0.023	0.026	0.1
Gibberellins A4A7	24	1.1	0.028	0.031	1.1
NAA	28	1.2	0.038	0.045	2.0
NAA, Potassium salt	19	1.1	0.024	0.027	0.8
NAD	13	1.1	0.048	0.050	1.0
Octadecadien (E,Z)	11	1.0	0.111	0.116	2.1
Octadecadien (Z,Z)	11	1.0	1.553	1.624	28.8
Prohexadione calcium	25	1.2	0.240	0.288	11.0
Tetradecanol	1	1.2	0.004	0.005	( <sup>2</sup> )
Zinc phosphide	3	1.8	0.089	0.160	0.6

\* Area applied is less than 0.5 percent.

<sup>1</sup> Bearing acreage in 2005 for Washington was 155,000 acres.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

<sup>4</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.



**Apples: Agricultural Chemical Applications,  
Wisconsin, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Glyphosate iso. salt	30	1.2	1.127	1.344	2.4
Paraquat	7	1.2	0.514	0.628	0.3
Simazine	29	1.0	1.987	1.987	3.4
<b>Insecticides</b>					
Acetamiprid	6	1.3	0.110	0.144	0.1
Azinphos-methyl	33	2.6	0.590	1.561	3.0
Carbaryl	29	1.4	0.795	1.132	1.9
Chlorpyrifos	4	1.3	0.436	0.571	0.1
Diazinon	3	1.9	0.685	1.306	0.2
Esfenvalerate	17	1.1	0.054	0.059	0.1
Hexythiazox	4	1.0	0.111	0.111	( <sup>2</sup> )
Imidacloprid	3	1.4	0.059	0.083	( <sup>2</sup> )
Indoxacarb	21	1.0	0.082	0.086	0.1
Malathion	2	1.7	0.257	0.430	0.1
Oxamyl	1	1.2	0.537	0.644	( <sup>2</sup> )
Petroleum distillate	22	1.5	8.905	13.387	17.5
Petroleum oil	4	1.2	8.201	10.142	2.6
Phosmet	77	4.6	1.151	5.339	24.0
Pyridaben	6	1.6	0.238	0.374	0.1
<b>Fungicides</b>					
Benomyl	2	2.9	0.078	0.229	( <sup>2</sup> )
Captan	88	6.4	1.807	11.477	58.8
Copper hydroxide	4	1.2	0.977	1.167	0.3
Copper oxychlor. sul.	6	1.0	1.873	1.873	0.6
Copper sulfate	4	1.0	0.537	0.537	0.1
Cyprodinil	6	2.2	0.126	0.275	0.1
Fenarimol	12	1.7	0.042	0.071	( <sup>2</sup> )
Kresoxim-methyl	16	1.8	0.124	0.227	0.2
Mancozeb	44	2.3	2.227	5.040	13.0
Maneb	3	2.3	2.466	5.555	1.1
Myclobutanil	53	2.1	0.104	0.219	0.7

See footnote(s) at end of table.

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**Apples: Agricultural Chemical Applications,  
Wisconsin, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Streptomycin	19	1.7	0.229	0.392	0.4
Thiophanate-methyl	22	3.0	0.436	1.299	1.7
Trifloxystrobin	43	2.1	0.063	0.132	0.3
Other Chemicals					
Butenoic Acid Hydro.	8	1.0	0.079	0.079	( <sup>2</sup> )
NAA	15	1.3	0.010	0.013	( <sup>2</sup> )
Prohexadione calcium	5	1.1	0.122	0.130	( <sup>2</sup> )

<sup>1</sup> Bearing acreage in 2005 for Wisconsin was 5,800 acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Apricots: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	CA
<b>Herbicides</b>		
2,4-D, dimeth. salt	P	P
Glyphosate amm. salt	*	*
Glyphosate iso. salt	P	P
Norflurazon	*	*
Oryzalin	*	*
Oxyfluorfen	P	P
Paraquat	P	P
Pendimethalin	*	*
<b>Insecticides</b>		
Benzoic acid	*	*
Bt subsp. kurstaki	P	P
Carbaryl	*	*
Diazinon	P	P
Diflubenzuron	*	*
Esfenvalerate	P	P
Hexythiazox	*	*
Lambda-cyhalothrin	P	P
Neem oil, clar. hyd.	P	P
Petroleum distillate	P	P
Phosmet	*	*
Potassium salts	*	*
Propargite	*	*
Spinosad	P	P
<b>Fungicides</b>		
Azoxystrobin	P	P
Bacillus subtilis	*	*
Boscalid	P	P
Captan	*	*
Chlorothalonil	*	*
Copper hydroxide	P	P
Copper oxide	P	P
Cyprodinil	P	P
Iprodione	P	P
Propiconazole	P	P
Pyraclostrobin	P	P
Thiophanate-methyl	*	*
Trifloxystrobin	*	*
Ziram	P	P
<b>Other Chemicals</b>		
Decenol	*	*
Decenyl acetate	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Apricots: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
California, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide <sup>1</sup>		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA <sup>2</sup>	14,500	46	17.9	74	148.6	80	54.6		

<sup>1</sup> Total Applied excludes Bt's (*Bacillus thuringiensis*) and other biologicals.

Quantities are not available because amounts of active ingredient are not comparable between products.

<sup>2</sup> Insufficient reports to publish data for one or more pesticide classes.

**Apricots: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Appli-cations	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	8	1.3	0.615	0.792	0.9
Glyphosate iso. salt	43	1.4	0.885	1.203	7.5
Oxyfluorfen	29	1.2	0.518	0.646	2.7
Paraquat	4	1.1	0.859	0.965	0.5
<b>Insecticides</b>					
Bt subsp. kurstaki	5	2.0	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Diazinon	3	1.1	1.728	1.934	0.9
Esfenvalerate	26	1.4	0.044	0.061	0.2
Lambda-cyhalothrin	38	1.9	0.025	0.048	0.3
Neem oil, clar. hyd.	7	2.1	4.076	8.444	8.0
Petroleum distillate	22	1.7	25.312	42.505	137.5
Spinosad	12	1.2	0.101	0.122	0.2
<b>Fungicides</b>					
Azoxystrobin	30	1.0	0.209	0.209	0.9
Boscalid	10	1.9	0.011	0.021	( <sup>3</sup> )
Copper hydroxide	56	1.5	2.534	3.761	30.5
Copper oxide	6	1.1	3.732	4.280	4.0
Cyprodinil	52	1.1	0.247	0.266	2.0
Iprodione	40	1.1	0.695	0.755	4.4
Propiconazole	23	1.3	0.115	0.150	0.5
Pyraclostrobin	10	1.9	0.001	0.001	( <sup>3</sup> )
Ziram	12	1.7	3.683	6.164	11.0

<sup>1</sup> Total acreage in 2005 for California was 14,500 acres.

Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Avocados: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	CA
<b>Herbicides</b>		
Glyphosate amm. salt	*	*
Glyphosate iso. salt	P	P
Oxyfluorfen	*	*
Paraquat	*	*
Simazine	P	P
Sulfosate	*	*
<b>Insecticides</b>		
Abamectin	P	P
Bt subsp. kurstaki	*	*
Chlorpyrifos	*	*
Malathion	*	*
Petroleum distillate	P	P
Sabadilla	P	P
Spinosad	P	P
<b>Fungicides</b>		
Fosetyl-al	*	*
Mefenoxam	*	*
<b>Other Chemicals</b>		
Diphacinone	P	P
Metaldehyde	P	P
Strychnine	P	P
Sulfaquinoxaline	*	*
Warfarin	*	*
Zinc phosphide	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Avocados: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
California, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA <sup>1</sup>	62,000	33	44.8	40	299.2			24	0.8

<sup>1</sup> Insufficient reports to publish data for one or more pesticide classes.

**Avocados: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Appli-cations	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Glyphosate iso. salt	31	4.0	0.458	1.846	35.8
Simazine	5	1.4	1.741	2.475	7.6
Insecticides					
Abamectin	33	1.2	0.017	0.021	0.4
Petroleum distillate	15	1.2	26.452	32.162	297.7
Sabadilla	3	1.2	0.028	0.033	0.1
Spinosad	5	1.2	0.147	0.183	0.6
Other Chemicals					
Diphacinone	4	1.9	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Metaldehyde	2	1.6	0.492	0.809	0.8
Strychnine	19	1.5	0.001	0.001	( <sup>3</sup> )

<sup>1</sup> Total acreage in 2005 for California was 62,000 acres. Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Blackberries: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	OR
<b>Herbicides</b>		
2,4-D, dimeth. salt	*	*
Carfentrazone-ethyl	P	P
Clethodim	*	*
Dichlobenil	*	*
Diuron	P	P
Glyphosate iso. salt	P	P
Napropamide	*	*
Norflurazon	P	P
Oryzalin	P	P
Oxyfluorfen	P	P
Paraquat	P	P
Pronamide	*	*
Sethoxydim	*	*
Simazine	P	P
Sulfentrazone	*	*
Terbacil	P	P
<b>Insecticides</b>		
Acetamiprid	*	*
Azinphos-methyl	*	*
Bifenthrin	P	P
Bt subsp. kurstaki	P	P
Carbaryl	P	P
Diazinon	P	P
Diflubenzuron	*	*
Endosulfan	*	*
Esfenvalerate	P	P
Etoxazole	*	*
Fenamiphos	*	*
Malathion	P	P
Petroleum distillate	P	P
Piperonyl butoxide	*	*
Pyrethrins	*	*
Spinosad	*	*
Tebufozide	*	*

See footnote(s) at end of table.

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**Blackberries: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States	
	ALL	OR
<b>Fungicides</b>		
Azoxystrobin	P	P
Basic copper sulfate	*	*
Boscalid	P	P
Calcium polysulfide	P	P
Captan	P	P
Copper amm. complex	P	P
Copper hydroxide	P	P
Copper sulfate	*	*
Cyprodinil	P	P
Fenhexamid	P	P
Fludioxonil	P	P
Fosetyl-al	*	*
Iprodione	P	P
Mefenoxam	*	*
Myclobutanil	P	P
Phosphorous acid	*	*
Pyraclostrobin	P	P
Sulfur	P	P
<b>Other Chemicals</b>		
Hydrogen peroxide	*	*
Metaldehyde	*	*
Tetradecen-1-OL (Z)	*	*
Tetradecen-1-yl (E)	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.



**Blackberries: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Oregon, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
OR <sup>1</sup>	6,400	71	11.9	65	7.8	71	76.9		

<sup>1</sup> Insufficient reports to publish data for one or more pesticide classes.

**Blackberries: Agricultural Chemical Applications,  
Oregon, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Appli-cations	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Carfentrazone-ethyl	24	1.6	0.048	0.075	0.1
Diuron	40	1.0	1.332	1.368	3.5
Glyphosate iso. salt	4	1.0	1.323	1.328	0.3
Norflurazon	3	1.0	0.859	0.859	0.2
Oryzalin	14	1.0	2.796	2.902	2.6
Oxyfluorfen	7	1.1	0.229	0.257	0.1
Paraquat	34	1.3	0.524	0.658	1.4
Simazine	26	1.2	1.498	1.759	2.9
Terbacil	2	1.0	0.425	0.425	0.1
<b>Insecticides</b>					
Bifenthrin	20	1.0	0.117	0.117	0.2
Bt subsp. kurstaki	8	1.3	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Carbaryl	24	1.2	1.267	1.517	2.3
Diazinon	11	1.2	1.551	1.826	1.3
Esfenvalerate	15	1.0	0.043	0.043	( <sup>3</sup> )
Malathion	1	1.6	1.169	1.850	0.2
Petroleum distillate	6	1.2	6.282	7.719	3.1
<b>Fungicides</b>					
Azoxystrobin	7	2.5	0.183	0.457	0.2
Boscalid	30	1.4	0.019	0.026	0.1
Calcium polysulfide	39	1.4	14.210	19.550	49.2
Captan	25	1.2	1.879	2.302	3.7
Copper amm. complex	4	1.0	1.267	1.267	0.3
Copper hydroxide	9	1.1	1.182	1.283	0.7
Cyprodinil	33	1.5	0.294	0.427	0.9
Fenhexamid	11	1.6	1.265	2.038	1.4
Fludioxonil	33	1.5	0.196	0.284	0.6
Iprodione	3	1.0	0.686	0.686	0.1
Myclobutanil	9	1.1	0.063	0.067	( <sup>3</sup> )
Pyraclostrobin	32	1.4	0.017	0.023	( <sup>3</sup> )
Sulfur	23	1.8	6.322	11.490	16.6

<sup>1</sup> Bearing acreage in 2005 for Oregon was 6,400 acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Blueberries: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States					
	ALL	GA	MI	NJ	NC	OR
<b>Herbicides</b>						
2,4-D, 2-EHE	*					*
2,4-D, dimeth. salt	P	*			*	P
Atrazine	*	*				
Carfentrazone-ethyl	*		*			*
Clethodim	*	*				*
Dicamba, dimet. salt	*					*
Dichlobenil	*			*		P
Diuron	P	P	P	P		P
Fluazifop-P-butyl	*	*				*
Glufosinate-ammonium	P	P	*			*
Glyphosate amm. salt	*				*	
Glyphosate iso. salt	P	P	P	*	*	P
Hexazinone	P	*	P		P	*
Isoxaben	*		*	*		*
MCPP, DMA salt	*					*
Napropamide	*					*
Norflurazon	P	*	P	P	*	P
Oryzalin	P	P	*	P	*	P
Paraquat	P	P	P	*	P	*
Pendimethalin	*			*		
Prometryn	*				*	
Pronamide	*		*			
Sethoxydim	P	P	*	*	P	*
Simazine	P	P	P	P	*	*
Terbacil	P		P	P	P	*
<b>Insecticides</b>						
Azinphos-methyl	P		P	*	*	
Bt subsp. kurstaki	P		*	*		P
Carbaryl	P	P	P	*	P	*
Diazinon	P	P		P		P
Endosulfan	*		*		*	
Esfenvalerate	P		P	P	P	P
Fenpropathrin	*		*			
Imidacloprid	P		P	*		*
Malathion	P	P	P	P	P	P
Methomyl	P		P	*		*
Petroleum distillate	P			*	*	P
Phosmet	P	*	P	P	*	
Piperonyl butoxide	*			*		
Propargite	*				*	
Pyrethrins	*			*		

See footnote(s) at end of table.

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**Blueberries: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States					
	ALL	GA	MI	NJ	NC	OR
<b>Insecticides (continued)</b>						
Pyriproxyfen	*		*	*		*
Spinosad	P	*		*	*	*
Tebufenozide	P		P			
Thiamethoxam	*		*			*
<b>Fungicides</b>						
Azoxystrobin	P		P	P	*	*
Basic copper sulfate	*					*
Benomyl	P	P		*	*	
Boscalid	P	*	P	P	*	P
Calcium polysulfide	P		P	P		P
Captan	P	P	P	P	P	P
Chlorothalonil	P	P	P	*		*
Copper amm. complex	*					*
Copper hydroxide	P					P
Copper resinate	*					*
Copper sulfate	*				*	P
Cyprodinil	P	*	*	*		P
Fenbuconazole	P	P	P	P	P	P
Fenhexamid	P	P		*		*
Fludioxonil	P	*	*	*		P
Fosetyl-al	P	*	P	*		
Iprodione	P					P
Maneb	*	*				
Mefenoxam	P	*	*			P
Myclobutanil	*					*
Phosphorous acid	P		*	*		*
Pyraclostrobin	P	P	P	P	*	*
Sulfur	*		*	*		
Thiophanate-methyl	P		P			
Triforine	*	*				*
Ziram	P	*	P	P	*	P

See footnote(s) at end of table.

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**Blueberries: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States					
	ALL	GA	MI	NJ	NC	OR
Other Chemicals						
Chlorophacinone	*					*
Cyanamid	P	P				
Cytokinins	*		*			*
Ethephon	*			*		
Gibberellic acid	P	P	*	*	*	*
Hydrogen peroxide	*			*		
Metaldehyde	*		*			*
Metam-sodium	*			*		
Pelargonic acid	*					*
Zinc phosphide	P					P

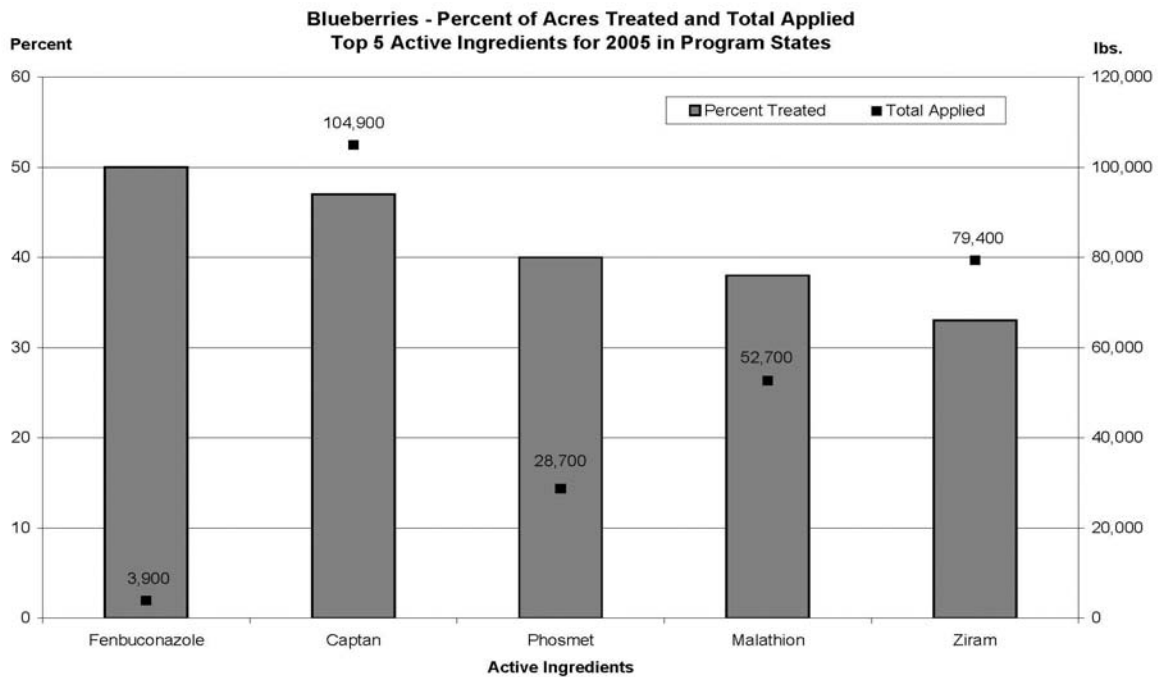
P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Blueberries: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
GA	6,000	66	11.8	79	13.1	84	19.3	47	2.6
MI	16,800	52	16.5	91	65.8	85	103.7	2	0.2
NJ	7,500	48	22.6	85	28.5	82	97.8	12	3.9
NC <sup>1</sup>	5,000	87	8.9	98	23.1	95	11.1		
OR	3,800	69	12.1	53	8.8	79	26.7	14	0.1
Total	39,100	59	71.9	85	139.3	85	258.6	13	6.9

<sup>1</sup> Insufficient reports to publish data for one or more pesticide classes.



**Blueberries: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	*	1.7	0.686	1.184	0.2
Diuron	21	1.1	1.313	1.438	11.6
Glufosinate-ammonium	2	1.8	0.521	0.933	0.8
Glyphosate iso. salt	21	1.3	0.948	1.253	10.3
Hexazinone	14	1.0	0.787	0.823	4.5
Norflurazon	14	1.0	2.243	2.281	12.7
Oryzalin	9	1.2	2.019	2.368	8.2
Paraquat	9	1.3	0.544	0.710	2.6
Sethoxydim	6	1.2	0.649	0.791	1.7
Simazine	15	1.1	1.626	1.855	10.9
Terbacil	17	1.1	0.824	0.946	6.1
<b>Insecticides</b>					
Azinphos-methyl	31	1.7	0.564	0.962	11.7
Bt subsp. kurstaki	3	2.8	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Carbaryl	17	1.4	1.396	1.997	13.1
Diazinon	20	1.6	0.772	1.248	10.0
Esfenvalerate	20	1.7	0.040	0.066	0.5
Imidacloprid	9	1.7	0.103	0.175	0.6
Malathion	38	3.4	1.047	3.554	52.7
Methomyl	20	2.0	0.642	1.311	10.1
Petroleum distillate	2	1.1	9.918	10.582	9.7
Phosmet	40	2.1	0.865	1.848	28.7
Spinosad	3	4.3	0.089	0.386	0.4
Tebufenozide	15	1.2	0.228	0.273	1.6
<b>Fungicides</b>					
Azoxystrobin	10	1.9	0.201	0.379	1.5
Benomyl	6	1.5	0.500	0.753	1.7
Boscalid	24	1.6	0.018	0.027	0.3
Calcium polysulfide	6	1.1	9.108	9.705	24.1
Captan	47	2.8	2.068	5.714	104.9
Chlorothalonil	10	1.3	2.164	2.745	10.4

See footnote(s) at end of table.

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**Blueberries: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Copper hydroxide	4	1.5	2.087	3.204	5.1
Cyprodinil	5	1.1	0.284	0.315	0.6
Fenbuconazole	50	2.2	0.092	0.199	3.9
Fenhexamid	3	1.2	0.720	0.875	1.0
Fludioxonil	5	1.1	0.189	0.210	0.4
Fosetyl-al	4	1.4	3.641	5.100	8.2
Iprodione	1	1.2	0.769	0.888	0.5
Mefenoxam	*	1.1	0.553	0.594	0.1
Phosphorous acid	1	1.0	1.807	1.807	0.4
Pyraclostrobin	33	1.8	0.060	0.107	1.4
Thiophanate-methyl	20	1.6	0.702	1.151	9.2
Ziram	33	2.2	2.793	6.194	79.4
Other Chemicals					
Cyanamid	2	1.0	3.972	3.972	2.4
Gibberellic acid	8	1.8	0.058	0.104	0.3
Zinc phosphide	1	1.1	0.117	0.129	( <sup>3</sup> )

\* Area applied is less than 0.5 percent.

<sup>1</sup> Bearing acreage in 2005 for the 5 Program States was 41,600 acres.  
States included are GA, MI, NJ, NC, and OR.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Blueberries: Agricultural Chemical Applications,  
Georgia, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Diuron	15	1.2	1.117	1.388	1.2
Glufosinate-ammonium	9	2.2	0.543	1.179	0.7
Glyphosate iso. salt	44	1.3	1.236	1.546	4.1
Oryzalin	14	1.3	1.794	2.284	1.9
Paraquat	8	1.1	0.365	0.416	0.2
Sethoxydim	14	1.1	0.643	0.713	0.6
Simazine	23	1.2	1.678	2.091	2.8
<b>Insecticides</b>					
Carbaryl	12	1.2	1.271	1.585	1.1
Diazinon	61	1.7	0.601	1.009	3.7
Malathion	63	2.2	0.931	2.073	7.8
<b>Fungicides</b>					
Benomyl	17	1.1	0.499	0.540	0.5
Captan	49	2.1	1.874	3.963	11.7
Chlorothalonil	14	1.0	2.149	2.149	1.8
Fenbuconazole	29	1.8	0.086	0.152	0.3
Fenhexamid	11	1.3	0.708	0.914	0.6
Pyraclostrobin	55	1.7	0.011	0.019	0.1
<b>Other Chemicals</b>					
Cyanamid	10	1.0	3.972	3.972	2.4
Gibberellic acid	39	1.8	0.054	0.098	0.2

<sup>1</sup> Bearing acreage in 2005 for Georgia was 6,000 acres.



**Blueberries: Agricultural Chemical Applications,  
Michigan, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Diuron	22	1.0	1.318	1.343	4.9
Glyphosate iso. salt	17	1.2	0.526	0.606	1.7
Hexazinone	7	1.1	0.631	0.697	0.8
Norflurazon	12	1.0	1.830	1.840	3.8
Paraquat	4	1.1	0.368	0.420	0.3
Simazine	14	1.0	1.480	1.522	3.5
Terbacil	12	1.0	0.531	0.535	1.1
<b>Insecticides</b>					
Azinphos-methyl	58	1.4	0.579	0.835	8.2
Carbaryl	23	1.4	1.570	2.170	8.4
Esfenvalerate	16	1.2	0.046	0.057	0.2
Imidacloprid	8	1.3	0.107	0.135	0.2
Malathion	33	2.2	1.809	3.934	21.6
Methomyl	23	1.3	0.640	0.843	3.3
Phosmet	71	2.1	0.866	1.845	22.0
Tebufenozide	34	1.2	0.228	0.273	1.6
<b>Fungicides</b>					
Azoxystrobin	4	1.2	0.179	0.217	0.1
Boscalid	16	1.3	0.018	0.024	0.1
Calcium polysulfide	5	1.2	4.292	5.067	4.6
Captan	43	2.4	2.137	5.222	37.8
Chlorothalonil	15	1.4	2.224	3.098	7.9
Fenbuconazole	60	2.0	0.092	0.186	1.9
Fosetyl-al	5	1.7	3.920	6.758	6.0
Pyraclostrobin	33	1.8	0.105	0.188	1.1
Thiophanate-methyl	47	1.6	0.702	1.151	9.2
Ziram	40	1.9	2.698	5.096	34.4

<sup>1</sup> Bearing acreage in 2005 for Michigan was 16,800 acres.

**Blueberries: Agricultural Chemical Applications,  
New Jersey, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Diuron	33	1.0	1.383	1.393	3.5
Norflurazon	41	1.0	2.578	2.647	8.2
Oryzalin	16	1.0	1.903	1.903	2.3
Simazine	15	1.0	2.356	2.399	2.6
Terbacil	44	1.2	1.012	1.211	4.0
<b>Insecticides</b>					
Diazinon	39	1.7	0.990	1.719	5.0
Esfenvalerate	9	1.4	0.046	0.067	( <sup>2</sup> )
Malathion	11	2.0	1.310	2.662	2.1
Phosmet	43	2.2	0.874	1.937	6.2
<b>Fungicides</b>					
Azoxystrobin	35	2.2	0.206	0.447	1.2
Boscalid	15	1.0	0.020	0.020	( <sup>2</sup> )
Calcium polysulfide	13	1.0	10.875	10.875	10.8
Captan	48	5.0	2.289	11.496	41.3
Fenbuconazole	27	1.4	0.091	0.130	0.3
Pyraclostrobin	16	1.0	0.004	0.004	( <sup>2</sup> )
Ziram	70	2.8	2.909	8.160	42.6

<sup>1</sup> Bearing acreage in 2005 for New Jersey was 7,500 acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Blueberries: Agricultural Chemical Applications,  
North Carolina, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Hexazinone	77	1.0	0.801	0.827	3.2
Paraquat	15	1.8	0.508	0.935	0.7
Sethoxydim	11	1.7	0.699	1.170	0.6
Terbacil	19	1.0	0.622	0.622	0.6
<b>Insecticides</b>					
Carbaryl	9	2.1	1.389	2.869	1.3
Esfenvalerate	76	2.1	0.036	0.075	0.3
Malathion	88	6.4	0.736	4.677	20.7
<b>Fungicides</b>					
Captan	66	1.8	1.485	2.619	8.6
Fenbuconazole	94	3.0	0.095	0.286	1.4

<sup>1</sup> Bearing acreage in 2005 for North Carolina was 5,000 acres.

**Blueberries: Agricultural Chemical Applications,  
Oregon, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	4	1.8	0.716	1.287	0.2
Dichlobenil	1	1.0	3.310	3.310	0.2
Diuron	27	1.5	1.323	1.932	2.0
Glyphosate iso. salt	20	1.7	0.824	1.417	1.1
Norflurazon	9	1.0	1.610	1.610	0.6
Oryzalin	33	1.3	2.226	2.884	3.6
<b>Insecticides</b>					
Bt subsp. kurstaki	20	3.2	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Diazinon	38	1.2	0.746	0.905	1.3
Esfenvalerate	11	1.0	0.049	0.050	( <sup>3</sup> )
Malathion	8	1.0	1.241	1.241	0.4
Petroleum distillate	16	1.1	10.046	10.999	6.8
<b>Fungicides</b>					
Boscalid	58	2.1	0.018	0.038	0.1
Calcium polysulfide	16	1.0	14.831	14.831	8.8
Captan	34	2.3	1.856	4.264	5.5
Copper hydroxide	42	1.5	2.087	3.204	5.1
Copper sulfate	7	1.7	2.037	3.404	0.9
Cyprodinil	32	1.2	0.298	0.346	0.4
Fenbuconazole	32	1.7	0.091	0.154	0.2
Fludioxonil	32	1.2	0.199	0.231	0.3
Iprodione	13	1.2	0.769	0.888	0.5
Mefenoxam	2	1.1	0.784	0.900	0.1
Ziram	14	1.0	2.280	2.280	1.2
<b>Other Chemicals</b>					
Zinc phosphide	7	1.1	0.117	0.129	( <sup>3</sup> )

<sup>1</sup> Bearing acreage in 2005 for Oregon was 3,800 acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Cherries, Sweet: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States				
	ALL	CA	MI	OR	WA
<b>Herbicides</b>					
2,4-D, dieth sal	P	P	*	*	*
2,4-D, dimeth. salt	P	P	P	P	P
Carfentrazone-ethyl	P				P
Clethodim	*	*			
Clopyralid	*				*
Diuron	P		*	*	*
Flumioxazin	*			*	*
Glufosinate-ammonium	*			*	
Glyphosate	*	*			*
Glyphosate amm. salt	*				*
Glyphosate iso. salt	P	P	P	P	P
Isoxaben	*				*
MSMA	*	*			
Napropamide	*			*	
Norflurazon	P	P			P
Oryzalin	P	P	*	*	P
Oxyfluorfen	P	P		P	P
Paraquat	P	P	P	P	P
Pendimethalin	P	*	*	*	P
Pronamide	*			*	
Sethoxydim	*	*			
Simazine	P	*	P	*	P
Sulfosate	*				*
Tebuthiuron	*				*
Terbacil	*		*		
Triallate	*				*
<b>Insecticides</b>					
Abamectin	*				*
Acetamiprid	*				*
Aluminum phosphide	*				*
Azadirachtin	*			*	*
Azinphos-methyl	P		P	P	P
Benzoic acid	P	P	*	*	P
Bifenazate	P				P
Bt subsp. kurstaki	P	P	*	*	P
Carbaryl	P	P	P	P	P
Chlorpyrifos	P	*	*	P	P
Clofentezine	P	P			*
Diazinon	P	P	*	*	P
Dimethoate	P			P	P
Endosulfan	P		P	P	P

See footnote(s) at end of table.

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**Cherries, Sweet: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States				
	ALL	CA	MI	OR	WA
Insecticides (continued)					
Esfenvalerate	P	P	*	*	
Ethyl parathion	*	*			
Fenamiphos	*	*			
Fenbutatin-oxide	P	P	*		P
Formetanate hydro.	*				*
Hexythiazox	P	P			P
Imidacloprid	P	P	P	P	P
Kaolin	P	P			P
Lambda-cyhalothrin	P	P	*		*
Malathion	P			P	P
Methidathion	P	P			
Methomyl	*				*
Methyl bromide	P	P			
Methyl parathion	*				*
Novaluron	*				*
Oxamyl	*				*
Permethrin	P	*	P	*	
Petroleum distillate	P	P	*	*	P
Petroleum oil	*			P	*
Phosmet	P	*	*	P	
Potassium salts	*				*
Propargite	P	P		*	*
Pyrethrins	*			*	
Pyridaben	*		*		*
Pyriproxyfen	P	*		*	*
Spinosad	P			P	P
Thiamethoxam	P	*	P	*	P

See footnote(s) at end of table.

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**Cherries, Sweet: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States				
	ALL	CA	MI	OR	WA
Fungicides					
Agrobacterium radio.	*				*
Azoxystrobin	P	*	*	*	*
Bacillus pumilus	*				*
Bacillus subtilis	*				*
Basic copper sulfate	P	*	P	P	*
Benomyl	*		*		
Boscalid	P	P	P	P	P
Calcium polysulfide	P	P	P	P	P
Captan	P	*	P	P	*
Chlorothalonil	P	*	P	*	
Copper amm. complex	*			*	
Copper chloride hyd.	*		*	*	
Copper hydroxide	P	P	P	P	P
Copper oxide	P	*		*	P
Copper oxychlo. sul.	*		*	P	
Copper oxychloride	*		P	*	
Copper sulfate	P	*	*	P	P
Cresol	*	*			
Cyprodinil	*		*		*
Dinocap	*				*
Dodine	P		*	*	*
Etridiazole	*				*
Fenarimol	P	*	*	P	P
Fenbuconazole	P	*	P	P	*
Fenhexamid	P	P			
Ferbam	*		P		*
Fosetyl-al	*	*			*
Iprodione	P	P	*	P	*
Kresoxim-methyl	*				*
Mancozeb	P			P	P
Maneb	*				*
Mefenoxam	*	*			*
Metiram	*		*		
Myclobutanil	P		P	P	P
Oxytetracycline	*				*
Phosphorous acid	*		P		*
Potassium bicarbon.	P	*		*	P
Propiconazole	P	P	P	P	P
Pyraclostrobin	P	P	P	P	P
Quintec	P	*		*	P
Streptomycin	*				*
Sulfur	P	P	P	P	P

See footnote(s) at end of table.

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**Cherries, Sweet: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States				
	ALL	CA	MI	OR	WA
<b>Fungicides (continued)</b>					
Tebuconazole	P	P	P	P	P
Thiophanate-methyl	P	*	P	P	*
Thiram	*				*
Triadimefon	*				*
Trifloxystrobin	P	*	*	P	P
Triflumizole	P	*		*	P
Xylenol	*	*			
Ziram	P	*	P	*	*
<b>Other Chemicals</b>					
Benzyladenine	*			*	*
Butenoic Acid Hydro.	*				*
Chlorophacinone	*				*
Cyanamid	P	P			
Cytokinins	P			P	P
Dichloropropene	*	*			
Diphacinone	*	*			*
Dodecadien-1-ol	*				*
E-8-Dodecenyl acetat	*	*			
Ethephon	P		*	*	P
GABA	P			*	*
Gibberellic acid	P	P	*	*	P
Gibberellins A4A7	*			*	*
Harpin protein	*		*		*
Iron phosphate	*	*			
L-Glutamic acid	P			*	*
Lactic acid	*				*
Metaldehyde	*	*	*		
Metam-sodium	*				*
Methyl anthranilate	P			P	P
NAA	*				*
NAD	*				*
Octadecadien (E,Z)	P				P
Octadecadien (Z,Z)	P				P
Prohexadione calcium	*				*
Spirodiclofen	P		P		
Strychnine	P	P		*	*
Z-8-Dodecanol	*	*			
Z-8-Dodecen acetate	*	*			
Zinc phosphide	P			*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.



**Cherries, Sweet: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide <sup>1</sup>		Other	
	<i>Acre</i> s	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	27,000	47	24.6	58	258.9	61	94.1	35	61.8
MI	8,200	39	4.3	84	17.0	86	167.3	74	2.9
OR	12,000	27	8.8	92	409.8	92	102.5	50	0.8
WA	29,000	47	30.7	95	723.6	90	468.9	55	5.8
Total	76,200	43	68.4	80	1,409.3	80	832.8	49	71.3

<sup>1</sup> Total Applied excludes Bt's (*Bacillus thuringiensis*) and other biologicals.

Quantities are not available because amounts of active ingredient are not comparable between products.

**Cherries, Sweet: Agricultural Chemical Applications,  
Program States, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dieth sal	1	1.1	0.629	0.703	0.6
2,4-D, dimeth. salt	5	1.3	0.627	0.790	3.2
Carfentrazone-ethyl	*	1.3	0.028	0.036	( <sup>2</sup> )
Diuron	*	1.1	1.606	1.725	0.4
Glyphosate iso. salt	29	1.5	0.824	1.270	27.8
Norflurazon	1	1.2	1.373	1.616	1.5
Oryzalin	6	1.3	2.195	2.775	11.9
Oxyfluorfen	12	1.2	0.400	0.479	4.3
Paraquat	20	1.4	0.585	0.805	12.4
Pendimethalin	1	1.4	2.373	3.356	3.0
Simazine	2	1.2	1.234	1.499	2.3
<b>Insecticides</b>					
Azinphos-methyl	29	1.6	0.657	1.082	23.9
Benzoic acid	14	1.1	0.236	0.271	3.0
Bifenazate	2	1.1	0.201	0.220	0.3
Bt subsp. kurstaki	4	1.6	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Carbaryl	28	1.3	1.777	2.315	50.2
Chlorpyrifos	26	1.1	1.835	2.044	40.4
Clofentezine	5	1.1	0.190	0.213	0.7
Diazinon	8	1.1	1.544	1.723	10.9
Dimethoate	7	1.0	1.109	1.164	6.0
Endosulfan	6	1.2	1.661	1.972	8.3
Esfenvalerate	17	1.9	0.050	0.095	1.2
Fenbutatin-oxide	2	1.1	0.859	0.982	1.7
Hexythiazox	3	1.4	0.166	0.234	0.4
Imidacloprid	22	1.5	0.132	0.198	3.3
Kaolin	2	1.3	31.966	41.447	62.1
Lambda-cyhalothrin	3	1.1	0.029	0.032	0.1
Malathion	12	3.3	0.855	2.801	25.9
Methidathion	1	1.2	1.071	1.301	1.2
Methyl bromide	1	1.1	47.382	50.436	26.0
Permethrin	3	1.9	0.101	0.188	0.5

See footnote(s) at end of table.

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**Cherries, Sweet: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Insecticides (continued)</b>					
Petroleum distillate	41	1.7	20.336	34.481	1,079.5
Phosmet	2	1.1	1.084	1.160	1.5
Propargite	11	1.5	1.718	2.505	21.9
Pyriproxyfen	1	1.1	0.087	0.095	0.1
Spinosad	28	1.7	0.096	0.162	3.5
Thiamethoxam	3	1.2	0.056	0.070	0.2
<b>Fungicides</b>					
Azoxystrobin	1	1.5	0.175	0.263	0.2
Basic copper sulfate	2	1.2	2.637	3.234	5.6
Boscalid	40	1.5	0.012	0.018	0.5
Calcium polysulfide	6	1.2	21.338	26.114	112.2
Captan	4	1.4	1.695	2.357	7.2
Chlorothalonil	9	2.1	2.108	4.407	28.6
Copper hydroxide	28	1.3	3.716	4.835	103.5
Copper oxide	4	1.5	5.463	8.048	22.6
Copper sulfate	3	1.5	3.049	4.650	10.7
Dodine	*	1.7	1.014	1.700	0.4
Fenarimol	3	1.3	0.078	0.101	0.2
Fenbuconazole	10	1.9	0.084	0.160	1.2
Fenhexamid	6	1.3	0.536	0.705	3.1
Iprodione	11	1.2	0.666	0.790	6.8
Mancozeb	2	1.1	1.627	1.808	2.3
Myclobutanil	20	1.4	0.117	0.167	2.6
Potassium bicarbon.	5	2.1	1.857	3.943	16.5
Propiconazole	16	1.4	0.114	0.155	1.9
Pyraclostrobin	46	1.7	0.029	0.049	1.7
Quintec	22	1.5	0.114	0.169	2.9
Sulfur	40	2.4	6.358	14.973	460.9
Tebuconazole	29	1.6	0.179	0.284	6.2
Thiophanate-methyl	2	1.3	0.786	1.039	1.4
Trifloxystrobin	5	1.1	0.095	0.109	0.5
Triflumizole	20	1.4	0.332	0.449	6.8

See footnote(s) at end of table.

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**Cherries, Sweet: Agricultural Chemical Applications,  
Program States, 2005<sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Ziram	4	1.9	2.407	4.586	14.9
Other Chemicals					
Cyanamid	3	1.2	16.557	19.487	48.6
Cytokinins	8	1.8	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Ethephon	10	1.1	0.520	0.562	4.2
GABA	1	1.6	0.081	0.133	0.1
Gibberellic acid	33	1.2	0.049	0.060	1.5
L-Glutamic acid	1	1.6	0.081	0.133	0.1
Methyl anthranilate	1	1.3	2.220	2.834	1.6
Octadecadien (E,Z)	1	1.4	0.104	0.150	0.1
Octadecadien (Z,Z)	1	1.4	1.457	2.100	0.9
Spirodiclofen	*	1.0	0.255	0.255	0.1
Strychnine	3	1.3	0.008	0.011	( <sup>2</sup> )
Zinc phosphide	1	1.8	0.084	0.155	0.1

\* Area applied is less than 0.5 percent.

<sup>1</sup> Bearing acreage in 2005 for the 4 Program States was 76,200 acres.

States included are CA, MI, OR, and WA.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Cherries, Sweet: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dieth sal	2	1.2	0.512	0.590	0.4
2,4-D, dimeth. salt	6	1.2	0.542	0.674	1.1
Glyphosate iso. salt	28	1.5	0.769	1.125	8.4
Norflurazon	2	1.1	1.065	1.208	0.8
Oryzalin	8	1.2	2.061	2.434	5.2
Oxyfluorfen	27	1.2	0.355	0.439	3.2
Paraquat	26	1.3	0.513	0.688	4.8
<b>Insecticides</b>					
Benzoic acid	19	1.1	0.167	0.191	1.0
Bt subsp. kurstaki	2	1.4	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Carbaryl	9	1.1	1.688	1.861	4.8
Clofentezine	13	1.1	0.190	0.214	0.7
Diazinon	9	1.1	1.700	1.805	4.3
Esfenvalerate	36	2.0	0.052	0.105	1.0
Fenbutatin-oxide	3	1.2	0.823	1.029	0.9
Hexythiazox	5	1.1	0.202	0.232	0.3
Imidacloprid	5	1.4	0.099	0.141	0.2
Kaolin	4	1.3	30.816	40.430	41.8
Lambda-cyhalothrin	8	1.0	0.029	0.030	0.1
Methidathion	3	1.2	1.071	1.301	1.2
Methyl bromide	2	1.1	47.382	50.436	26.0
Petroleum distillate	22	1.1	23.894	26.350	155.2
Propargite	29	1.5	1.715	2.566	19.9
<b>Fungicides</b>					
Boscalid	38	1.3	0.011	0.014	0.1
Calcium polysulfide	3	1.0	33.395	34.839	29.1
Copper hydroxide	17	1.2	3.689	4.449	20.2
Fenhexamid	16	1.3	0.536	0.705	3.1
Iprodione	26	1.2	0.669	0.798	5.5
Propiconazole	6	1.4	0.112	0.159	0.3
Pyraclostrobin	42	1.4	0.019	0.027	0.3

See footnote(s) at end of table.

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**Cherries, Sweet: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Sulfur	12	1.1	7.309	8.388	26.2
Tebuconazole	39	1.5	0.172	0.261	2.8
Other Chemicals					
Cyanamid	9	1.2	16.557	19.487	48.6
Gibberellic acid	24	1.1	0.065	0.074	0.5
Strychnine	9	1.3	0.008	0.010	( <sup>3</sup> )

<sup>1</sup> Total acreage in 2005 for California was 27,000 acres.  
Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Cherries, Sweet: Agricultural Chemical Applications,  
Michigan, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	10	1.3	0.878	1.137	0.9
Glyphosate iso. salt	31	1.1	0.726	0.777	2.0
Paraquat	10	1.1	0.453	0.510	0.4
Simazine	10	1.0	1.065	1.075	0.9
<b>Insecticides</b>					
Azinphos-methyl	68	1.8	0.521	0.913	5.1
Carbaryl	39	1.3	2.266	3.026	9.6
Endosulfan	2	1.7	0.762	1.260	0.2
Imidacloprid	5	1.4	0.068	0.093	( <sup>2</sup> )
Permethrin	27	1.9	0.099	0.191	0.4
Thiamethoxam	19	1.3	0.051	0.066	0.1
<b>Fungicides</b>					
Basic copper sulfate	5	1.0	0.541	0.541	0.2
Boscalid	19	1.5	0.010	0.016	( <sup>2</sup> )
Calcium polysulfide	9	1.7	4.604	7.836	5.8
Captan	20	1.5	1.727	2.603	4.3
Chlorothalonil	71	2.2	2.112	4.681	27.3
Copper hydroxide	6	1.3	1.960	2.560	1.2
Copper oxychloride	5	1.0	1.906	1.906	0.8
Fenbuconazole	48	2.4	0.081	0.196	0.8
Ferbam	5	2.0	1.838	3.611	1.4
Myclobutanil	4	1.3	0.114	0.149	0.1
Phosphorous acid	2	1.1	0.592	0.670	0.1
Propiconazole	20	1.5	0.102	0.151	0.3
Pyraclostrobin	19	1.5	0.001	0.001	( <sup>2</sup> )
Sulfur	69	3.9	4.839	18.816	106.3
Tebuconazole	47	2.1	0.173	0.366	1.4
Thiophanate-methyl	7	1.3	0.969	1.301	0.8
Ziram	38	1.9	2.317	4.478	13.9
<b>Other Chemicals</b>					
Spirodiclofen	3	1.0	0.255	0.255	0.1

<sup>1</sup> Bearing acreage in 2005 for Michigan was 8,200 acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Cherries, Sweet: Agricultural Chemical Applications,  
Oregon, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	6	1.2	0.428	0.521	0.4
Glyphosate iso. salt	24	1.7	0.907	1.514	4.3
Oxyfluorfen	10	1.0	0.615	0.626	0.7
Paraquat	3	1.5	0.523	0.806	0.3
<b>Insecticides</b>					
Azinphos-methyl	17	1.5	0.661	0.969	1.9
Carbaryl	18	1.5	1.575	2.409	5.2
Chlorpyrifos	53	1.1	1.906	2.070	13.3
Dimethoate	15	1.1	1.034	1.109	2.0
Endosulfan	2	1.2	1.875	2.181	0.6
Imidacloprid	7	1.4	0.098	0.134	0.1
Malathion	37	4.7	0.816	3.823	17.2
Petroleum oil	22	2.4	5.014	12.101	31.9
Phosmet	8	1.1	0.964	1.026	0.9
Spinosad	20	1.4	0.098	0.134	0.3
<b>Fungicides</b>					
Basic copper sulfate	5	1.6	1.342	2.130	1.4
Boscalid	23	1.5	0.011	0.016	( <sup>2</sup> )
Calcium polysulfide	1	1.9	11.680	21.794	3.9
Captan	8	1.3	1.497	2.005	2.0
Copper hydroxide	30	1.2	3.675	4.309	15.7
Copper oxychlor. sul.	4	1.2	3.269	3.944	1.7
Copper sulfate	7	1.7	3.857	6.415	5.2
Fenarimol	2	1.2	0.065	0.077	( <sup>2</sup> )
Fenbuconazole	28	1.4	0.089	0.124	0.4
Iprodione	6	1.1	0.675	0.715	0.5
Mancozeb	2	1.3	2.361	3.000	0.6
Myclobutanil	16	1.3	0.097	0.123	0.2
Propiconazole	23	1.5	0.111	0.167	0.5
Pyraclostrobin	29	1.7	0.034	0.058	0.2
Sulfur	42	1.7	7.211	12.280	62.6

See footnote(s) at end of table.

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**Cherries, Sweet: Agricultural Chemical Applications,  
Oregon, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Tebuconazole	38	1.3	0.180	0.243	1.1
Thiophanate-methyl	3	1.6	0.330	0.530	0.2
Trifloxystrobin	11	1.0	0.093	0.097	0.1
Other Chemicals					
Cytokinins	8	1.6	<sup>(3)</sup>	<sup>(3)</sup>	<sup>(2)</sup>
Methyl anthranilate	2	1.7	1.543	2.579	0.5

<sup>1</sup> Bearing acreage in 2005 for Oregon was 12,000 acres.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Cherries, Sweet: Agricultural Chemical Applications,  
Washington, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	3	1.3	0.703	0.911	0.8
Carfentrazone-ethyl	1	1.3	0.028	0.036	( <sup>2</sup> )
Glyphosate iso. salt	31	1.7	0.857	1.459	13.1
Norflurazon	1	1.3	1.994	2.543	0.7
Oryzalin	4	1.5	2.557	3.732	4.3
Oxyfluorfen	2	1.1	0.703	0.744	0.4
Paraquat	25	1.4	0.668	0.956	6.9
Pendimethalin	2	1.6	2.388	3.805	2.4
Simazine	2	1.5	1.354	2.014	1.3
<b>Insecticides</b>					
Azinphos-methyl	50	1.6	0.716	1.166	16.8
Benzoic acid	8	1.1	0.414	0.469	1.1
Bifenazate	5	1.1	0.201	0.220	0.3
Bt subsp. kurstaki	5	1.9	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Carbaryl	48	1.3	1.710	2.218	30.6
Chlorpyrifos	44	1.1	1.846	2.093	26.5
Diazinon	11	1.2	1.583	1.826	5.6
Dimethoate	12	1.0	1.154	1.195	4.0
Endosulfan	13	1.2	1.696	1.986	7.5
Fenbutatin-oxide	2	1.0	0.927	0.954	0.6
Hexythiazox	2	2.0	0.118	0.239	0.1
Imidacloprid	48	1.5	0.139	0.210	2.9
Kaolin	2	1.3	34.754	43.815	20.2
Malathion	17	1.9	0.947	1.814	8.8
Petroleum distillate	58	1.9	18.354	34.800	589.3
Spinosad	66	1.7	0.096	0.166	3.2
Thiamethoxam	2	1.3	0.084	0.110	0.1

See footnote(s) at end of table.

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**Cherries, Sweet: Agricultural Chemical Applications,  
Washington, 2005<sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Fungicides</b>					
Boscalid	54	1.6	0.013	0.021	0.3
Calcium polysulfide	9	1.1	26.568	29.023	73.4
Copper hydroxide	44	1.4	3.801	5.225	66.4
Copper oxide	8	1.5	5.565	8.625	20.1
Copper sulfate	4	1.5	2.407	3.705	4.2
Fenarimol	6	1.3	0.084	0.112	0.2
Mancozeb	4	1.1	1.469	1.589	1.7
Myclobutanil	46	1.5	0.119	0.174	2.3
Potassium bicarbon.	14	2.1	1.844	3.909	15.5
Propiconazole	21	1.3	0.120	0.150	0.9
Pyraclostrobin	66	1.9	0.034	0.064	1.2
Quintec	51	1.5	0.114	0.167	2.5
Sulfur	58	2.3	6.972	15.749	265.8
Tebuconazole	9	1.5	0.214	0.325	0.9
Trifloxystrobin	8	1.2	0.098	0.117	0.3
Triflumizole	41	1.3	0.335	0.451	5.3
<b>Other Chemicals</b>					
Cytokinins	18	1.8	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Ethephon	5	1.2	0.827	0.972	1.4
Gibberellic acid	45	1.3	0.044	0.057	0.7
Methyl anthranilate	1	1.1	2.822	2.976	1.1
Octadecadien (E,Z)	1	1.4	0.104	0.150	0.1
Octadecadien (Z,Z)	1	1.4	1.457	2.100	0.9

<sup>1</sup> Bearing acreage in 2005 for Washington was 29,000 acres.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Cherries, Tart: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States			
	ALL	MI	NY	WI
<b>Herbicides</b>				
2,4-D, dieth sal	*	*		
2,4-D, dimeth. salt	P	P	*	*
Diuron	P	P		
Glyphosate iso. salt	P	P	P	P
Norflurazon	*	*		
Oryzalin	*	*		
Paraquat	P	P	*	P
Simazine	P	P	*	P
Sulfosate	*		*	
Terbacil	*	*		
<b>Insecticides</b>				
Azinphos-methyl	P	P	P	P
Benzoic acid	*	*		
Bt subsp. kurstaki	*	*	*	
Carbaryl	P	P	P	P
Chlorpyrifos	P	P		
Clofentezine	P	P		
Endosulfan	*	*	*	
Esfenvalerate	P	P	*	*
Fenbutatin-oxide	*	*		
Imidacloprid	P	P	*	*
Lambda-cyhalothrin	P	P	P	
Permethrin	*	P	*	
Petroleum distillate	*	*	*	
Petroleum oil	*			*
Phosmet	P	P	*	P
Propargite	*	*		
Pyrethrins	*	*		
Pyridaben	*	*		
Rotenone	*	*		
Spinosad	P	*	*	
Thiamethoxam	P	P		

See footnote(s) at end of table.

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**Cherries, Tart: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States			
	ALL	MI	NY	WI
<b>Fungicides</b>				
Basic copper sulfate	*	*		
Boscalid	P	P		P
Calcium polysulfide	*	P		*
Captan	P	P	P	P
Chlorothalonil	P	P	P	P
Copper chloride hyd.	*	*		
Copper hydroxide	P	P	*	*
Copper oxychlor. sul.	*	*		
Copper oxychloride	*	*		
Copper sulfate	*	P	*	
Cyprodinil	*	*		*
Dodine	P	P		
Fenarimol	*	*		
Fenbuconazole	P	P	P	P
Fosetyl-al	*	*		
Iprodione	P	*	*	
Metiram	*			*
Myclobutanil	P	P	*	*
Phosphorous acid	*	*		
Propiconazole	*	P	*	
Pyraclostrobin	P	P		P
Streptomycin sulfate	*			*
Sulfur	P	P	*	*
Tebuconazole	P	P	*	*
Thiophanate-methyl	P	P	*	*
Triadimefon	*		*	
Trifloxystrobin	P	P	*	*
Ziram	P	P		
<b>Other Chemicals</b>				
Ethephon	P	P	*	*
Gibberellic acid	P	P	*	*
Metaldehyde	*	*		
Spirodiclofen	P	P		
Zinc phosphide	*		*	

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Cherries, Tart: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
		<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>
MI	27,300	44	19.2	84	51.4	88	381.9	78	4.1
NY	2,000	39	0.6	92	3.3	93	35.9	49	0.1
WI	1,800	26	0.3	74	2.6	75	11.8	60	0.1
Total	31,100	42	20.1	84	57.3	88	429.6	75	4.3

**Cherries, Tart: Agricultural Chemical Applications,  
Program States, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	10	1.1	0.789	0.867	2.6
Diuron	1	1.1	1.233	1.361	0.5
Glyphosate iso. salt	34	1.1	0.718	0.794	8.5
Paraquat	12	1.1	0.392	0.416	1.6
Simazine	16	1.0	1.277	1.299	6.4
<b>Insecticides</b>					
Azinphos-methyl	61	2.0	0.503	1.028	19.4
Carbaryl	4	1.4	2.076	2.906	3.2
Chlorpyrifos	16	1.2	0.560	0.694	3.4
Clofentezine	3	1.0	0.077	0.077	0.1
Esfenvalerate	18	1.6	0.036	0.058	0.3
Imidacloprid	4	1.0	0.100	0.100	0.1
Lambda-cyhalothrin	15	1.8	0.028	0.049	0.2
Phosmet	54	1.6	1.049	1.699	28.8
Spinosad	1	1.0	0.062	0.062	( <sup>2</sup> )
Thiamethoxam	2	1.1	0.051	0.057	( <sup>2</sup> )
<b>Fungicides</b>					
Boscalid	30	1.7	0.008	0.013	0.1
Captan	28	1.9	1.654	3.146	26.9
Chlorothalonil	77	2.9	1.750	5.163	123.8
Copper hydroxide	7	1.8	1.282	2.269	5.3
Dodine	10	1.7	0.665	1.102	3.3
Fenbuconazole	29	1.9	0.085	0.160	1.5
Iprodione	2	1.1	0.516	0.552	0.3
Myclobutanil	7	1.6	0.099	0.160	0.3
Pyraclostrobin	30	1.7	( <sup>3</sup> )	0.001	( <sup>2</sup> )
Sulfur	63	4.1	2.995	12.303	241.4
Tebuconazole	54	2.0	0.125	0.250	4.2
Thiophanate-methyl	3	1.8	0.588	1.031	0.8
Trifloxystrobin	16	1.4	0.052	0.071	0.4
Ziram	3	1.9	2.387	4.646	3.9
<b>Other Chemicals</b>					
Ethephon	69	1.1	0.169	0.186	4.0

See footnote(s) at end of table.

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**Cherries, Tart: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Other Chemicals (continued)					
Gibberellic acid	31	1.3	0.012	0.016	0.2
Spirodiclofen	2	1.0	0.187	0.187	0.1

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 31,100 acres.

States included are MI, NY, and WI.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.



**Cherries, Tart: Agricultural Chemical Applications,  
Michigan, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	11	1.1	0.782	0.860	2.6
Diuron	1	1.1	1.233	1.361	0.5
Glyphosate iso. salt	36	1.1	0.729	0.812	8.0
Paraquat	12	1.1	0.380	0.406	1.3
Simazine	18	1.0	1.278	1.301	6.3
<b>Insecticides</b>					
Azinphos-methyl	61	2.0	0.485	0.984	16.3
Carbaryl	3	1.3	2.302	2.915	2.5
Chlorpyrifos	18	1.2	0.560	0.694	3.4
Clofentezine	4	1.0	0.077	0.077	0.1
Esfenvalerate	20	1.6	0.035	0.057	0.3
Imidacloprid	4	1.0	0.097	0.097	0.1
Lambda-cyhalothrin	14	1.7	0.026	0.045	0.2
Permethrin	11	2.0	0.090	0.178	0.5
Phosmet	57	1.6	1.064	1.734	27.2
Thiamethoxam	3	1.1	0.051	0.057	( <sup>2</sup> )
<b>Fungicides</b>					
Boscalid	33	1.8	0.008	0.013	0.1
Calcium polysulfide	2	2.2	10.172	22.856	15.0
Captan	21	1.8	1.587	2.900	16.9
Chlorothalonil	76	3.0	1.698	5.151	107.5
Copper hydroxide	8	1.8	1.256	2.248	5.0
Copper sulfate	2	1.0	1.213	1.213	0.5
Dodine	11	1.7	0.665	1.102	3.3
Fenbuconazole	26	1.9	0.082	0.154	1.1
Myclobutanil	6	1.7	0.098	0.164	0.3
Propiconazole	4	1.4	0.096	0.134	0.2
Pyraclostrobin	33	1.8	( <sup>3</sup> )	0.001	( <sup>2</sup> )
Sulfur	68	4.2	2.868	11.926	221.1
Tebuconazole	58	2.0	0.125	0.251	4.0
Thiophanate-methyl	2	1.6	0.595	0.975	0.7

See footnote(s) at end of table.

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**Cherries, Tart: Agricultural Chemical Applications,  
Michigan, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Trifloxystrobin	18	1.4	0.051	0.069	0.3
Ziram	3	1.9	2.387	4.646	3.9
Other Chemicals					
Ethephon	74	1.1	0.170	0.188	3.8
Gibberellic acid	32	1.4	0.012	0.016	0.1
Spirodiclofen	2	1.0	0.187	0.187	0.1

<sup>1</sup> Bearing acreage in 2005 for Michigan was 27,300 acres.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Cherries, Tart: Agricultural Chemical Applications,  
New York, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Glyphosate iso. salt	24	1.0	0.682	0.709	0.3
<b>Insecticides</b>					
Azinphos-methyl	58	2.2	0.711	1.597	1.8
Carbaryl	7	2.4	1.411	3.362	0.5
Lambda-cyhalothrin	34	2.0	0.037	0.073	( <sup>2</sup> )
<b>Fungicides</b>					
Captan	87	2.0	2.214	4.332	7.5
Chlorothalonil	89	1.9	2.206	4.284	7.7
Fenbuconazole	87	2.1	0.092	0.189	0.3

<sup>1</sup> Bearing acreage in 2005 for New York was 2,000 acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Cherries, Tart: Agricultural Chemical Applications,  
Wisconsin, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Glyphosate iso. salt	21	1.0	0.446	0.447	0.2
Paraquat	5	1.0	0.498	0.498	( <sup>2</sup> )
Simazine	4	1.0	1.283	1.288	0.1
<b>Insecticides</b>					
Azinphos-methyl	67	2.1	0.527	1.083	1.3
Carbaryl	6	1.1	1.931	2.169	0.2
Phosmet	51	1.6	0.734	1.191	1.1
<b>Fungicides</b>					
Boscalid	25	1.5	0.012	0.017	( <sup>2</sup> )
Captan	55	2.2	1.123	2.515	2.5
Chlorothalonil	74	3.0	2.180	6.531	8.7
Fenbuconazole	24	1.3	0.100	0.131	0.1
Pyraclostrobin	25	1.5	0.001	0.001	( <sup>2</sup> )

<sup>1</sup> Bearing acreage in 2005 for Wisconsin was 1,800 acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Dates: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	CA
Herbicides		
Glyphosate iso. salt	P	P
Oxyfluorfen	*	*
Paraquat	*	*
Insecticides		
Hexythiazox	P	P
Malathion	P	P
Fungicides		
Quintec	*	*
Sulfur	*	*
Other Chemicals		
Strychnine	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Dates: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
California, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA <sup>1</sup>	4,600	23	3.0	10	1.6				

<sup>1</sup> Insufficient reports to publish data for one or more pesticide classes.

**Dates: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applica-tions	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Glyphosate iso. salt	22	4.9	0.607	2.975	3.0
Insecticides					
Hexythiazox	7	1.1	0.156	0.173	0.1
Malathion	8	1.7	2.345	4.104	1.5

<sup>1</sup> Total acreage in 2005 for California was 4,600 acres.  
Acreage includes both bearing and nonbearing acres.

**Figs: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	CA
Herbicides		
Glyphosate iso. salt	P	P
Oryzalin	P	P
Oxyfluorfen	P	P
Paraquat	*	*
Other Chemicals		
Strychnine	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Figs: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
California, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA <sup>1</sup>	12,300	70	11.6						

<sup>1</sup> Insufficient reports to publish data for one or more pesticide classes.

**Figs: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Appli-cations	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Glyphosate iso. salt	66	1.4	0.708	0.977	8.0
Oryzalin	4	1.2	1.538	1.882	1.0
Oxyfluorfen	42	1.2	0.369	0.445	2.3

<sup>1</sup> Total acreage in 2005 for California was 12,300 acres.  
Acreage includes both bearing and nonbearing acres.

**Grapefruit: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States			
	ALL	CA	FL	TX
<b>Herbicides</b>				
2,4-D, 2-EHE	*			*
2,4-D, isoprop. salt	P		P	
Bromacil	P	*	P	*
Bromoxynil heptanoat	*			*
Bromoxynil octanoate	*			*
Diuron	P	P	P	P
Glyphosate amm. salt	P		*	*
Glyphosate iso. salt	P	P	P	P
MSMA	*			*
Norflurazon	P	*	P	*
Oryzalin	*			*
Paraquat	*		P	*
Pendimethalin	*			*
Sethoxydim	*		*	*
Simazine	P	*	P	*
Sulfosate	*		*	
Terbacil	*			*
Thiazopyr	*			*
<b>Insecticides</b>				
Abamectin	P	*	P	*
Acetamiprid	*	*		
Aldicarb	P		P	P
Carbaryl	*	*	P	
Carbofuran	*		*	
Chlorpyrifos	P	*	*	P
Cyfluthrin	*	*		
Dicofol	P	*	P	*
Diflubenzuron	P	*	P	*
Dimethoate	*	*		
Ethion	*		*	
Fenbutatin-oxide	P	*	P	*
Fenpropathrin	*		*	P
Formetanate hydro.	*	*		
Imidacloprid	*		P	*
Malathion	*		*	
Oxamyl	P			P
Petroleum distillate	P	P	P	P
Petroleum oil	*		*	
Phosmet	*		*	
Propargite	*		*	
Pyridaben	P		P	P

See footnote(s) at end of table.

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**Grapefruit: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States			
	ALL	CA	FL	TX
<b>Insecticides (continued)</b>				
Pyriproxyfen	P	*	P	*
S-Methoprene	*		*	
Sabadilla	*	*		
Soybean oil	*			*
Spinosad	*	*		
Sulfur	P	P	P	P
<b>Fungicides</b>				
Azoxystrobin	P		P	
Bacillus subtilis	P		P	
Basic copper sulfate	P	P	P	
Benomyl	*		*	
Chlorothalonil	*	*		
Copper chloride hyd.	*		*	
Copper hydroxide	P	P	P	P
Copper oxide	*			*
Copper oxychloride	*		*	
Copper sulfate	P	*	P	*
Fenbuconazole	P		P	P
Ferbam	P		P	
Fosetyl-al	*		*	
Mefenoxam	*	*	P	
Phosphorous acid	P		P	
Pyraclostrobin	P		P	P
Thiophanate-methyl	*		P	*
Trifloxystrobin	P		P	P
<b>Other Chemicals</b>				
2,4-D, isoprop ester	P	P		
Bromadiolone	*	*		
Diphacinone	P	P		
Harpin protein	*		*	*
Hydrogen peroxide	*		*	
Metaldehyde	*	*		
Spirodiclofen	P			P
Strychnine	*	*		
Zinc phosphide	*	*		

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.



**Grapefruit: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide <sup>1</sup>		Other	
	<i>Acre</i> s	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	12,500	56	10.7	25	47.9	25	3.3	33	0.2
FL <sup>2</sup>	71,000	76	363.1	84	5,198.1	91	485.5		
TX	18,500	80	233.5	83	1,403.6	79	7.9	71	2.9
Total	102,000	74	607.3	76	6,649.6	80	496.7	18	4.0

<sup>1</sup> Total Applied excludes Bt's (*Bacillus thuringiensis*) and other biologicals.

Quantities are not available because amounts of active ingredient are not comparable between products.

<sup>2</sup> Insufficient reports to publish data for one or more pesticide classes.

**Grapefruit: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, isoprop. salt	13	1.5	0.248	0.373	4.8
Bromacil	27	1.7	0.889	1.509	42.0
Diuron	44	1.7	1.330	2.289	102.0
Glyphosate amm. salt	7	4.8	1.285	6.144	41.5
Glyphosate iso. salt	68	2.7	0.927	2.503	173.8
Norflurazon	11	1.8	1.538	2.779	31.5
Simazine	30	2.6	2.312	6.051	185.9
<b>Insecticides</b>					
Abamectin	58	1.4	0.010	0.014	0.8
Aldicarb	23	1.0	4.118	4.124	97.3
Chlorpyrifos	14	1.9	2.343	4.465	65.9
Dicofol	2	1.2	2.656	3.187	6.2
Diflubenzuron	7	1.1	0.130	0.146	1.0
Fenbutatin-oxide	28	1.4	0.993	1.345	38.5
Oxamyl	11	2.5	0.553	1.391	15.5
Petroleum distillate	66	2.9	29.314	83.545	5,654.9
Pyridaben	17	1.1	0.295	0.321	5.7
Pyriproxyfen	5	1.0	0.096	0.096	0.5
Sulfur	33	1.7	13.076	22.270	744.6
<b>Fungicides</b>					
Azoxystrobin	20	1.4	0.196	0.276	5.7
Bacillus subtilus <sup>2</sup>	2	1.1			
Basic copper sulfate	6	1.2	2.815	3.255	18.5
Copper hydroxide	62	4.0	1.623	6.475	412.5
Copper sulfate	11	1.5	1.068	1.584	17.1
Fenbuconazole	22	1.4	0.125	0.178	4.0
Ferbam	*	1.6	4.123	6.728	3.2
Phosphorous acid	2	1.1	1.586	1.687	3.1
Pyraclostrobin	18	1.6	0.169	0.273	4.9
Trifloxystrobin	14	1.5	0.096	0.140	2.0
<b>Other Chemicals</b>					
2,4-D, isoprop ester	1	1.1	0.069	0.078	0.1

See footnote(s) at end of table.

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**Grapefruit: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Other Chemicals (continued)					
Diphacinone	1	2.0	<sup>(3)</sup>	<sup>(3)</sup>	<sup>(4)</sup>
Spirodiclofen	13	1.3	0.169	0.226	2.9

\* Area applied is less than 0.5 percent.

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 102,000 acres.  
States included are CA, FL, and TX.

<sup>2</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

<sup>4</sup> Total applied is less than 50 lbs.

**Grapefruit: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Diuron	6	1.2	1.962	2.435	1.7
Glyphosate iso. salt	54	2.1	0.550	1.131	7.7
Insecticides					
Petroleum distillate	7	1.2	27.699	33.253	27.7
Sulfur	4	1.0	33.282	34.015	16.0
Fungicides					
Basic copper sulfate	3	1.1	2.291	2.452	0.8
Copper hydroxide	7	1.2	2.009	2.422	2.2
Other Chemicals					
2,4-D, isoprop ester	11	1.1	0.069	0.078	0.1
Diphacinone	11	2.0	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )

<sup>1</sup> Total acreage in 2005 for California was 12,500 acres.

Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Grapefruit: Agricultural Chemical Applications,  
Florida, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, isoprop. salt	18	1.5	0.248	0.373	4.8
Bromacil	21	1.7	0.710	1.221	18.5
Diuron	43	1.7	1.189	2.067	63.0
Glyphosate iso. salt	72	2.4	1.006	2.447	125.3
Norflurazon	16	1.8	1.532	2.787	31.1
Paraquat	1	1.5	0.444	0.656	0.7
Simazine	23	1.6	2.033	3.289	53.8
<b>Insecticides</b>					
Abamectin	67	1.1	0.010	0.012	0.6
Aldicarb	26	1.0	3.871	3.879	71.8
Carbaryl	4	1.0	4.106	4.106	10.9
Dicofol	2	1.2	2.721	3.288	3.7
Diflubenzuron	9	1.0	0.134	0.141	0.9
Fenbutatin-oxide	29	1.3	0.843	1.082	22.1
Imidacloprid	4	1.1	0.088	0.098	0.3
Petroleum distillate	80	2.6	29.702	77.090	4,358.5
Pyridaben	25	1.1	0.294	0.320	5.6
Pyriproxyfen	7	1.0	0.094	0.094	0.5
Sulfur	46	1.7	12.889	22.235	718.9
<b>Fungicides</b>					
Azoxystrobin	29	1.4	0.196	0.276	5.7
Bacillus subtilus <sup>2</sup>	2	1.1			
Basic copper sulfate	8	1.2	2.844	3.304	17.7
Copper hydroxide	83	4.2	1.633	6.923	406.3
Copper sulfate	13	1.6	1.181	1.859	16.7
Fenbuconazole	25	1.5	0.124	0.191	3.3
Ferbam	1	1.6	4.123	6.728	3.2
Mefenoxam	5	1.1	1.305	1.417	4.7
Phosphorous acid	3	1.1	1.586	1.687	3.1
Pyraclostrobin	21	1.7	0.170	0.289	4.2
Thiophanate-methyl	6	1.5	1.169	1.755	7.7
Trifloxystrobin	8	1.4	0.075	0.103	0.6

<sup>1</sup> Bearing acreage in 2005 for Florida was 71,000 acres.

<sup>2</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.

**Grapefruit: Agricultural Chemical Applications,  
Texas, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Diuron	72	1.7	1.638	2.790	37.3
Glyphosate iso. salt	62	4.3	0.831	3.570	40.8
<b>Insecticides</b>					
Aldicarb	27	1.0	5.026	5.026	25.4
Chlorpyrifos	73	2.0	2.342	4.661	62.9
Fenpropathrin	4	1.0	0.397	0.397	0.3
Oxamyl	60	2.5	0.553	1.391	15.5
Petroleum distillate	56	4.4	28.085	123.178	1,268.7
Pyridaben	1	1.0	0.411	0.411	0.1
Sulfur	3	1.1	14.133	15.305	9.7
<b>Fungicides</b>					
Copper hydroxide	22	1.0	0.953	0.959	4.0
Fenbuconazole	27	1.0	0.127	0.130	0.7
Pyraclostrobin	19	1.2	0.165	0.202	0.7
Trifloxystrobin	46	1.5	0.108	0.164	1.4
<b>Other Chemicals</b>					
Spirodiclofen	70	1.3	0.169	0.226	2.9

<sup>1</sup> Bearing acreage in 2005 for Texas was 18,500 acres.

**Grapes, All: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States			
	ALL	CA	NY	WA
Herbicides				
2,4-D, dimeth. salt	*	P		*
Atrazine	*			*
Butylate	*			*
Carfentrazone-ethyl	P			P
DCPA	*		*	
Dicamba, dimet. salt	*		*	
Dichlobenil	*	*		
Diquat dibromide	*	*		
Diuron	P	P	*	*
Fluazifop-P-butyl	*	*		
Flumioxazin	P	P		P
Glufosinate-ammonium	P	P	*	*
Glyphosate	*	*		
Glyphosate amm. salt	P	*	P	*
Glyphosate iso. salt	P	P	P	P
Isoxaben	*	*		
Napropamide	*	*	*	
Norflurazon	P	P	P	P
Oryzalin	P	P	P	P
Oxyfluorfen	P	P	*	*
Paraquat	P	P	P	P
Pendimethalin	*	P	*	
Sethoxydim	*	P	*	
Simazine	P	P	P	P
Sulfosate	*	*	P	
Thiazopyr	*	*		
Trifluralin	P	P		

See footnote(s) at end of table.

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**Grapes, All: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States			
	ALL	CA	NY	WA
Insecticides				
Abamectin	*	P		*
Acetamiprid	P	P	*	*
Aluminum phosphide	*			*
Azadirachtin	*	*		*
Azinphos-methyl	*		*	*
Benzoic acid	P	P		
Bifenazate	P	P	*	*
Bifenthrin	*		*	P
Boric acid	*	*		
Bt subsp. kurstaki	*	P	*	
Buprofezin	P	P		P
Carbaryl	P	P	P	P
Carbofuran	*	*		
Chlorpyrifos	P	P		P
Clofentezine	*	*		
Cryolite	P	P		
Diazinon	*	P		*
Dicofol	*	P	*	
Dimethoate	P	P	*	*
Dinotefuran	*			*
Fenamiphos	P	P		
Fenbutatin-oxide	*			*
Fenpropathrin	P	P	P	P
Fenpyroximate	*	P		*
Imidacloprid	P	P	*	*
Kaolin	*	P		*
Lambda-cyhalothrin	*		*	
Malathion	P	*		*
Methomyl	*	P		*
Myrothecium verruc.	P	P		
Permethrin	*			*
Petroleum distillate	P	P	P	P
Petroleum oil	*			*
Phosmet	P	P	*	*
Potassium salts	*	*		*
Propargite	*	P		*
Pyrethrins	P	P		
Pyridaben	P	P		
Spinosad	P	P		P
Tebufenozide	*		*	

See footnote(s) at end of table.

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**Grapes, All: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States			
	ALL	CA	NY	WA
Fungicides				
Azoxystrobin	P	P	*	*
Bacillus pumilus	*		*	*
Bacillus subtilis	P	P	*	*
Basic copper sulfate	P	P	*	*
Benomyl	*	*		
Boscalid	P	P	P	P
Calcium polysulfide	P	P		P
Captan	P	P	P	
Chlorothalonil	*		*	
Copper hydroxide	P	P	*	*
Copper oxide	P	P		
Copper oxychloro. sul.	*	P		*
Copper oxychloride	*	*	*	
Copper resinate	*	*	*	
Copper sulfate	*		*	
Cresol	*	*		
Cyprodinil	P	P	P	P
Dicloran	*	P		*
Fenarimol	P	P	P	P
Fenbuconazole	*		*	
Fenhexamid	P	P	P	P
Fosetyl-al	*		*	
Iprodione	*	P	*	
Kresoxim-methyl	P	P	P	P
Mancozeb	P	P	P	*
Maneb	P	*	P	*
Mefenoxam	P		P	
Myclobutanil	P	P	P	P
Phosphorous acid	P		P	
Potassium Phosphate	P		P	
Potassium bicarbon.	P	P	*	*
Pyraclostrobin	P	P	P	P
Pyrimethanil	P	*	*	P
Quintec	P	P	P	P
Streptomycin	*			*
Sulfur	P	P	P	P
Tebuconazole	P	P	P	P
Thiophanate-methyl	*	P	*	
Triadimefon	*	*		
Trifloxystrobin	P	P	P	P
Triflumizole	P	P	*	P
Vinclozolin	*			*

See footnote(s) at end of table.

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**Grapes, All: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States			
	ALL	CA	NY	WA
Fungicides (continued)				
Xylenol	*	*		
Ziram	P	P	P	
Other Chemicals				
Benzyladenine	*			*
Capsaicin	*			*
Chlorophacinone	*	*		
Cyanamid	P	P		
Cytokinins	*			*
Dichloropropene	P	P		
Diphacinone	*	*		
E-8-Dodecenyl acetat	*		*	
Ethephon	*	P		*
Farnesol	*	*		
GABA	*	*		*
Gibberellic acid	*	P		*
Gibberellins A4A7	*			*
Hydrogen peroxide	*		*	
Iron phosphate	*	*		
L-Glutamic acid	*	*		*
Mepiquat chloride	*		*	
Metam-sodium	*	*		*
NAA, Potassium salt	*			*
Nerolidol	*	*		
Prohexadione calcium	*			*
Sodium tetrathiocarb	P	P		
Strychnine	*	P		*
Tetradecen-1-OL (Z)	P	P		
Tetradecen-1-yl (E)	P	P		
Z-8-Dodecanol	*		*	
Z-8-Dodecen acetate	*		*	
Zinc phosphide	*	*	*	

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Grapes, All: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide <sup>1</sup>		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	800,000	56	1,028.5	41	1,245.4	77	30,031.0	16	1,562.8
NY	31,000	61	67.2	76	97.1	92	394.3	3	5.9
WA	54,000	64	91.9	57	162.9	57	142.8	9	0.9
Total	885,000	57	1,187.6	43	1,505.4	77	30,568.1	15	1,569.6

<sup>1</sup> Total Applied excludes Bt's (*Bacillus thuringiensis*) and other biologicals.

Quantities are not available because amounts of active ingredient are not comparable between products.

**Grapes, All: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Carfentrazone-ethyl	*	1.6	0.028	0.046	0.1
Diuron	5	1.1	0.817	0.895	37.2
Flumioxazin	3	1.6	0.148	0.240	7.3
Glufosinate-ammonium	3	1.1	0.344	0.373	9.5
Glyphosate amm. salt	1	1.2	0.365	0.419	3.1
Glyphosate iso. salt	44	1.4	0.816	1.170	451.4
Norflurazon	3	1.1	0.851	0.946	21.2
Oryzalin	8	1.1	1.637	1.780	133.4
Oxyfluorfen	23	1.2	0.437	0.532	107.9
Paraquat	17	1.4	0.551	0.760	115.7
Simazine	20	1.1	1.177	1.321	229.4
Trifluralin	1	1.2	1.084	1.320	9.4
<b>Insecticides</b>					
Acetamiprid	1	1.2	0.040	0.047	0.5
Benzoic acid	7	1.2	0.170	0.203	13.1
Bifenazate	5	1.1	0.436	0.499	22.1
Buprofezin	1	1.1	0.502	0.538	5.8
Carbaryl	2	1.3	1.591	2.003	32.3
Chlorpyrifos	5	1.2	1.913	2.387	106.8
Cryolite	4	1.2	5.261	6.483	230.8
Dimethoate	1	1.2	0.990	1.176	11.2
Fenamiphos	1	1.3	1.887	2.361	19.0
Fenpropathrin	8	1.2	0.218	0.259	19.2
Imidacloprid	8	1.1	0.041	0.046	3.2
Malathion	*	1.9	1.178	2.240	5.0
Myrothecium verruc.	*	1.1	10.963	12.401	11.9
Petroleum distillate	9	1.8	5.753	10.491	847.7
Phosmet	*	1.7	1.444	2.442	8.3
Pyrethrins	1	2.0	0.029	0.059	0.5
Pyridaben	1	1.1	0.347	0.376	4.7
Spinosad	4	1.1	0.092	0.103	3.6

See footnote(s) at end of table.

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**Grapes, All: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Fungicides</b>					
Azoxystrobin	3	1.4	0.200	0.273	7.8
Bacillus subtilis <sup>2</sup>	2	1.2			
Basic copper sulfate	*	2.1	1.286	2.671	6.4
Boscalid	20	1.3	0.011	0.015	2.6
Calcium polysulfide	3	1.1	7.630	8.647	197.7
Captan	2	1.3	1.606	2.088	36.2
Copper hydroxide	24	1.7	0.618	1.035	216.9
Copper oxide	9	1.8	0.755	1.386	113.4
Cyprodinil	9	1.2	0.423	0.504	40.1
Fenarimol	11	1.3	0.032	0.041	4.0
Fenhexamid	5	1.3	0.474	0.595	26.6
Kresoxim-methyl	6	1.2	0.123	0.145	8.1
Mancozeb	8	1.8	1.859	3.341	232.0
Maneb	*	1.2	2.211	2.736	8.2
Mefenoxam	*	1.2	0.097	0.113	0.3
Myclobutanil	4	2.6	0.070	0.184	5.7
Phosphorous acid	*	2.1	1.398	2.910	4.1
Potassium Phosphate	*	1.4	5.641	8.072	35.2
Potassium bicarbon.	7	1.4	2.871	3.880	255.3
Pyraclostrobin	20	1.3	0.001	0.001	0.1
Pyrimethanil	*	1.4	0.483	0.670	0.5
Quintec	9	1.2	0.085	0.104	8.1
Sulfur	69	5.5	8.691	47.935	29,051.5
Tebuconazole	17	1.4	0.112	0.161	24.0
Trifloxystrobin	21	1.2	0.068	0.083	15.3
Triflumizole	8	1.2	0.170	0.206	15.1
Ziram	3	1.2	2.822	3.387	76.3
<b>Other Chemicals</b>					
Cyanamid	1	1.1	14.152	15.954	81.4
Dichloropropene	*	1.0	295.338	299.902	996.6
Sodium tetrathiocarb	1	1.3	30.682	40.245	436.7
Tetradecen-1-OL (Z)	1	1.4	0.002	0.002	( <sup>3</sup> )
Tetradecen-1-yl (E)	1	1.4	0.011	0.015	0.1

\* Area applied is less than 0.5 percent.

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 885,000 acres.  
States included are CA, NY, and WA.

<sup>2</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.

<sup>3</sup> Total applied is less than 50 lbs.

**Grapes, All: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	8	1.1	0.474	0.525	33.8
Diuron	4	1.1	0.645	0.715	25.2
Flumioxazin	3	1.2	0.123	0.142	3.9
Glufosinate-ammonium	3	1.1	0.348	0.377	9.4
Glyphosate iso. salt	43	1.4	0.793	1.124	388.1
Norflurazon	2	1.1	0.716	0.814	14.6
Oryzalin	9	1.1	1.612	1.754	127.2
Oxyfluorfen	25	1.2	0.439	0.531	105.1
Paraquat	16	1.3	0.501	0.644	80.6
Pendimethalin	*	1.1	2.088	2.348	3.3
Sethoxydim	*	1.0	0.256	0.256	1.0
Simazine	20	1.1	1.114	1.256	202.9
Trifluralin	1	1.2	1.084	1.320	9.4
<b>Insecticides</b>					
Abamectin	2	1.4	0.012	0.016	0.2
Acetamiprid	1	1.2	0.038	0.045	0.4
Benzoic acid	8	1.2	0.170	0.203	13.1
Bifenazate	5	1.2	0.435	0.501	20.6
Bt subsp. kurstaki	3	1.3	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Buprofezin	1	1.1	0.505	0.539	5.2
Carbaryl	*	1.1	1.611	1.706	4.3
Chlorpyrifos	5	1.3	1.929	2.429	102.5
Cryolite	4	1.2	5.261	6.483	230.8
Diazinon	*	1.1	0.955	1.065	3.0
Dicofol	1	1.0	1.218	1.250	6.6
Dimethoate	1	1.1	1.126	1.282	8.4
Fenamiphos	1	1.3	1.887	2.361	19.0
Fenpropathrin	6	1.2	0.229	0.272	13.0
Fenpyroximate	2	1.1	0.079	0.084	1.3
Imidacloprid	7	1.1	0.031	0.035	1.9
Kaolin	1	1.1	15.680	17.311	77.4
Methomyl	1	1.0	0.931	0.973	10.4

See footnote(s) at end of table.

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**Grapes, All: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides (continued)					
Myrothecium verruc.	*	1.1	10.963	12.401	11.9
Petroleum distillate	8	1.7	6.040	10.174	636.8
Phosmet	*	1.7	1.487	2.536	7.1
Propargite	4	1.1	1.878	2.052	57.9
Pyrethrins	1	2.0	0.029	0.059	0.5
Pyridaben	2	1.1	0.347	0.376	4.7
Spinosad	4	1.1	0.092	0.103	3.4
Fungicides					
Azoxystrobin	2	1.3	0.194	0.252	4.7
Bacillus subtilus <sup>4</sup>	2	1.3			
Basic copper sulfate	*	2.1	1.276	2.676	6.3
Boscalid	20	1.3	0.011	0.015	2.4
Calcium polysulfide	3	1.1	7.044	7.874	162.7
Captan	2	1.0	1.521	1.540	20.7
Copper hydroxide	26	1.7	0.618	1.037	215.9
Copper oxide	10	1.8	0.755	1.386	113.4
Copper oxychlor. sul.	4	2.3	2.014	4.601	153.0
Cyprodinil	9	1.2	0.423	0.494	36.4
Dicloran	*	1.0	1.364	1.387	5.1
Fenarimol	9	1.2	0.035	0.042	2.9
Fenhexamid	5	1.2	0.473	0.583	24.2
Iprodione	1	1.1	0.452	0.480	4.8
Kresoxim-methyl	6	1.2	0.128	0.149	7.1
Mancozeb	6	1.5	1.430	2.124	102.6
Myclobutanil	2	3.3	0.061	0.204	4.1
Potassium bicarbon.	8	1.4	2.872	3.891	253.1
Pyraclostrobin	20	1.3	0.001	0.001	0.1
Quintec	7	1.3	0.087	0.111	6.2
Sulfur	73	5.6	8.790	49.270	28,786.9
Tebuconazole	16	1.5	0.111	0.165	21.3
Thiophanate-methyl	1	1.1	0.746	0.799	3.5
Trifloxystrobin	20	1.2	0.070	0.085	13.9

See footnote(s) at end of table.

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**Grapes, All: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Triflumizole	8	1.2	0.165	0.201	12.2
Ziram	2	1.2	2.821	3.404	58.1
Other Chemicals					
Cyanamid	1	1.1	14.152	15.954	81.4
Dichloropropene	*	1.0	295.338	299.902	996.6
Ethephon	3	1.2	0.237	0.290	5.9
Gibberellic acid	11	1.9	0.041	0.079	7.2
Sodium tetrathiocarb	1	1.3	30.682	40.245	436.7
Strychnine	2	1.2	0.006	0.007	0.1
Tetradecen-1-OL (Z)	1	1.4	0.002	0.002	( <sup>3</sup> )
Tetradecen-1-yl (E)	1	1.4	0.011	0.015	0.1

\* Area applied is less than 0.5 percent.

<sup>1</sup> Total acreage in 2005 for California was 800,000 acres.

Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

<sup>4</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.



**Grapes, All: Agricultural Chemical Applications,  
New York, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Glyphosate amm. salt	2	1.2	0.099	0.121	0.1
Glyphosate iso. salt	35	1.5	1.016	1.520	16.6
Norflurazon	6	1.0	1.681	1.711	3.0
Oryzalin	2	1.1	2.696	2.921	1.7
Paraquat	35	1.3	0.520	0.652	7.1
Simazine	32	1.0	2.333	2.436	24.4
Sulfosate	4	1.1	1.302	1.438	1.6
<b>Insecticides</b>					
Carbaryl	40	1.3	1.627	2.158	26.7
Fenprothrin	37	1.4	0.185	0.254	2.9
Petroleum distillate	13	2.2	7.357	16.196	65.9
<b>Fungicides</b>					
Boscalid	14	2.1	0.012	0.024	0.1
Captan	12	2.3	1.738	4.078	15.6
Cyprodinil	6	1.6	0.465	0.739	1.5
Fenarimol	31	1.3	0.027	0.035	0.3
Fenhexamid	8	1.7	0.492	0.826	2.0
Kresoxim-methyl	12	1.1	0.119	0.129	0.5
Mancozeb	65	2.6	2.478	6.399	129.2
Maneb	8	1.2	2.663	3.089	7.5
Mefenoxam	7	1.2	0.097	0.113	0.3
Myclobutanil	13	1.5	0.116	0.171	0.7
Phosphorous acid	5	2.1	1.398	2.910	4.1
Potassium Phosphate	14	1.4	5.641	8.072	35.2
Pyraclostrobin	13	2.1	0.001	0.001	( <sup>2</sup> )
Quintec	19	1.2	0.070	0.083	0.5
Sulfur	29	4.8	3.981	18.933	170.9
Tebuconazole	43	1.2	0.110	0.133	1.8
Trifloxystrobin	3	1.1	0.058	0.066	0.1
Ziram	18	1.2	2.826	3.331	18.2

<sup>1</sup> Bearing acreage in 2005 for New York was 31,000 acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Grapes, All: Agricultural Chemical Applications,  
Washington, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Carfentrazone-ethyl	5	1.6	0.028	0.046	0.1
Flumioxazin	5	6.3	0.194	1.222	3.4
Glyphosate iso. salt	54	1.6	0.986	1.596	46.7
Norflurazon	5	1.0	1.361	1.363	3.6
Oryzalin	3	1.1	2.347	2.497	4.4
Paraquat	29	2.3	0.794	1.800	28.0
Simazine	3	1.1	1.063	1.188	2.1
<b>Insecticides</b>					
Bifenthrin	4	1.0	0.085	0.085	0.2
Buprofezin	2	1.1	0.477	0.526	0.6
Carbaryl	2	1.0	1.072	1.073	1.3
Chlorpyrifos	5	1.1	1.592	1.679	4.2
Fenpropathrin	28	1.0	0.210	0.218	3.3
Petroleum distillate	26	2.3	4.383	10.299	145.0
Spinosad	3	1.1	0.096	0.107	0.2
<b>Fungicides</b>					
Boscalid	20	1.1	0.010	0.011	0.1
Calcium polysulfide	4	1.3	12.675	16.291	35.0
Cyprodinil	7	1.5	0.393	0.594	2.2
Fenarimol	39	1.5	0.027	0.039	0.8
Fenhexamid	1	1.0	0.491	0.502	0.4
Kresoxim-methyl	7	1.5	0.076	0.113	0.4
Myclobutanil	14	1.3	0.103	0.137	1.0
Pyraclostrobin	20	1.1	0.001	0.001	( <sup>2</sup> )
Pyrimethanil	1	1.4	0.555	0.767	0.2
Quintec	30	1.0	0.084	0.087	1.4
Sulfur	24	2.0	3.602	7.081	93.6
Tebuconazole	12	1.0	0.138	0.139	0.9
Trifloxystrobin	37	1.1	0.059	0.067	1.3
Triflumizole	22	1.2	0.199	0.240	2.8

<sup>1</sup> Bearing acreage in 2005 for Washington was 54,000 acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Grapes, Raisin: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	CA
<b>Herbicides</b>		
2,4-D, dimeth. salt	P	P
Diuron	P	P
Flumioxazin	P	P
Glufosinate-ammonium	P	P
Glyphosate	*	*
Glyphosate iso. salt	P	P
Norflurazon	P	P
Oryzalin	P	P
Oxyfluorfen	P	P
Paraquat	P	P
Pendimethalin	*	*
Sethoxydim	*	*
Simazine	P	P
Trifluralin	*	*
<b>Insecticides</b>		
Abamectin	*	*
Acetamiprid	*	*
Benzoic acid	P	P
Bifenazate	P	P
Bt subsp. kurstaki	P	P
Chlorpyrifos	*	*
Cryolite	P	P
Diazinon	*	*
Dicofol	*	*
Dimethoate	*	*
Fenamiphos	*	*
Fenpropathrin	*	*
Fenpyroximate	*	*
Imidacloprid	P	P
Malathion	*	*
Myrothecium verruc.	*	*
Petroleum distillate	*	*
Phosmet	*	*
Propargite	P	P
Spinosad	*	*

See footnote(s) at end of table.

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**Grapes, Raisin: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States	
	ALL	CA
<b>Fungicides</b>		
Azoxystrobin	*	*
Boscalid	P	P
Calcium polysulfide	*	*
Captan	*	*
Copper hydroxide	P	P
Copper oxide	P	P
Copper oxychlor. sul.	P	P
Cyprodinil	P	P
Dicloran	*	*
Fenarimol	P	P
Fenhexamid	*	*
Iprodione	*	*
Kresoxim-methyl	P	P
Mancozeb	*	*
Myclobutanil	*	*
Potassium bicarbon.	P	P
Pyraclostrobin	P	P
Pyrimethanil	*	*
Quintec	*	*
Sulfur	P	P
Tebuconazole	P	P
Triadimefon	*	*
Trifloxystrobin	P	P
Triflumizole	P	P
Ziram	P	P
<b>Other Chemicals</b>		
Cyanamid	*	*
Dichloropropene	*	*
Ethephon	P	P
Gibberellic acid	P	P
Zinc phosphide	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Grapes, Raisin: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
California, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	242,000	48	263.0	32	267.7	67	7,351.8	20	148.4

**Grapes, Raisin: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	16	1.0	0.450	0.470	18.6
Diuron	6	1.1	0.510	0.553	7.7
Flumioxazin	3	1.2	0.111	0.135	1.0
Glufosinate-ammonium	3	1.1	0.531	0.576	3.5
Glyphosate iso. salt	37	1.3	0.638	0.856	77.2
Norflurazon	5	1.2	0.750	0.884	11.4
Oryzalin	11	1.1	1.386	1.477	38.2
Oxyfluorfen	14	1.2	0.261	0.325	11.1
Paraquat	11	1.2	0.393	0.465	12.1
Simazine	29	1.1	0.946	1.063	74.3
<b>Insecticides</b>					
Benzoic acid	8	1.2	0.159	0.188	3.8
Bifenazate	8	1.2	0.429	0.503	9.4
Bt subsp. kurstaki	3	1.1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Cryolite	12	1.2	5.558	6.665	187.2
Imidacloprid	5	1.1	0.028	0.030	0.4
Propargite	3	1.0	2.067	2.119	14.4
<b>Fungicides</b>					
Boscalid	6	1.4	0.010	0.013	0.2
Copper hydroxide	19	1.8	0.771	1.396	62.7
Copper oxide	8	2.0	0.918	1.839	34.5
Copper oxychlo. sul.	2	1.6	2.335	3.735	17.3
Cyprodinil	2	1.3	0.311	0.418	2.5
Fenarimol	10	1.3	0.033	0.044	1.1
Kresoxim-methyl	2	1.2	0.119	0.148	0.9
Potassium bicarbon.	6	1.0	2.860	2.878	40.4
Pyraclostrobin	6	1.4	( <sup>2</sup> )	0.001	( <sup>3</sup> )
Sulfur	65	4.6	9.848	45.491	7,124.8
Tebuconazole	10	1.5	0.110	0.161	3.8
Trifloxystrobin	7	1.3	0.073	0.096	1.6
Triflumizole	13	1.3	0.161	0.214	6.8

See footnote(s) at end of table.

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**Grapes, Raisin: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Ziram	4	1.2	2.751	3.350	30.7
Other Chemicals					
Ethephon	3	1.3	0.241	0.325	2.1
Gibberellic acid	19	1.5	0.049	0.074	3.3

<sup>1</sup> Total acreage in 2005 for California was 242,000 acres.

Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Grapes, Table: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	CA
<b>Herbicides</b>		
2,4-D, dimeth. salt	*	*
Diuron	*	*
Fluazifop-P-butyl	*	*
Flumioxazin	*	*
Glufosinate-ammonium	P	P
Glyphosate	*	*
Glyphosate iso. salt	P	P
Isoxaben	*	*
Norflurazon	*	*
Oryzalin	P	P
Oxyfluorfen	P	P
Paraquat	P	P
Pendimethalin	*	*
Sethoxydim	*	*
Simazine	P	P
Sulfosate	*	*
Trifluralin	*	*
<b>Insecticides</b>		
Abamectin	P	P
Acetamiprid	*	*
Azadirachtin	*	*
Benzoic acid	P	P
Bifenazate	P	P
Bt subsp. kurstaki	P	P
Buprofezin	*	*
Carbaryl	*	*
Chlorpyrifos	P	P
Cryolite	P	P
Diazinon	*	*
Dimethoate	P	P
Fenamiphos	*	*
Fenpropathrin	*	*
Fenpyroximate	*	*
Imidacloprid	P	P
Malathion	*	*
Methomyl	P	P
Myrothecium verruc.	*	*
Petroleum distillate	*	*
Phosmet	*	*
Propargite	*	*
Pyrethrins	*	*

See footnote(s) at end of table.

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**Grapes, Table: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States	
	ALL	CA
Insecticides (continued)		
Pyridaben	*	*
Spinosad	P	P
Fungicides		
Azoxystrobin	P	P
Bacillus subtilus	*	*
Basic copper sulfate	*	*
Boscalid	P	P
Calcium polysulfide	*	*
Captan	*	*
Copper hydroxide	P	P
Copper oxide	*	*
Copper oxychlo. sul.	P	P
Cyprodinil	P	P
Dicloran	*	*
Fenarimol	*	*
Fenhexamid	P	P
Iprodione	P	P
Kresoxim-methyl	*	*
Mancozeb	P	P
Maneb	*	*
Myclobutanil	*	*
Potassium bicarbon.	*	*
Pyraclostrobin	P	P
Pyrimethanil	*	*
Quintec	P	P
Sulfur	P	P
Tebuconazole	P	P
Thiophanate-methyl	*	*
Triadimefon	*	*
Trifloxystrobin	P	P
Triflumizole	*	*
Ziram	*	*

See footnote(s) at end of table.

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**Grapes, Table: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States	
	ALL	CA
Other Chemicals		
Cyanamid	P	P
Dichloropropene	*	*
Diphacinone	*	*
Ethephon	P	P
GABA	*	*
Gibberellic acid	P	P
L-Glutamic acid	*	*
Metam-sodium	*	*
Sodium tetrathiocarb	*	*
Tetradecen-1-OL (Z)	*	*
Tetradecen-1-yl (E)	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Grapes, Table: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
California, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide <sup>1</sup>		Other	
	<i>Acre</i> s	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	84,000	50	94.2	52	92.0	74	2,756.6	54	280.0

<sup>1</sup> Total Applied excludes Bt's (Bacillus thuringiensis) and other biologicals.

Quantities are not available because amounts of active ingredient are not comparable between products.

**Grapes, Table: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Glufosinate-ammonium	2	1.1	0.749	0.838	1.6
Glyphosate iso. salt	36	1.3	0.836	1.091	33.1
Oryzalin	11	1.1	2.498	2.668	24.1
Oxyfluorfen	15	1.2	0.599	0.710	8.7
Paraquat	20	1.2	0.664	0.783	13.1
Simazine	9	1.1	0.927	0.983	7.7
<b>Insecticides</b>					
Abamectin	5	1.7	0.010	0.018	0.1
Benzoic acid	9	1.1	0.178	0.200	1.6
Bifenazate	5	1.1	0.465	0.515	2.2
Bt subsp. kurstaki	12	1.5	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Chlorpyrifos	14	1.1	1.865	1.974	24.0
Cryolite	4	1.3	4.038	5.348	17.0
Dimethoate	6	1.2	1.188	1.380	7.3
Imidacloprid	7	1.1	0.033	0.035	0.2
Methomyl	6	1.0	1.125	1.148	5.6
Spinosad	32	1.1	0.090	0.101	2.7
<b>Fungicides</b>					
Azoxystrobin	4	1.7	0.195	0.329	1.0
Boscalid	38	1.2	0.011	0.013	0.4
Copper hydroxide	52	1.5	0.616	0.955	41.8
Copper oxychlo. sul.	13	3.1	1.555	4.856	53.6
Cyprodinil	21	1.2	0.438	0.506	8.9
Fenhexamid	8	1.2	0.444	0.553	3.7
Iprodione	11	1.1	0.482	0.516	4.6
Mancozeb	20	1.7	1.245	2.081	34.7
Pyraclostrobin	38	1.2	0.001	0.001	( <sup>3</sup> )
Quintec	17	1.2	0.077	0.090	1.3
Sulfur	68	8.0	5.654	45.079	2,560.7
Tebuconazole	31	1.7	0.118	0.206	5.4
Trifloxystrobin	23	1.3	0.064	0.081	1.6
<b>Other Chemicals</b>					
Cyanamid	5	1.1	14.252	16.072	69.8

See footnote(s) at end of table.

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**Grapes, Table: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Other Chemicals (continued)					
Ethephon	16	1.2	0.234	0.274	3.8
Gibberellic acid	53	2.4	0.037	0.086	3.9

<sup>1</sup> Total acreage in 2005 for California was 84,000 acres.  
Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Grapes, Wine: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	CA
<b>Herbicides</b>		
2,4-D, dimeth. salt	P	P
Dichlobenil	*	*
Diquat dibromide	*	*
Diuron	P	P
Fluazifop-P-butyl	*	*
Flumioxazin	P	P
Glufosinate-ammonium	P	P
Glyphosate	*	*
Glyphosate amm. salt	*	*
Glyphosate iso. salt	P	P
Isoxaben	*	*
Napropamide	*	*
Norflurazon	P	P
Oryzalin	P	P
Oxyfluorfen	P	P
Paraquat	P	P
Pendimethalin	P	P
Sethoxydim	P	P
Simazine	P	P
Thiazopyr	*	*
Trifluralin	P	P
<b>Insecticides</b>		
Abamectin	P	P
Acetamiprid	P	P
Benzoic acid	P	P
Bifenazate	P	P
Boric acid	*	*
Bt subsp. kurstaki	P	P
Buprofezin	P	P
Carbaryl	P	P
Carbofuran	*	*
Chlorpyrifos	P	P
Clofentezine	*	*
Cryolite	P	P
Diazinon	P	P
Dicofol	P	P
Dimethoate	*	*
Fenamiphos	*	*
Fenpropathrin	P	P
Fenpyroximate	P	P
Imidacloprid	P	P

See footnote(s) at end of table.

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**Grapes, Wine: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States	
	ALL	CA
Insecticides (continued)		
Kaolin	P	P
Malathion	*	*
Methomyl	P	P
Myrothecium verruc.	*	*
Petroleum distillate	P	P
Phosmet	*	*
Potassium salts	*	*
Propargite	P	P
Pyrethrins	P	P
Pyridaben	P	P
Spinosad	*	*
Fungicides		
Azoxystrobin	P	P
Bacillus subtilus	P	P
Basic copper sulfate	*	*
Benomyl	*	*
Boscalid	P	P
Calcium polysulfide	P	P
Captan	*	*
Copper hydroxide	P	P
Copper oxide	P	P
Copper oxychlo. sul.	P	P
Copper oxychloride	*	*
Copper resinate	*	*
Cresol	*	*
Cyprodinil	P	P
Dicloran	P	P
Fenarimol	P	P
Fenhexamid	P	P
Iprodione	*	*
Kresoxim-methyl	P	P
Mancozeb	P	P
Maneb	*	*
Myclobutanil	*	*
Potassium bicarbon.	P	P
Pyraclostrobin	P	P
Quintec	P	P
Sulfur	P	P
Tebuconazole	P	P
Thiophanate-methyl	*	*
Trifloxystrobin	P	P

See footnote(s) at end of table.

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**Grapes, Wine: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States	
	ALL	CA
Fungicides (continued)		
Triflumizole	P	P
Xylenol	*	*
Ziram	*	*
Other Chemicals		
Chlorophacinone	*	*
Dichloropropene	P	P
Diphacinone	*	*
Farnesol	*	*
GABA	*	*
Gibberellic acid	P	P
Iron phosphate	*	*
L-Glutamic acid	*	*
Nerolidol	*	*
Sodium tetrathiocarb	*	*
Strychnine	P	P
Tetradecen-1-OL (Z)	*	*
Tetradecen-1-yl (E)	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.



**Grapes, Wine: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
California, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide <sup>1</sup>		Other	
	<i>Acre</i> s	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	474,000	61	671.2	44	885.7	83	19,922.6	7	1,134.4

<sup>1</sup> Total Applied excludes Bt's (Bacillus thuringiensis) and other biologicals.

Quantities are not available because amounts of active ingredient are not comparable between products.

**Grapes, Wine: Agricultural Chemical Applications,  
California, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	5	1.2	0.541	0.672	14.5
Diuron	4	1.1	0.745	0.848	16.4
Flumioxazin	4	1.1	0.122	0.139	2.7
Glufosinate-ammonium	4	1.1	0.234	0.253	4.3
Glyphosate iso. salt	47	1.5	0.845	1.236	277.8
Norflurazon	1	1.0	0.576	0.583	2.5
Oryzalin	8	1.1	1.557	1.725	65.0
Oxyfluorfen	32	1.2	0.468	0.563	85.2
Paraquat	17	1.3	0.503	0.672	55.4
Pendimethalin	*	1.3	1.100	1.415	0.9
Sethoxydim	*	1.0	0.208	0.209	0.4
Simazine	18	1.1	1.268	1.441	120.9
Trifluralin	1	1.3	1.191	1.551	7.8
<b>Insecticides</b>					
Abamectin	1	1.1	0.014	0.016	0.1
Acetamiprid	2	1.2	0.038	0.045	0.3
Benzoic acid	8	1.2	0.174	0.211	7.8
Bifenazate	4	1.1	0.435	0.495	9.1
Bt subsp. kurstaki	*	1.4	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Buprofezin	2	1.1	0.507	0.541	5.1
Carbaryl	1	1.0	1.631	1.701	4.2
Chlorpyrifos	6	1.3	1.985	2.665	76.1
Cryolite	1	1.4	4.451	6.135	26.7
Diazinon	*	1.1	0.977	1.114	2.4
Dicofol	1	1.0	1.217	1.232	6.4
Fenpropathrin	9	1.2	0.233	0.277	12.4
Fenpyroximate	2	1.1	0.081	0.088	0.9
Imidacloprid	8	1.1	0.032	0.036	1.4
Kaolin	1	1.1	15.680	17.311	77.4
Methomyl	1	1.1	0.776	0.827	4.8
Petroleum distillate	12	1.6	6.522	10.563	593.8
Propargite	4	1.1	1.835	2.050	42.5

See footnote(s) at end of table.

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**Grapes, Wine: Agricultural Chemical Applications,  
California, 2005<sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Insecticides (continued)</b>					
Pyrethrins	2	2.1	0.028	0.060	0.4
Pyridaben	3	1.1	0.346	0.375	4.7
<b>Fungicides</b>					
Azoxystrobin	3	1.2	0.194	0.239	3.5
Bacillus subtilus <sup>4</sup>	2	1.3			
Boscalid	24	1.4	0.012	0.016	1.8
Calcium polysulfide	3	1.1	9.293	10.400	157.1
Copper hydroxide	25	1.7	0.556	0.932	111.5
Copper oxide	12	1.8	0.689	1.260	73.9
Copper oxychlor. sul.	4	1.9	2.407	4.671	82.1
Cyprodinil	11	1.1	0.433	0.498	25.1
Dicloran	1	1.0	1.476	1.492	4.1
Fenarimol	9	1.1	0.036	0.041	1.8
Fenhexamid	7	1.2	0.477	0.585	19.6
Kresoxim-methyl	8	1.2	0.128	0.148	5.4
Mancozeb	6	1.4	1.542	2.178	63.7
Potassium bicarbon.	11	1.5	2.878	4.195	210.4
Pyraclostrobin	24	1.4	0.001	0.001	0.1
Quintec	8	1.3	0.090	0.119	4.7
Sulfur	78	5.7	9.102	51.507	19,101.4
Tebuconazole	17	1.4	0.109	0.153	12.1
Trifloxystrobin	27	1.2	0.070	0.084	10.7
Triflumizole	6	1.1	0.173	0.188	5.2
<b>Other Chemicals</b>					
Dichloropropene	*	1.0	326.143	332.863	771.0
Gibberellic acid	*	1.1	0.015	0.016	( <sup>3</sup> )
Strychnine	3	1.2	0.006	0.007	0.1

\* Area applied is less than 0.5 percent.

<sup>1</sup> Total acreage in 2005 for California was 474,000 acres.

Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

<sup>4</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.

**Kiwifruit: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	CA
Herbicides		
Glyphosate iso. salt	P	P
Oryzalin	*	*
Oxyfluorfen	P	P
Paraquat	P	P
Insecticides		
Cryolite	*	*
Methidathion	*	*
Petroleum distillate	P	P
Fungicides		
Fenhexamid	*	*
Mefenoxam	*	*
Other Chemicals		
Cyanamid	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Kiwifruit: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
California, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
		<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>
CA <sup>1</sup>	4,500	44	5.4	26	29.9				

<sup>1</sup> Insufficient reports to publish data for one or more pesticide classes.

**Kiwifruit: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Appli-cations	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Glyphosate iso. salt	33	2.1	1.120	2.383	3.5
Oxyfluorfen	8	1.0	0.388	0.388	0.1
Paraquat	28	1.8	0.751	1.369	1.7
Insecticides					
Petroleum distillate	17	1.1	30.230	34.552	26.8

<sup>1</sup> Total acreage in 2005 for California was 4,500 acres. Acreage includes both bearing and nonbearing acres.

**Lemons: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	CA
<b>Herbicides</b>		
Bromacil	P	P
Diuron	P	P
Glyphosate	*	*
Glyphosate iso. salt	P	P
Norflurazon	*	*
Oxyfluorfen	*	*
Paraquat	*	*
Pendimethalin	*	*
Simazine	P	P
Sulfosate	*	*
Trifluralin	*	*
<b>Insecticides</b>		
Abamectin	P	P
Acephate	*	*
Acetamiprid	P	P
Bt subsp. kurstaki	*	*
Buprofezin	*	*
Carbaryl	*	*
Chlorpyrifos	P	P
Cryolite	*	*
Cyfluthrin	*	*
Dicofol	*	*
Dimethoate	*	*
Fenamiphos	*	*
Fenpropathrin	*	*
Formetanate hydro.	*	*
Kaolin	*	*
Malathion	*	*
Petroleum distillate	P	P
Phosmet	*	*
Piperonyl butoxide	*	*
Pyrethrins	*	*
Pyridaben	*	*
Pyriproxyfen	P	P
Sabadilla	*	*
Spinosad	P	P
Sulfur	P	P

See footnote(s) at end of table.

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**Lemons: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States	
	ALL	CA
<b>Fungicides</b>		
Basic copper sulfate	P	P
Chlorothalonil	*	*
Copper hydroxide	P	P
Copper oxide	*	*
Copper sulfate	P	P
Fosetyl-al	*	*
Mefenoxam	*	*
Phosphorous acid	*	*
<b>Other Chemicals</b>		
2,4-D, isoprop ester	P	P
Bromadiolone	*	*
Dichloropropene	*	*
Diphacinone	P	P
Gibberellic acid	P	P
Harpin protein	*	*
Metaldehyde	P	P
Metam-sodium	*	*
Sodium tetrathiocarb	*	*
Strychnine	P	P

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Lemons: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
California, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	44,000	62	85.8	52	1,389.6	30	58.6	46	45.9

**Lemons: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Appli-cations	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Bromacil	4	1.1	1.053	1.148	2.1
Diuron	13	1.3	1.885	2.515	14.0
Glyphosate iso. salt	58	2.7	0.795	2.164	55.7
Simazine	10	1.4	2.153	2.924	12.6
<b>Insecticides</b>					
Abamectin	19	1.1	0.010	0.011	0.1
Acetamiprid	1	1.1	0.127	0.144	0.1
Chlorpyrifos	22	1.6	2.916	4.777	45.2
Petroleum distillate	38	1.6	46.506	74.898	1,240.5
Pyriproxyfen	4	1.0	0.101	0.103	0.2
Spinosad	8	1.0	0.115	0.119	0.4
Sulfur	5	1.2	27.803	33.497	76.6
<b>Fungicides</b>					
Basic copper sulfate	3	1.2	5.599	6.514	8.7
Copper hydroxide	12	1.2	2.260	2.685	14.3
Copper sulfate	11	1.6	4.412	6.844	32.9
<b>Other Chemicals</b>					
2,4-D, isoprop ester	5	1.2	0.038	0.047	0.1
Diphacinone	4	1.1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Gibberellic acid	24	1.2	0.035	0.042	0.4
Metaldehyde	27	2.9	0.526	1.517	17.7
Strychnine	4	1.6	0.001	0.001	( <sup>3</sup> )

<sup>1</sup> Total acreage in 2005 for California was 44,000 acres.

Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Nectarines: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	CA
<b>Herbicides</b>		
2,4-D, dimeth. salt	P	P
Fluazifop-P-butyl	*	*
Flumioxazin	*	*
Glyphosate	P	P
Glyphosate iso. salt	P	P
Isoxaben	*	*
Norflurazon	P	P
Oryzalin	P	P
Oxyfluorfen	P	P
Paraquat	P	P
Pendimethalin	*	*
Simazine	P	P
<b>Insecticides</b>		
Benzoic acid	P	P
Bifenazate	P	P
Bt subsp. kurstaki	P	P
Carbaryl	*	*
Chlorpyrifos	P	P
Clofentezine	P	P
Diazinon	P	P
Diflubenzuron	*	*
Esfenvalerate	P	P
Fenbutatin-oxide	*	*
Formetanate hydro.	P	P
Hexythiazox	P	P
Lambda-cyhalothrin	*	*
Methomyl	P	P
Methyl bromide	*	*
Neem oil, clar. hyd.	*	*
Petroleum distillate	P	P
Phosmet	P	P
Propargite	P	P
Spinosad	P	P

See footnote(s) at end of table.

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**Nectarines: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States	
	ALL	CA
<b>Fungicides</b>		
Azoxystrobin	*	*
Bacillus subtilis	*	*
Basic copper sulfate	*	*
Boscalid	P	P
Captan	*	*
Chlorothalonil	P	P
Copper hydroxide	P	P
Copper oxide	P	P
Cyprodinil	P	P
Fenbuconazole	P	P
Iprodione	P	P
Propiconazole	P	P
Pyraclostrobin	P	P
Sulfur	P	P
Tebuconazole	P	P
Thiophanate-methyl	*	*
Trifloxystrobin	*	*
Ziram	P	P
<b>Other Chemicals</b>		
Chloropicrin	*	*
Dazomet	*	*
Dichloropropene	P	P
E-8-Dodecenyl acetat	*	*
Gibberellic acid	*	*
Strychnine	*	*
Z-8-Dodecanol	*	*
Z-8-Dodecen acetate	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Nectarines: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
California, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide <sup>1</sup>		Other	
	<i>Acre</i> s	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	36,500	61	58.2	64	922.4	77	282.1	5	140.9

<sup>1</sup> Total Applied excludes Bt's (*Bacillus thuringiensis*) and other biologicals.

Quantities are not available because amounts of active ingredient are not comparable between products.

**Nectarines: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	30	1.3	0.443	0.574	6.3
Glyphosate	12	2.2	0.647	1.404	6.0
Glyphosate iso. salt	55	1.5	0.771	1.122	22.4
Norflurazon	8	1.1	0.731	0.791	2.3
Oryzalin	13	1.0	1.754	1.783	8.4
Oxyfluorfen	27	1.1	0.497	0.563	5.6
Paraquat	6	1.1	0.564	0.621	1.4
Simazine	20	1.1	0.654	0.713	5.2
<b>Insecticides</b>					
Benzoic acid	1	1.2	0.201	0.249	0.1
Bifenazate	3	1.0	0.483	0.500	0.6
Bt subsp. kurstaki	4	1.0	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Chlorpyrifos	17	1.1	1.875	2.037	12.3
Clofentezine	4	1.0	0.188	0.190	0.3
Diazinon	1	1.2	1.909	2.287	1.0
Esfenvalerate	49	1.2	0.045	0.052	0.9
Formetanate hydro.	40	1.0	0.973	1.008	14.9
Hexythiazox	16	1.1	0.162	0.175	1.0
Methomyl	4	1.6	0.864	1.414	2.0
Petroleum distillate	43	1.1	49.478	52.975	838.7
Phosmet	36	1.1	2.521	2.747	35.9
Propargite	9	1.0	2.185	2.293	7.3
Spinosad	25	1.1	0.101	0.114	1.0
<b>Fungicides</b>					
Boscalid	13	1.0	0.012	0.012	0.1
Chlorothalonil	1	1.8	2.420	4.427	2.2
Copper hydroxide	33	1.1	4.393	4.878	58.7
Copper oxide	15	1.1	4.074	4.468	24.5
Cyprodinil	7	1.1	0.218	0.235	0.6
Fenbuconazole	4	1.0	0.094	0.098	0.1
Iprodione	34	1.0	0.670	0.701	8.7

See footnote(s) at end of table.

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**Nectarines: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Propiconazole	25	1.1	0.114	0.125	1.1
Pyraclostrobin	13	1.0	0.001	0.001	( <sup>3</sup> )
Sulfur	58	1.2	5.512	6.589	139.4
Tebuconazole	18	1.2	0.180	0.214	1.4
Ziram	13	1.3	6.070	8.085	38.9
Other Chemicals					
Dichloropropene	1	1.0	257.881	258.504	129.0

<sup>1</sup> Total acreage in 2005 for California was 36,500 acres.  
Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Olives: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	CA
<b>Herbicides</b>		
Diuron	P	P
Glyphosate iso. salt	P	P
Oryzalin	P	P
Oxyfluorfen	P	P
Paraquat	P	P
Simazine	P	P
<b>Insecticides</b>		
Acetamiprid	*	*
Aluminum phosphide	*	*
Carbaryl	*	*
Methidathion	*	*
Petroleum distillate	*	*
Spinosad	*	*
<b>Fungicides</b>		
Basic copper sulfate	*	*
Copper hydroxide	P	P
Copper oxide	*	*
Copper oxychloride	*	*
Copper sulfate	*	*
<b>Other Chemicals</b>		
Diphacinone	*	*
NAA	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Olives: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
California, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	32,000	47	33.9	11	31.2	23	41.8	19	0.1

**Olives: Agricultural Chemical Applications,  
California, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
Diuron	16	1.3	1.057	1.383	7.0
Glyphosate iso. salt	42	2.2	0.514	1.144	15.5
Oryzalin	2	1.1	1.596	1.701	1.1
Oxyfluorfen	10	1.4	0.148	0.212	0.7
Paraquat	2	1.2	0.488	0.584	0.4
Simazine	18	1.2	1.319	1.601	9.0
Fungicides					
Copper hydroxide	14	1.4	3.753	5.067	22.7

<sup>1</sup> Total acreage in 2005 for California was 32,000 acres.  
Acreage includes both bearing and nonbearing acres.

**Oranges: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States		
	ALL	CA	FL
<b>Herbicides</b>			
2,4-D	*		*
2,4-D, BEE	*		*
2,4-D, dimeth. salt	P	P	
2,4-D, isoprop. salt	P		P
Bromacil	P	P	P
Butoxyethyl triclopy	*		*
Carfentrazone-ethyl	*		*
Clomazone	*		*
Diuron	P	P	P
Glyphosate	*	*	
Glyphosate amm. salt	P	*	*
Glyphosate iso. salt	P	P	P
MSMA	*	*	
Norflurazon	P	P	P
Oryzalin	P	P	
Oxyfluorfen	P	P	
Paraquat	P	P	P
Pendimethalin	P	P	
Sethoxydim	P		P
Simazine	P	P	P
Sulfosate	P		P
Triclopyr	*		*
Trifluralin	P	*	*
<b>Insecticides</b>			
Abamectin	P	P	P
Acephate	*	*	*
Acetamiprid	P	P	
Aldicarb	P		P
Aluminum phosphide	*	*	
Azinphos-methyl	*	*	
Bt subsp. kurstaki	*	P	*
Buprofezin	P	P	
Carbaryl	P	P	P
Chlorpyrifos	P	P	P
Cryolite	P	P	
Cyfluthrin	P	P	
Dicofol	P	P	P
Diflubenzuron	*	*	P
Dimethoate	P	P	
Ethion	*		*
Fenamiphos	*	P	*

See footnote(s) at end of table.

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**Oranges: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States		
	ALL	CA	FL
<b>Insecticides (continued)</b>			
Fenbutatin-oxide	*	*	P
Fenpropathrin	*	P	*
Formetanate hydro.	P	P	
Imidacloprid	P		P
Kaolin	P	P	
Malathion	P	P	
Methidathion	P	P	
Methomyl	*	*	
Oxamyl	P		P
Petroleum distillate	P	P	P
Petroleum oil	*	*	P
Piperonyl butoxide	*	*	
Propargite	*	*	
Pyrethrins	*	*	
Pyridaben	P	P	P
Pyriproxyfen	*	P	*
S-Methoprene	*		*
Sabadilla	P	P	
Spinosad	*	P	*
Sulfur	P	P	P
<b>Fungicides</b>			
Azoxystrobin	*	*	P
Bacillus subtilis	P		P
Basic copper sulfate	P	P	P
Benomyl	*	*	*
Captan	*		*
Chlorothalonil	*	P	*
Copper amm. complex	*	*	*
Copper hydroxide	P	P	P
Copper oxide	P	P	
Copper oxychloride	*		*
Copper resinate	*		*
Copper sulfate	P	P	P
Fenbuconazole	P		P
Ferbam	*		*
Fosetyl-al	*	*	*
Mefenoxam	P	P	P
Metalaxyl	P	P	
Phosphorous acid	P		P
Propiconazole	*	*	
Pyraclostrobin	P		P

See footnote(s) at end of table.

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**Oranges: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States		
	ALL	CA	FL
Fungicides (continued)			
Thiophanate-methyl	P		P
Trifloxystrobin	P		P
Other Chemicals			
2,4-D, isoprop ester	P	P	
Acequinocyl	*	*	
Chlorophacinone	*	*	
Dichloropropene	*	*	
Diphacinone	P	P	
Gibberellic acid	P	P	
Harpin protein	*	*	
Hydrogen peroxide	P		P
Iron phosphate	*	*	
Metaldehyde	P	P	
Metam-sodium	*	*	
Strychnine	*	*	

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Oranges: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide <sup>1</sup>		Other	
	<i>Acre</i> s	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	176,000	63	461.5	60	1,837.2	53	488.0	41	264.8
FL	541,800	92	3,510.2	88	40,857.2	61	738.4	1	2.6
Total	717,800	85	3,971.7	81	42,694.4	59	1,226.4	11	267.4

<sup>1</sup> Total Applied excludes Bt's (Bacillus thuringiensis) and other biologicals.

Quantities are not available because amounts of active ingredient are not comparable between products.

**Oranges: Agricultural Chemical Applications,  
Program States, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	1	1.3	0.603	0.764	4.6
2,4-D, isoprop. salt	20	1.9	0.270	0.525	75.4
Bromacil	12	1.7	0.916	1.566	139.9
Diuron	46	1.7	1.435	2.410	788.8
Glyphosate amm. salt	9	3.7	1.126	4.189	265.1
Glyphosate iso. salt	78	2.5	1.123	2.857	1,600.6
Norflurazon	12	2.2	1.381	3.069	263.1
Oryzalin	1	1.2	1.930	2.275	8.3
Oxyfluorfen	1	1.2	0.373	0.461	2.1
Paraquat	8	1.3	0.381	0.489	26.6
Pendimethalin	*	1.2	2.286	2.701	1.6
Sethoxydim	2	1.1	0.195	0.221	3.5
Simazine	30	1.4	2.324	3.285	702.2
Sulfosate	2	2.7	1.797	4.864	79.8
Trifluralin	*	2.1	1.506	3.116	2.8
<b>Insecticides</b>					
Abamectin	16	1.5	0.008	0.013	1.5
Acetamiprid	*	1.3	0.122	0.159	0.3
Aldicarb	6	1.0	3.575	3.636	157.0
Buprofezin	*	1.1	1.662	1.790	4.6
Carbaryl	3	1.3	4.013	5.284	114.3
Chlorpyrifos	17	1.7	1.605	2.751	343.2
Cryolite	*	1.6	11.306	18.083	57.4
Cyfluthrin	5	1.4	0.059	0.085	2.9
Dicofol	1	1.1	2.879	3.304	17.2
Dimethoate	2	1.1	1.500	1.686	21.5
Formetanate hydro.	1	1.1	1.090	1.211	5.8
Imidacloprid	2	1.7	0.198	0.345	5.4
Kaolin	*	1.1	35.076	39.553	29.5
Malathion	*	1.2	4.147	4.947	13.8
Methidathion	*	1.0	3.456	3.619	3.4
Oxamyl	2	2.2	0.916	2.028	30.0

See footnote(s) at end of table.

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**Oranges: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Insecticides (continued)</b>					
Petroleum distillate	66	2.4	35.541	86.596	41,160.5
Pyridaben	3	1.1	0.306	0.334	6.9
Sabadilla	*	1.2	0.022	0.026	0.1
Sulfur	5	1.6	8.965	14.139	543.0
<b>Fungicides</b>					
Bacillus subtilus <sup>2</sup>	1	1.2			
Basic copper sulfate	6	1.5	3.657	5.362	241.5
Copper hydroxide	34	2.0	1.532	2.997	740.3
Copper oxide	1	1.5	4.825	7.140	48.3
Copper sulfate	5	2.0	1.419	2.829	105.5
Fenbuconazole	1	1.0	0.136	0.137	0.5
Mefenoxam	8	1.0	0.361	0.377	21.8
Metalaxyl	*	1.0	0.572	0.596	0.7
Phosphorous acid	2	1.0	1.256	1.303	15.0
Pyraclostrobin	4	1.4	0.157	0.219	6.5
Thiophanate-methyl	*	1.4	1.087	1.477	1.7
Trifloxystrobin	4	1.2	0.064	0.079	2.5
<b>Other Chemicals</b>					
2,4-D, isoprop ester	8	1.4	0.058	0.084	4.8
Diphacinone	1	3.5	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>4</sup> )
Gibberellic acid	4	1.2	0.081	0.097	3.1
Hydrogen peroxide	1	1.0	0.475	0.475	2.6
Metaldehyde	3	1.8	0.422	0.770	13.9

\* Area applied is less than 0.5 percent.

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 717,800 acres.  
States included are CA and FL.

<sup>2</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

<sup>4</sup> Total applied is less than 50 lbs.

**Oranges: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	3	1.3	0.603	0.764	4.6
Bromacil	4	1.3	1.313	1.649	13.0
Diuron	28	1.3	1.969	2.632	131.4
Glyphosate iso. salt	54	2.2	0.691	1.552	147.1
Norflurazon	1	1.1	1.644	1.828	2.6
Oryzalin	2	1.2	1.930	2.275	8.3
Oxyfluorfen	3	1.2	0.373	0.461	2.1
Paraquat	2	1.1	0.590	0.652	2.8
Pendimethalin	*	1.2	2.286	2.701	1.6
Simazine	25	1.3	2.206	2.912	127.6
<b>Insecticides</b>					
Abamectin	6	1.4	0.010	0.013	0.1
Acetamiprid	1	1.3	0.122	0.159	0.3
Bt subsp. kurstaki	13	1.3	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Buprofezin	1	1.1	1.662	1.790	4.6
Carbaryl	4	1.1	6.749	7.686	49.5
Chlorpyrifos	35	1.3	3.031	3.898	241.1
Cryolite	2	1.6	11.306	18.083	57.4
Cyfluthrin	19	1.4	0.059	0.085	2.9
Dicofol	2	1.1	2.859	3.044	8.4
Dimethoate	7	1.1	1.500	1.686	21.5
Fenamiphos	1	1.0	1.769	1.779	3.3
Fenpropathrin	5	1.2	0.345	0.419	4.0
Formetanate hydro.	3	1.1	1.090	1.211	5.8
Kaolin	*	1.1	35.076	39.553	29.5
Malathion	2	1.2	4.147	4.947	13.8
Methidathion	1	1.0	3.456	3.619	3.4
Petroleum distillate	24	1.5	21.492	31.174	1,314.3
Pyridaben	2	1.1	0.373	0.412	1.8
Pyriproxyfen	12	1.4	0.107	0.145	3.1
Sabadilla	2	1.2	0.022	0.026	0.1
Spinosad	32	1.4	0.105	0.143	8.1

See footnote(s) at end of table.

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**Oranges: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides (continued)					
Sulfur	2	1.1	10.487	11.677	44.3
Fungicides					
Basic copper sulfate	21	1.5	3.870	5.828	215.9
Chlorothalonil	1	1.0	0.285	0.291	0.4
Copper hydroxide	29	1.6	2.201	3.459	174.6
Copper oxide	4	1.5	4.825	7.140	48.3
Copper sulfate	7	1.2	3.138	3.904	46.4
Mefenoxam	2	1.0	0.203	0.211	0.6
Metalaxyl	1	1.0	0.572	0.596	0.7
Other Chemicals					
2,4-D, isoprop ester	32	1.4	0.058	0.084	4.8
Diphacinone	5	3.5	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Gibberellic acid	18	1.2	0.081	0.097	3.1
Metaldehyde	10	1.8	0.422	0.770	13.9

\* Area applied is less than 0.5 percent.

<sup>1</sup> Total acreage in 2005 for California was 176,000 acres.  
Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Oranges: Agricultural Chemical Applications,  
Florida, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, isoprop. salt	26	1.9	0.270	0.525	75.4
Bromacil	15	1.8	0.888	1.558	126.9
Diuron	51	1.7	1.361	2.370	657.4
Glyphosate iso. salt	86	2.6	1.198	3.123	1,453.5
Norflurazon	16	2.2	1.379	3.090	260.5
Paraquat	9	1.3	0.366	0.475	23.8
Sethoxydim	3	1.1	0.195	0.221	3.5
Simazine	31	1.4	2.352	3.381	574.5
Sulfosate	3	2.7	1.797	4.864	79.8
<b>Insecticides</b>					
Abamectin	19	1.5	0.008	0.012	1.3
Aldicarb	8	1.0	3.575	3.636	157.0
Carbaryl	3	1.4	3.064	4.265	64.8
Chlorpyrifos	12	2.1	0.759	1.622	102.1
Dicofol	*	1.2	2.899	3.598	8.8
Diflubenzuron	2	1.7	0.275	0.462	5.1
Fenbutatin-oxide	2	1.0	0.795	0.819	9.8
Imidacloprid	3	1.7	0.198	0.345	5.4
Oxamyl	3	2.2	0.916	2.028	30.0
Petroleum distillate	80	2.5	36.325	91.997	39,846.1
Petroleum oil	4	2.0	2.331	4.664	110.7
Pyridaben	3	1.1	0.288	0.314	5.1
Sulfur	6	1.6	8.850	14.410	498.6
<b>Fungicides</b>					
Azoxystrobin	14	1.9	0.186	0.354	27.3
Bacillus subtilis <sup>2</sup>	1	1.2			
Basic copper sulfate	1	1.3	2.496	3.201	25.6
Copper hydroxide	36	2.1	1.401	2.878	565.6
Copper sulfate	5	2.3	0.991	2.325	59.0
Fenbuconazole	1	1.0	0.136	0.137	0.5
Mefenoxam	10	1.0	0.369	0.385	21.2

See footnote(s) at end of table.

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**Oranges: Agricultural Chemical Applications,  
Florida, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Phosphorous acid	2	1.0	1.256	1.303	15.0
Pyraclostrobin	5	1.4	0.157	0.219	6.5
Thiophanate-methyl	*	1.4	1.087	1.477	1.7
Trifloxystrobin	6	1.2	0.064	0.079	2.5
Other Chemicals					
Hydrogen peroxide	1	1.0	0.475	0.475	2.6

\* Area applied is less than 0.5 percent.

<sup>1</sup> Bearing acreage in 2005 for Florida was 541,800 acres.

<sup>2</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.



**Peaches: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States							
	ALL	CA	GA	MI	NJ	PA	SC	TX
Herbicides								
2,4-D	*					*		
2,4-D, BEE	*					*		
2,4-D, dieth sal	P	*				*	*	
2,4-D, dimeth. salt	P	P	*	P	*	P	P	*
Atrazine	*		*			*		
Chlorimuron-ethyl	*						*	
Cycloate	*						*	
Dichlobenil	*		*					
Diuron	P		P	*	P	P	P	*
Fenoxaprop-p-ethyl	*					*		
Fluazifop-P-butyl	P	*	*				*	
Flumioxazin	*	*						
Glyphosate	P	P						
Glyphosate amm. salt	*					*		
Glyphosate iso. salt	P	P	P	P	P	P	P	P
Isoxaben	*	*						
MSMA	*	*						
Napropamide	*					*		
Norflurazon	P	P		*	P	P	P	*
Oryzalin	P	P	*	*	*		*	*
Oxyfluorfen	P	P						
Paraquat	P	P	P	P	P	P	P	P
Pendimethalin	P	P		*		*	*	*
S-Metolachlor	*				*			
Sethoxydim	P	*	*				*	
Simazine	P	P	P	*	P	P	P	*
Sulfosate	*						*	
Terbacil	P		*	P	P	P	*	*
Thifensulfuron	*						*	

See footnote(s) at end of table.

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**Peaches: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States							
	ALL	CA	GA	MI	NJ	PA	SC	TX
Insecticides								
Abamectin	*					*		
Acetamiprid	*						*	
Azadirachtin	*			*				
Azinphos-methyl	P	*	*	P	P	P	P	P
Benzoic acid	P	P		*	*	P		
Bifenazate	P	P				*	*	*
Bt subsp. aizawai	*						*	
Bt subsp. kurstaki	P	P		*	*	*		
Carbaryl	P	P	P	P	P	P	P	P
Carbofuran	*					*		
Chlorpyrifos	P	P	P	P	P	P	P	P
Clofentezine	P	P				P		*
Cryolite	*	*	*			*		
Diazinon	P	P		*	*	P		P
Diflubenzuron	*	*						
Dimethoate	*					*		
Endosulfan	P		*	P	P	P	*	*
Esfenvalerate	P	P	P	P	P	P	P	*
Etoxazole	*					*		
Fenbutatin-oxide	*	P						*
Fenpropathrin	*					*		
Formetanate hydro.	P	P			*	*		
Gamma-cyhalothrin	*					P	*	
Hexythiazox	P	P			*	*		
Imidacloprid	P			P	P	P		*
Indoxacarb	P			*		*		
Lambda-cyhalothrin	P	P		P		P	*	
Malathion	P			*	*		P	P
Methidathion	*	*						
Methomyl	P	*		P	P	P	*	P
Methoxychlor	*						*	*
Methyl bromide	*	*						
Methyl parathion	*					*		
Neem oil, clar. hyd.	*	*						
Permethrin	P	P	*	P	*	P	P	*
Petroleum distillate	P	P	*	*	P	P	P	P
Petroleum oil	P		*		P	P	*	P
Phorate	*						*	
Phosmet	P	P	P	P	P	P	P	P
Potassium salts	*	*						
Propargite	*	*		*				
Pyridaben	P	*		*	*	P		*

See footnote(s) at end of table.

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**Peaches: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States							
	ALL	CA	GA	MI	NJ	PA	SC	TX
<b>Insecticides (continued)</b>								
Pyriproxyfen	P	*		*			*	P
Spinosad	P	P		*	*			
Thiacloprid	*			*				
Thiamethoxam	*			P		*		
Zeta-cypermethrin	*					*		
<b>Fungicides</b>								
Azoxystrobin	P	P	*		*		P	
Bacillus subtilus	*	*						
Basic copper sulfate	P	*		P		*		
Benomyl	P			*	*	*		*
Boscalid	P	P	*	P		*	P	
Calcium polysulfide	P	*		*	*			
Captafol	*		*					
Captan	P	*	P	*	P	P	P	P
Chlorothalonil	P	*	P	*	P	P	P	P
Copper amm. complex	P		*				P	
Copper chloride hyd.	*			*	*			
Copper hydroxide	P	P	*	P	*	P	P	P
Copper oxide	P	P						
Copper oxychloro. sul.	P			P		*	*	
Copper oxychloride	P	*		P		*		
Copper resinate	P		*	*	P		*	
Copper sulfate	P	*	*	*		*	*	*
Cyprodinil	P	P		*	P	*	P	
Dicloran	*				*	*	*	*
Dodine	*			P		*		
Fenarimol	P			*		*		
Fenbuconazole	P	P	*	P	P	*	P	P
Ferbam	P		*	*	*	*	*	
Fosetyl-al	*				*			
Glyodin	*						*	
Iprodione	P	P			*	*	*	
Kresoxim-methyl	*					*		
Mancozeb	*					*		
Mefenoxam	*				*	*		
Metiram	*			*				
Myclobutanil	P			*	P	P	*	
Oxytetracycline	P		*	P	P	P	P	*
Oxytetracycline calc	*						*	
PCNB	*						*	
Phosphorous acid	*					*		

See footnote(s) at end of table.

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**Peaches: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States							
	ALL	CA	GA	MI	NJ	PA	SC	TX
<b>Fungicides (continued)</b>								
Propiconazole	P	P	P	P	P	P	P	P
Pyraclostrobin	P	P	*	*		P	P	
Streptomycin	*					*		
Streptomycin sulfate	*						*	
Sulfur	P	P	P	P	P	P	P	P
Tebuconazole	P	P	*	P	*	P	*	*
Thiophanate-methyl	P	*		P	P	*	P	P
Thiram	P					P		
Triadimefon	*					*		
Trifloxystrobin	P	*			*	*		
Vinclozolin	*					*		
Ziram	P	P	*	P	P	P	P	*
<b>Other Chemicals</b>								
Cyanamid	*							*
Decenol	*	*						
Decenyl acetate	*	*						
Dichloropropene	*	P					*	
Diphacinone	*	*						
Dodecadien-1-ol	*			*				
E-8-Dodecenyl acetat	P	P		P		*	*	
Ethephon	*						*	
Gibberellic acid	*					*		
Harpin protein	*		*					
Hydrogen peroxide	*						*	
Methyl anthranilate	*				*			
Monocarbamide dihyd.	*				*			
NAA	*						*	
NAA, Potassium salt	*							*
Octadecadien (E,Z)	*			*				
Octadecadien (Z,Z)	*			*				
Sodium tetrathiocarb	*	*						
Spirodiclofen	*			*				
Strychnine	*	*						
Tetradecen-1-OL (Z)	P	*		*		*		
Tetradecen-1-yl (E)	*	*						
Z-8-Dodecanol	P	P		P		*	*	
Z-8-Dodecen acetate	P	P		P		*	*	

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Peaches: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide <sup>1</sup>		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	66,400	55	71.1	72	1,078.9	73	841.0	13	551.4
GA <sup>2</sup>	11,500	51	14.9	100	258.4	99	457.0		
MI	5,000	40	4.0	88	14.4	94	93.6	21	0.1
NJ <sup>2</sup>	7,400	20	3.0	98	114.6	77	319.6		
PA	4,500	30	3.5	75	24.6	81	71.3	1	( <sup>3</sup> )
SC	14,000	78	53.9	95	288.3	95	758.5	7	1.9
TX <sup>2</sup>	6,000	20	4.5	53	47.6	49	26.2		
<b>Total</b>	<b>114,800</b>	<b>52</b>	<b>154.9</b>	<b>79</b>	<b>1,826.8</b>	<b>79</b>	<b>2,567.2</b>	<b>10</b>	<b>553.6</b>

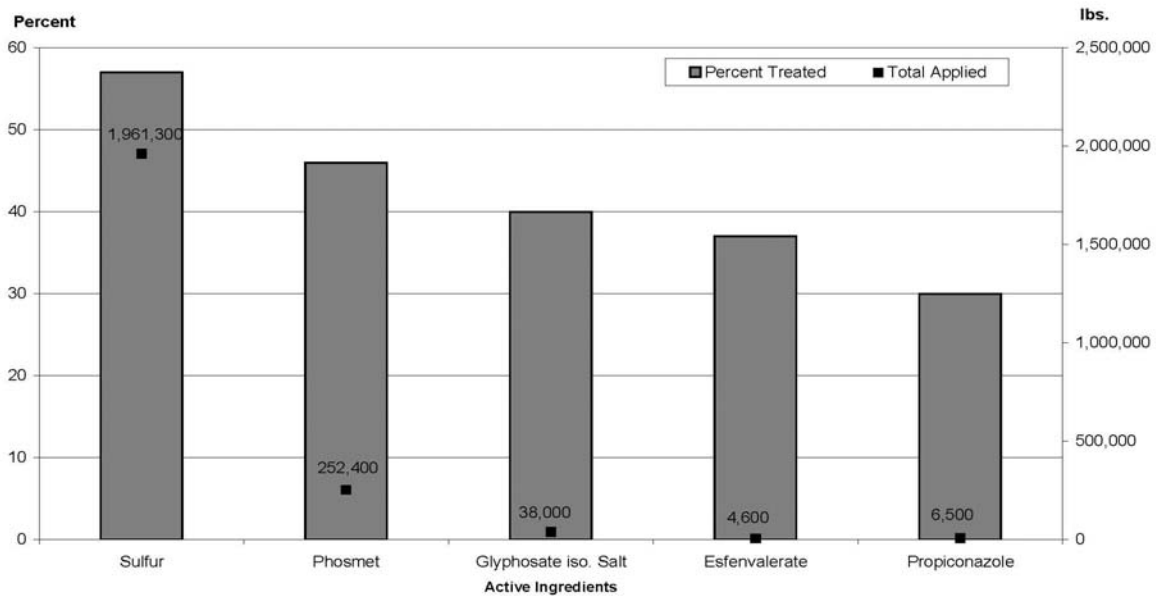
<sup>1</sup> Total Applied excludes Bt's (Bacillus thuringiensis) and other biologicals.

Quantities are not available because amounts of active ingredient are not comparable between products.

<sup>2</sup> Insufficient reports to publish data for one or more pesticide classes.

<sup>3</sup> Total applied is less than 50 pounds.

**Peaches - Percent of Acres Treated and Total Applied  
Top 5 Active Ingredients for 2005 in Program States**



**Peaches: Agricultural Chemical Applications,  
Program States, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dieth sal	1	2.1	0.481	0.998	1.1
2,4-D, dimeth. salt	16	1.2	0.711	0.840	15.8
Diuron	7	1.0	1.465	1.513	11.5
Fluazifop-P-butyl	1	1.4	0.105	0.150	0.2
Glyphosate	2	2.4	0.619	1.516	4.3
Glyphosate iso. salt	40	1.4	0.591	0.836	38.0
Norflurazon	4	1.3	1.158	1.506	6.9
Oryzalin	7	1.0	1.715	1.747	13.1
Oxyfluorfen	13	1.1	0.426	0.468	7.0
Paraquat	15	1.6	0.567	0.881	15.5
Pendimethalin	1	1.0	2.479	2.584	1.8
Sethoxydim	*	1.8	0.198	0.347	0.2
Simazine	18	1.1	1.096	1.241	26.0
Terbacil	4	1.0	0.579	0.580	2.6
<b>Insecticides</b>					
Azinphos-methyl	17	2.7	0.664	1.790	35.1
Benzoic acid	4	1.8	0.255	0.470	2.2
Bifenazate	4	1.1	0.469	0.528	2.2
Bt subsp. kurstaki	3	1.3	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Carbaryl	13	1.6	1.277	2.099	31.5
Chlorpyrifos	18	1.2	1.239	1.429	29.1
Clofentezine	3	1.1	0.154	0.171	0.5
Diazinon	3	2.1	1.204	2.480	9.1
Endosulfan	3	2.2	0.767	1.714	6.6
Esfenvalerate	37	2.1	0.051	0.108	4.6
Formetanate hydro.	2	1.7	0.550	0.936	2.1
Hexythiazox	7	1.1	0.156	0.168	1.3
Imidacloprid	2	1.8	0.047	0.085	0.2
Indoxacarb	*	1.0	0.112	0.112	( <sup>3</sup> )
Lambda-cyhalothrin	7	1.7	0.028	0.048	0.4
Malathion	2	2.2	1.416	3.093	7.3
Methomyl	5	2.5	0.478	1.185	6.2

See footnote(s) at end of table.

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**Peaches: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Insecticides (continued)					
Permethrin	8	3.1	0.182	0.566	5.0
Petroleum distillate	28	1.2	30.228	35.166	1,120.8
Petroleum oil	9	1.6	16.439	25.521	268.6
Phosmet	46	3.2	1.506	4.797	252.4
Pyridaben	1	1.0	0.188	0.193	0.1
Pyriproxyfen	*	1.1	0.191	0.204	( <sup>3</sup> )
Spinosad	5	1.2	0.103	0.120	0.7
Fungicides					
Azoxystrobin	4	1.4	0.213	0.296	1.3
Basic copper sulfate	2	1.3	3.130	4.045	7.8
Benomyl	*	2.0	0.312	0.612	0.2
Boscalid	16	1.2	0.012	0.014	0.3
Calcium polysulfide	*	1.1	12.673	13.357	6.2
Captan	25	3.8	1.645	6.211	181.8
Chlorothalonil	21	2.1	1.844	3.859	94.4
Copper amm. complex	5	3.0	0.529	1.600	9.0
Copper hydroxide	23	1.3	3.180	4.102	108.3
Copper oxide	3	1.0	5.063	5.312	20.7
Copper oxychloro. sul.	2	1.0	2.623	2.623	5.2
Copper oxychloride	1	1.4	3.475	4.856	6.8
Copper resinate	3	10.8	0.015	0.160	0.6
Copper sulfate	2	1.6	2.495	4.047	7.1
Cyprodinil	14	1.2	0.230	0.283	4.5
Fenarimol	*	2.3	0.054	0.127	( <sup>3</sup> )
Fenbuconazole	12	2.6	0.117	0.304	4.3
Ferbam	*	1.0	2.301	2.301	0.5
Iprodione	13	1.1	0.709	0.794	12.0
Myclobutanil	4	4.0	0.043	0.171	0.8
Oxytetracycline	7	3.3	0.146	0.480	4.1
Propiconazole	30	1.7	0.113	0.190	6.5
Pyraclostrobin	16	1.2	0.001	0.001	( <sup>3</sup> )
Sulfur	57	3.6	8.476	30.123	1,961.3

See footnote(s) at end of table.

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**Peaches: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Fungicides (continued)</b>					
Tebuconazole	10	1.5	0.154	0.235	2.7
Thiophanate-methyl	8	2.3	0.718	1.654	15.4
Thiram	*	1.6	2.484	4.088	0.8
Trifloxystrobin	*	1.0	0.059	0.061	( <sup>3</sup> )
Ziram	14	1.3	4.653	6.170	101.4
<b>Other Chemicals</b>					
E-8-Dodecenyl acetat	7	1.4	0.002	0.002	( <sup>3</sup> )
Tetradecen-1-OL (Z)	*	1.5	0.024	0.035	( <sup>3</sup> )
Z-8-Dodecanol	7	1.4	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Z-8-Dodecen acetate	7	1.4	0.023	0.034	0.3

\* Area applied is less than 0.5 percent.

<sup>1</sup> Bearing acreage in 2005 for the 7 Program States was 114,800 acres.  
States included are CA, GA, MI, NJ, PA, SC, and TX.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.



**Peaches: Agricultural Chemical Applications,  
California, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	16	1.3	0.457	0.584	6.1
Glyphosate	4	2.4	0.619	1.516	4.3
Glyphosate iso. salt	49	1.3	0.650	0.845	27.3
Norflurazon	4	1.2	0.869	1.033	3.1
Oryzalin	11	1.0	1.722	1.735	12.8
Oxyfluorfen	23	1.1	0.426	0.468	7.0
Paraquat	7	1.1	0.437	0.466	2.3
Pendimethalin	1	1.0	2.464	2.513	1.6
Simazine	14	1.1	0.611	0.682	6.4
<b>Insecticides</b>					
Benzoic acid	3	1.1	0.208	0.234	0.5
Bifenazate	6	1.1	0.467	0.529	2.0
Bt subsp. kurstaki	6	1.3	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Carbaryl	1	1.0	3.624	3.716	2.7
Chlorpyrifos	12	1.1	1.938	2.209	17.2
Clofentezine	4	1.1	0.169	0.185	0.5
Diazinon	2	1.3	1.875	2.380	3.4
Esfenvalerate	40	1.3	0.047	0.062	1.6
Fenbutatin-oxide	6	1.1	0.664	0.723	3.0
Formetanate hydro.	1	1.1	0.941	1.014	0.6
Hexythiazox	11	1.1	0.158	0.170	1.3
Lambda-cyhalothrin	8	1.6	0.028	0.043	0.2
Permethrin	4	2.0	0.235	0.476	1.3
Petroleum distillate	32	1.1	38.626	43.769	936.5
Phosmet	31	1.3	2.764	3.491	71.4
Spinosad	8	1.1	0.104	0.119	0.7
<b>Fungicides</b>					
Azoxystrobin	3	1.2	0.237	0.281	0.5
Boscalid	18	1.1	0.012	0.013	0.1
Copper hydroxide	28	1.2	4.224	5.027	95.0
Copper oxide	6	1.0	5.063	5.312	20.7

See footnote(s) at end of table.

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**Peaches: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Fungicides (continued)</b>					
Cyprodinil	18	1.2	0.238	0.284	3.4
Fenbuconazole	3	1.1	0.094	0.103	0.2
Iprodione	22	1.1	0.698	0.782	11.2
Propiconazole	24	1.2	0.113	0.134	2.1
Pyraclostrobin	18	1.1	0.001	0.001	( <sup>3</sup> )
Sulfur	47	1.7	10.968	18.879	589.1
Tebuconazole	12	1.4	0.177	0.251	1.9
Ziram	17	1.3	5.754	7.411	84.5
<b>Other Chemicals</b>					
Dichloropropene	3	1.0	295.428	300.099	546.5
E-8-Dodecenyl acetat	10	1.5	0.001	0.002	( <sup>3</sup> )
Z-8-Dodecanol	10	1.5	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Z-8-Dodecen acetate	10	1.5	0.021	0.031	0.2

<sup>1</sup> Total acreage in 2005 for California was 66,400 acres.

Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Peaches: Agricultural Chemical Applications,  
Georgia, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Diuron	8	1.0	1.125	1.125	1.0
Glyphosate iso. salt	38	1.5	0.355	0.523	2.3
Paraquat	31	1.2	0.477	0.572	2.0
Simazine	39	1.2	1.536	1.891	8.4
<b>Insecticides</b>					
Carbaryl	22	1.1	1.051	1.130	2.9
Chlorpyrifos	16	1.3	0.807	1.062	1.9
Esfenvalerate	48	1.5	0.028	0.042	0.2
Phosmet	99	4.5	1.295	5.785	65.6
<b>Fungicides</b>					
Captan	43	1.1	1.970	2.162	10.8
Chlorothalonil	78	2.0	2.202	4.420	39.6
Propiconazole	44	1.4	0.118	0.163	0.8
Sulfur	95	4.5	8.239	37.009	402.8

<sup>1</sup> Bearing acreage in 2005 for Georgia was 11,500 acres.

**Peaches: Agricultural Chemical Applications,  
Michigan, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	7	1.1	0.854	0.906	0.3
Glyphosate iso. salt	18	1.2	0.748	0.894	0.8
Paraquat	22	1.0	0.531	0.547	0.6
Terbacil	8	1.0	0.646	0.661	0.3
<b>Insecticides</b>					
Azinphos-methyl	32	2.5	0.618	1.530	2.5
Carbaryl	26	1.7	2.018	3.437	4.5
Chlorpyrifos	7	1.8	1.438	2.531	0.9
Endosulfan	18	2.1	0.804	1.689	1.5
Esfenvalerate	54	3.0	0.036	0.108	0.3
Imidacloprid	10	1.5	0.052	0.077	( <sup>2</sup> )
Lambda-cyhalothrin	28	2.3	0.032	0.074	0.1
Methomyl	14	1.4	0.631	0.869	0.6
Permethrin	14	2.2	0.138	0.307	0.2
Phosmet	24	2.3	1.331	3.023	3.6
Thiamethoxam	6	1.0	0.052	0.052	( <sup>2</sup> )
<b>Fungicides</b>					
Basic copper sulfate	12	1.0	0.645	0.654	0.4
Boscalid	15	1.7	0.008	0.013	( <sup>2</sup> )
Copper hydroxide	19	1.1	1.750	1.848	1.7
Copper oxychlo. sul.	4	1.0	2.536	2.536	0.5
Copper oxychloride	12	1.0	2.329	2.361	1.5
Dodine	19	2.7	0.412	1.117	1.0
Fenbuconazole	55	2.6	0.088	0.231	0.6
Oxytetracycline	24	2.8	0.148	0.406	0.5
Propiconazole	24	2.1	0.098	0.207	0.2
Sulfur	67	3.8	5.434	20.536	68.6
Tebuconazole	23	2.2	0.137	0.302	0.3
Thiophanate-methyl	3	1.7	0.568	0.944	0.2
Ziram	7	1.5	3.315	5.109	1.8
<b>Other Chemicals</b>					
E-8-Dodecenyl acetat	15	1.0	0.003	0.003	( <sup>2</sup> )

See footnote(s) at end of table.

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**Peaches: Agricultural Chemical Applications,  
Michigan, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Other Chemicals (continued)					
Z-8-Dodecanol	15	1.0	0.001	0.001	( <sup>2</sup> )
Z-8-Dodecen acetate	15	1.0	0.046	0.048	( <sup>2</sup> )

<sup>1</sup> Bearing acreage in 2005 for Michigan was 5,000 acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Peaches: Agricultural Chemical Applications,  
New Jersey, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Diuron	16	1.0	0.456	0.456	0.6
Glyphosate iso. salt	2	1.0	1.331	1.331	0.2
Norflurazon	3	1.1	2.144	2.292	0.5
Paraquat	16	1.0	0.412	0.416	0.5
Simazine	1	1.1	1.899	2.158	0.2
Terbacil	16	1.0	0.641	0.641	0.8
<b>Insecticides</b>					
Azinphos-methyl	67	3.7	0.382	1.395	7.0
Carbaryl	24	1.9	0.369	0.687	1.2
Chlorpyrifos	45	1.0	0.509	0.509	1.7
Endosulfan	25	2.0	0.701	1.415	2.6
Esfenvalerate	30	7.3	0.014	0.103	0.2
Imidacloprid	1	1.6	0.048	0.079	( <sup>2</sup> )
Methomyl	41	3.0	0.447	1.349	4.1
Petroleum distillate	31	1.0	11.197	11.197	25.8
Petroleum oil	46	1.0	13.730	13.730	47.1
Phosmet	47	4.1	1.351	5.473	19.2
<b>Fungicides</b>					
Captan	67	6.1	1.247	7.545	37.1
Chlorothalonil	51	3.1	1.399	4.275	16.2
Copper resinate	43	11.8	0.014	0.170	0.5
Cyprodinil	20	1.5	0.229	0.351	0.5
Fenbuconazole	44	3.7	0.060	0.219	0.7
Myclobutanil	38	4.7	0.027	0.126	0.4
Oxytetracycline	25	6.3	0.165	1.033	1.9
Propiconazole	26	3.4	0.119	0.403	0.8
Sulfur	72	7.7	6.112	46.789	248.3
Thiophanate-methyl	26	5.0	0.643	3.234	6.3
Ziram	14	1.8	1.919	3.422	3.5

<sup>1</sup> Bearing acreage in 2005 for New Jersey was 7,400 acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Peaches: Agricultural Chemical Applications,  
Pennsylvania, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	6	1.2	1.054	1.258	0.3
Diuron	12	1.0	1.724	1.724	0.9
Glyphosate iso. salt	6	1.1	0.632	0.695	0.2
Norflurazon	5	1.1	1.353	1.464	0.3
Paraquat	21	1.4	0.545	0.735	0.7
Simazine	12	1.0	1.150	1.193	0.6
Terbacil	3	1.0	0.796	0.796	0.1
<b>Insecticides</b>					
Azinphos-methyl	45	2.8	0.364	1.013	2.1
Benzoic acid	8	2.1	0.107	0.222	0.1
Carbaryl	29	1.8	0.927	1.710	2.2
Chlorpyrifos	6	1.0	0.988	1.031	0.3
Clofentezine	9	1.3	0.091	0.117	( <sup>2</sup> )
Diazinon	24	3.2	0.811	2.569	2.7
Endosulfan	6	1.7	0.771	1.278	0.4
Esfenvalerate	27	1.7	0.035	0.058	0.1
Gamma-cyhalothrin	15	3.6	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Imidacloprid	46	1.9	0.046	0.087	0.2
Lambda-cyhalothrin	8	1.9	0.016	0.031	( <sup>2</sup> )
Methomyl	21	2.0	0.408	0.801	0.8
Permethrin	9	2.4	0.194	0.462	0.2
Petroleum distillate	8	1.0	14.603	15.163	5.2
Petroleum oil	4	1.1	8.687	9.151	1.6
Phosmet	53	3.6	0.987	3.590	8.6
Pyridaben	4	1.1	0.198	0.214	( <sup>2</sup> )
<b>Fungicides</b>					
Captan	58	5.3	1.316	6.912	18.1
Chlorothalonil	55	2.8	1.055	2.921	7.2
Copper hydroxide	5	1.0	2.393	2.483	0.6
Myclobutanil	24	3.3	0.092	0.304	0.3
Oxytetracycline	10	3.7	0.073	0.269	0.1

See footnote(s) at end of table.

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**Peaches: Agricultural Chemical Applications,  
Pennsylvania, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Fungicides (continued)					
Propiconazole	21	2.0	0.090	0.183	0.2
Pyraclostrobin	10	1.8	0.008	0.015	( <sup>2</sup> )
Sulfur	53	4.1	3.984	16.448	38.9
Tebuconazole	17	2.2	0.168	0.362	0.3
Thiram	4	1.6	2.484	4.088	0.8
Ziram	4	1.6	3.129	5.113	0.8

<sup>1</sup> Bearing acreage in 2005 for Pennsylvania was 4,500 acres.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.



**Peaches: Agricultural Chemical Applications,  
South Carolina, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	51	1.1	1.129	1.190	8.5
Diuron	29	1.0	1.833	1.901	7.7
Glyphosate iso. salt	46	2.0	0.495	0.982	6.4
Norflurazon	8	1.7	1.580	2.714	2.9
Paraquat	39	2.4	0.547	1.304	7.2
Simazine	42	1.1	1.355	1.478	8.8
<b>Insecticides</b>					
Azinphos-methyl	44	2.9	1.033	2.984	18.2
Carbaryl	45	1.8	1.402	2.490	15.6
Chlorpyrifos	39	1.1	0.797	0.892	4.9
Esfenvalerate	33	4.6	0.102	0.473	2.2
Malathion	5	2.0	1.049	2.078	1.3
Permethrin	33	4.1	0.168	0.685	3.1
Petroleum distillate	34	1.3	18.818	25.377	121.9
Phosmet	89	4.9	1.293	6.377	79.3
<b>Fungicides</b>					
Azoxystrobin	14	1.6	0.206	0.321	0.6
Boscalid	25	1.7	0.012	0.021	0.1
Captan	86	4.0	1.826	7.281	87.4
Chlorothalonil	35	1.4	2.428	3.485	17.0
Copper amm. complex	38	3.1	0.529	1.657	8.9
Copper hydroxide	27	1.8	0.976	1.800	6.8
Cyprodinil	17	1.2	0.203	0.240	0.6
Fenbuconazole	22	2.2	0.231	0.520	1.6
Oxytetracycline	32	2.4	0.137	0.324	1.5
Propiconazole	62	2.3	0.113	0.258	2.3
Pyraclostrobin	25	1.7	0.001	0.002	( <sup>2</sup> )
Sulfur	83	5.6	9.317	52.553	610.0
Thiophanate-methyl	35	1.5	0.931	1.376	6.8
Ziram	21	1.3	2.404	3.045	8.8

<sup>1</sup> Bearing acreage in 2005 for South Carolina was 14,000 acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Peaches: Agricultural Chemical Applications,  
Texas, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Glyphosate iso. salt	16	1.6	0.560	0.871	0.8
Paraquat	7	2.7	2.057	5.576	2.2
<b>Insecticides</b>					
Azinphos-methyl	33	2.2	0.716	1.548	3.1
Carbaryl	19	2.0	1.068	2.118	2.4
Chlorpyrifos	23	1.4	1.140	1.548	2.2
Diazinon	8	1.1	0.927	0.993	0.5
Malathion	28	2.3	1.547	3.548	5.9
Methomyl	1	1.4	0.455	0.629	( <sup>2</sup> )
Petroleum distillate	16	1.4	8.360	11.710	11.3
Petroleum oil	19	1.0	13.918	14.389	16.7
Phosmet	22	3.3	1.080	3.576	4.7
Pyriproxyfen	2	1.0	0.252	0.258	( <sup>2</sup> )
<b>Fungicides</b>					
Captan	38	2.8	1.770	4.928	11.2
Chlorothalonil	41	1.8	1.414	2.540	6.3
Copper hydroxide	30	1.1	1.427	1.584	2.9
Fenbuconazole	19	3.0	0.222	0.674	0.8
Propiconazole	10	1.7	0.112	0.192	0.1
Sulfur	6	2.4	4.065	9.940	3.6
Thiophanate-methyl	4	2.4	0.444	1.075	0.2

<sup>1</sup> Bearing acreage in 2005 for Texas was 6,000 acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Pears: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States			
	ALL	CA	OR	WA
<b>Herbicides</b>				
2,4-D	*		*	*
2,4-D, dieth sal	*	*	*	
2,4-D, dimeth. salt	P	P	P	P
Acetochlor	*		*	
Alachlor	*			*
Atrazine	*		*	
Bromacil	*			*
Carfentrazone-ethyl	*		*	
Diuron	P	P	P	P
Flumioxazin	*	*	*	*
Glyphosate	*		*	
Glyphosate amm. salt	*			*
Glyphosate iso. salt	P	P	P	P
MCPA, dimethyl. salt	*			*
Napropamide	*			*
Norflurazon	P	*	*	P
Oryzalin	P	*	*	*
Oxyfluorfen	P	P	P	*
Paraquat	P	P	P	P
Pendimethalin	*			*
Pronamide	*		*	
Simazine	P	*	P	P
Sulfosate	*	*	*	*
<b>Insecticides</b>				
Abamectin	P	P	P	P
Acetamiprid	P	P	P	P
Aluminum phosphide	*			*
Azadirachtin	*		*	P
Azinphos-methyl	P	P	P	P
Benzoic acid	P	P	P	P
Bifenazate	P	P	P	P
Bifenthrin	*		*	
Bt subsp. kurstaki	*		*	P
Buprofezin	*		*	P
Carbaryl	P	*	*	P
Chlorpyrifos	P	P	P	P
Clofentezine	P	*	*	P
Clothianidin	P		P	P
Clove oil	*		*	
Cottonseed oil	*		*	
Cyd-X Granulo. Virus	P		P	P

See footnote(s) at end of table.

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**Pears: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States			
	ALL	CA	OR	WA
Insecticides (continued)				
Cyfluthrin	*			*
Diazinon	P	P		P
Dicofol	*		*	
Dimethoate	*		*	*
Endosulfan	P		P	P
Esfenvalerate	P	P	P	P
Etoxazole	*			*
Fenbutatin-oxide	P		*	*
Fenpropathrin	*	P	*	
Fenpyroximate	P		P	P
Formetanate hydro.	P	*	P	P
Hexythiazox	P	*	*	*
Imidacloprid	P		P	P
Kaolin	P	*	*	P
Lambda-cyhalothrin	P	P	P	P
Malathion	P	*	*	*
Methidathion	*		*	
Methyl parathion	*		*	
Novaluron	*			*
Oxamyl	*		*	
Permethrin	*		*	
Petroleum distillate	P	P	P	P
Petroleum oil	*		*	
Phosmet	P	P	P	P
Piperonyl butoxide	P			P
Potassium salts	*			*
Pymetrozine	*			*
Pyrethrins	*			*
Pyridaben	P		P	P
Pyriproxyfen	P	*	P	P
Spinosad	P	P	P	P
Thiacloprid	*		P	*
Thiamethoxam	P	*	P	P

See footnote(s) at end of table.

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**Pears: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States			
	ALL	CA	OR	WA
Fungicides				
Bacillus pumilus	*			*
Bacillus subtilis	P		*	*
Basic copper sulfate	P	*	*	P
Benomyl	*		*	
Boscalid	P			P
Butanone	*		*	
Calcium polysulfide	P	P	P	P
Captan	*	*	*	
Chloroneb	*			*
Chlorothalonil	*		*	
Copper (metallic)	*	*		
Copper chloride hyd.	*		*	
Copper hydroxide	P	P	P	P
Copper oxide	P	*	*	P
Copper oxychlor. sul.	*	*	*	
Copper oxychloride	*	*	*	
Copper sulfate	P	*	*	P
Cyprodinil	*	*	*	
Dodine	P	*	P	*
Fenarimol	P	*	*	P
Fosetyl-al	P	*	*	P
Iprodione	*		*	
Kresoxim-methyl	P	*	*	P
Mancozeb	P	P	P	P
Maneb	*		*	*
Myclobutanil	P		P	P
Oxytetracycline	P	P	P	P
Phosphorous acid	*		*	
Potassium bicarbon.	*		*	*
Propiconazole	*			*
Pseudomonas fluores.	P	P	*	*
Pyraclostrobin	P			P
Quintec	*			*
Streptomycin	P	P	P	P
Streptomycin sulfate	*	*	*	*
Sulfur	P	P	P	P
Thiophanate-methyl	P		P	P
Thiram	*			*
Triadimefon	P		P	P
Trifloxystrobin	P	P	P	P
Triflumizole	P	*	P	P
Triphenyltin hydrox.	*		*	

See footnote(s) at end of table.

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**Pears: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States			
	ALL	CA	OR	WA
Fungicides (continued)				
Ziram	P	P	P	P
Other Chemicals				
2,4-D, isoprop ester	*		*	
Acequinocyl	*		*	
Benzyladenine	*			*
Butenoic Acid Hydro.	P			P
Chlorophacinone	*			*
Chloropicrin	*			*
Cytokinins	P		P	P
Decenol	*			*
Decenyl acetate	*			*
Dichloropropene	*			*
Diphacinone	*	*		
Dodecadien-1-ol	P	P	P	P
Dodecanol	*	P		*
E-8-Dodecenyl acetat	*	P		*
Ethephon	*			*
Garlic oil	*		*	
Gibberellic acid	*			*
Gibberellins A4A7	*			*
Methyl anthranilate	*			*
Monocarbamide dihyd.	*		*	
NAA	P	P	P	P
NAA, Potassium salt	P		P	P
NAD	*			*
Octadecadien (E,Z)	*		*	P
Octadecadien (Z,Z)	*		*	P
Pelargonic acid	*			*
Prohexadione calcium	*		*	
Spirodiclofen	*		*	
Strychnine	*	*		*
Tetradecanol	*	P		*
Tetradecen-1-OL (Z)	*		*	
Tetradecen-1-yl (E)	*		*	
Z-8-Dodecanol	*	P		*
Z-8-Dodecen acetate	*	P		*
Zinc phosphide	*	*		P

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Pears: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide <sup>1</sup>		Fungicide <sup>1</sup>		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	16,000	59	12.6	82	966.4	81	247.9	61	1.0
OR	17,400	34	34.6	98	1,302.4	96	548.7	47	4.2
WA	26,300	36	30.0	95	2,935.8	82	344.1	50	6.9
Total	59,700	42	77.2	92	5,204.6	86	1,140.7	52	12.1

<sup>1</sup> Total Applied excludes Bt's (*Bacillus thuringiensis*) and other biologicals.

Quantities are not available because amounts of active ingredient are not comparable between products.

**Pears: Agricultural Chemical Applications,  
Program States, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	4	1.5	0.995	1.445	3.6
Diuron	4	1.2	1.484	1.747	4.2
Glyphosate iso. salt	37	1.4	0.937	1.317	29.4
Norflurazon	3	1.3	2.224	2.882	6.0
Oryzalin	1	1.1	2.100	2.372	1.4
Oxyfluorfen	9	1.1	0.869	0.957	5.2
Paraquat	10	1.7	0.789	1.322	8.1
Simazine	10	1.1	2.498	2.653	15.7
<b>Insecticides</b>					
Abamectin	66	1.3	0.019	0.024	1.0
Acetamiprid	40	1.6	0.130	0.203	4.9
Azinphos-methyl	38	1.6	1.048	1.696	38.1
Benzoic acid	23	1.2	0.233	0.277	3.8
Bifenazate	15	1.2	0.444	0.521	4.7
Carbaryl	5	1.1	1.689	1.889	6.1
Chlorpyrifos	16	1.0	2.021	2.114	20.3
Clofentezine	5	1.2	0.184	0.215	0.6
Clothianidin	9	1.1	0.178	0.193	1.0
Cyd-X Granulo. Viru <sup>2</sup>	6	1.4			
Diazinon	3	1.0	1.009	1.054	1.9
Endosulfan	28	1.2	2.067	2.397	39.5
Esfenvalerate	18	1.2	0.057	0.068	0.7
Fenbutatin-oxide	5	1.1	0.848	0.894	2.5
Fenpyroximate	15	1.1	0.093	0.106	1.0
Formetanate hydro.	9	1.2	0.524	0.636	3.2
Hexythiazox	1	1.0	0.172	0.180	0.1
Imidacloprid	4	1.4	0.131	0.190	0.4
Kaolin	29	2.3	41.748	94.338	1,653.3
Lambda-cyhalothrin	29	1.2	0.038	0.046	0.8
Malathion	1	1.3	10.573	13.402	5.1
Petroleum distillate	83	4.0	15.852	64.084	3,166.3
Phosmet	24	1.8	3.459	6.142	89.3

See footnote(s) at end of table.

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**Pears: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Insecticides (continued)</b>					
Piperonyl butoxide	3	1.1	1.383	1.471	3.1
Pyridaben	18	1.2	0.353	0.427	4.5
Pyriproxyfen	36	1.1	0.106	0.121	2.6
Spinosad	12	1.2	0.112	0.134	1.0
Thiamethoxam	34	1.2	0.076	0.094	1.9
<b>Fungicides</b>					
Bacillus subtilis <sup>2</sup>	1	1.1			
Basic copper sulfate	5	1.0	0.722	0.750	2.2
Boscalid	2	1.2	0.018	0.021	( <sup>3</sup> )
Calcium polysulfide	19	1.4	22.408	30.557	338.3
Copper hydroxide	28	1.3	2.288	2.937	49.1
Copper oxide	5	1.1	3.842	4.409	13.1
Copper sulfate	2	1.0	2.011	2.098	2.1
Dodine	9	1.6	0.730	1.141	6.2
Fenarimol	7	1.5	0.078	0.114	0.5
Fosetyl-al	2	1.3	3.401	4.377	4.2
Kresoxim-methyl	3	1.4	0.137	0.195	0.3
Mancozeb	39	2.2	3.753	8.078	189.0
Myclobutanil	1	1.2	0.125	0.152	0.1
Oxytetracycline	34	3.3	0.129	0.421	8.4
Pseudomonas fluores.	5	2.4	0.133	0.313	1.0
Pyraclostrobin	2	1.2	0.001	0.001	( <sup>3</sup> )
Streptomycin	16	2.6	0.095	0.243	2.3
Sulfur	40	1.5	10.829	16.066	381.0
Thiophanate-methyl	6	1.0	0.732	0.763	2.6
Triadimefon	3	1.1	0.202	0.226	0.4
Trifloxystrobin	29	1.6	0.068	0.109	1.9
Triflumizole	40	1.6	0.260	0.405	9.7
Ziram	27	1.6	4.700	7.425	121.0
<b>Other Chemicals</b>					
Butenoic Acid Hydro.	*	1.2	0.102	0.121	( <sup>3</sup> )

See footnote(s) at end of table.

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**Pears: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Other Chemicals (continued)					
Cytokinins	6	1.4	<sup>(4)</sup>	<sup>(4)</sup>	<sup>(3)</sup>
Dodecadien-1-ol	18	1.1	0.088	0.100	1.0
NAA	29	1.2	0.065	0.081	1.4
NAA, Potassium salt	6	1.1	0.061	0.064	0.2

\* Area applied is less than 0.5 percent.

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 59,700 acres.

States included are CA, OR, and WA.

<sup>2</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.

<sup>3</sup> Total applied is less than 50 lbs.

<sup>4</sup> Rate per acre is less than 0.0005 lbs.

**Pears: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	5	1.3	0.656	0.875	0.7
Diuron	5	1.3	0.912	1.162	0.9
Glyphosate iso. salt	56	1.5	0.638	0.928	8.4
Oxyfluorfen	13	1.3	0.179	0.225	0.5
Paraquat	5	1.2	0.365	0.439	0.4
<b>Insecticides</b>					
Abamectin	53	1.3	0.012	0.016	0.1
Acetamiprid	7	1.5	0.111	0.173	0.2
Azinphos-methyl	30	1.3	1.416	1.884	9.1
Benzoic acid	30	1.3	0.226	0.293	1.4
Bifenazate	6	1.1	0.392	0.429	0.4
Chlorpyrifos	7	1.1	1.353	1.550	1.7
Diazinon	10	1.0	1.109	1.160	1.8
Esfenvalerate	51	1.2	0.055	0.067	0.6
Fenpropathrin	6	1.1	0.347	0.369	0.3
Lambda-cyhalothrin	7	1.6	0.040	0.065	0.1
Petroleum distillate	74	3.2	23.786	75.666	892.8
Phosmet	27	1.5	4.311	6.268	27.2
Spinosad	8	1.3	0.088	0.117	0.2
<b>Fungicides</b>					
Calcium polysulfide	21	1.1	29.874	32.765	107.7
Copper hydroxide	25	1.6	0.726	1.134	4.6
Mancozeb	37	2.2	3.326	7.290	43.3
Oxytetracycline	42	6.3	0.104	0.657	4.4
Pseudomonas fluores.	17	2.3	0.109	0.247	0.7
Streptomycin	33	3.5	0.066	0.231	1.2
Sulfur	12	1.7	10.424	17.335	32.9
Trifloxystrobin	58	2.0	0.070	0.140	1.3
Ziram	21	2.9	4.251	12.468	42.0

See footnote(s) at end of table.

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**Pears: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Other Chemicals					
Dodecadien-1-ol	42	1.2	0.028	0.034	0.2
Dodecanol	19	1.1	0.008	0.009	<sup>(2)</sup>
E-8-Dodecenyl acetat	5	1.2	0.001	0.002	<sup>(2)</sup>
NAA	47	1.2	0.074	0.093	0.7
Tetradecanol	19	1.1	0.002	0.002	<sup>(2)</sup>
Z-8-Dodecanol	5	1.2	<sup>(3)</sup>	<sup>(3)</sup>	<sup>(2)</sup>
Z-8-Dodecen acetate	5	1.2	0.018	0.023	<sup>(2)</sup>

<sup>1</sup> Total acreage in 2005 for California was 16,000 acres.

Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Pears: Agricultural Chemical Applications,  
Oregon, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	2	1.2	0.881	1.033	0.3
Diuron	6	1.2	1.598	1.889	1.8
Glyphosate iso. salt	26	1.1	1.597	1.731	7.9
Oxyfluorfen	18	1.0	1.468	1.468	4.6
Paraquat	20	1.9	0.919	1.738	6.0
Simazine	24	1.0	2.676	2.709	11.5
<b>Insecticides</b>					
Abamectin	67	1.2	0.021	0.025	0.3
Acetamiprid	53	1.4	0.135	0.186	1.7
Azinphos-methyl	39	1.7	0.916	1.540	10.4
Benzoic acid	27	1.1	0.242	0.277	1.3
Bifenazate	30	1.2	0.450	0.559	2.9
Chlorpyrifos	15	1.0	1.991	2.033	5.4
Clothianidin	11	1.0	0.178	0.178	0.3
Cyd-X Granulo. Viru <sup>2</sup>	11	1.2			
Endosulfan	26	1.1	2.338	2.684	12.2
Esfenvalerate	11	1.1	0.046	0.051	0.1
Fenpyroximate	14	1.0	0.097	0.099	0.2
Formetanate hydro.	4	1.0	0.363	0.363	0.2
Imidacloprid	2	1.0	0.145	0.152	( <sup>3</sup> )
Lambda-cyhalothrin	46	1.2	0.039	0.045	0.4
Petroleum distillate	87	3.7	15.035	55.456	836.8
Phosmet	36	2.3	3.217	7.532	47.2
Pyridaben	38	1.2	0.406	0.494	3.2
Pyriproxyfen	64	1.1	0.107	0.121	1.4
Spinosad	6	1.0	0.140	0.140	0.1
Thiacloprid	15	1.3	0.244	0.309	0.8
Thiamethoxam	23	1.2	0.077	0.094	0.4

See footnote(s) at end of table.

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**Pears: Agricultural Chemical Applications,  
Oregon, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Fungicides</b>					
Calcium polysulfide	31	1.6	19.006	30.324	162.2
Copper hydroxide	26	1.2	3.951	4.684	21.3
Dodine	23	1.2	0.624	0.780	3.1
Mancozeb	78	2.4	3.729	8.925	120.7
Myclobutanil	1	1.8	0.130	0.233	( <sup>3</sup> )
Oxytetracycline	26	1.3	0.199	0.253	1.1
Streptomycin	21	1.4	0.193	0.262	1.0
Sulfur	57	1.5	11.697	17.864	178.7
Thiophanate-methyl	12	1.1	0.713	0.756	1.6
Triadimefon	5	1.0	0.250	0.250	0.2
Trifloxystrobin	41	1.1	0.064	0.071	0.5
Triflumizole	60	1.9	0.255	0.493	5.1
Ziram	39	1.2	5.170	6.016	40.8
<b>Other Chemicals</b>					
Cytokinins	15	1.5	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>3</sup> )
Dodecadien-1-ol	14	1.0	0.272	0.273	0.7
NAA	17	1.3	0.073	0.096	0.3
NAA, Potassium salt	5	1.0	0.057	0.057	( <sup>3</sup> )

<sup>1</sup> Bearing acreage in 2005 for Oregon was 17,400 acres.

<sup>2</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.

<sup>3</sup> Total applied is less than 50 lbs.

<sup>4</sup> Rate per acre is less than 0.0005 lbs.

**Pears: Agricultural Chemical Applications,  
Washington, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	5	1.6	1.196	1.916	2.6
Diuron	3	1.1	2.116	2.233	1.5
Glyphosate iso. salt	33	1.5	0.990	1.508	13.2
Norflurazon	7	1.3	2.343	3.150	5.6
Paraquat	7	1.5	0.627	0.923	1.7
Simazine	5	1.2	2.291	2.660	3.5
<b>Insecticides</b>					
Abamectin	73	1.3	0.021	0.027	0.5
Acetamiprid	52	1.7	0.129	0.218	3.0
Azadirachtin	16	2.0	0.024	0.048	0.2
Azinphos-methyl	42	1.7	1.000	1.710	18.7
Benzoic acid	16	1.1	0.230	0.258	1.1
Bifenazate	10	1.1	0.448	0.478	1.3
Bt subsp. kurstaki	4	1.4	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Buprofezin	2	1.3	2.735	3.517	2.2
Carbaryl	5	1.3	1.353	1.725	2.4
Chlorpyrifos	22	1.0	2.180	2.263	13.2
Clofentezine	6	1.0	0.224	0.226	0.3
Clothianidin	13	1.1	0.177	0.201	0.7
Cyd-X Granulo. Viru <sup>4</sup>	6	1.7			
Diazinon	1	1.0	0.325	0.336	0.1
Endosulfan	45	1.2	1.961	2.283	27.3
Esfenvalerate	3	1.2	0.093	0.109	0.1
Fenpyroximate	25	1.2	0.091	0.109	0.7
Formetanate hydro.	17	1.2	0.545	0.681	3.0
Imidacloprid	7	1.5	0.130	0.196	0.4
Kaolin	51	2.1	48.390	103.276	1,394.9
Lambda-cyhalothrin	31	1.2	0.037	0.044	0.4
Petroleum distillate	86	4.8	13.400	63.784	1,436.7
Phosmet	15	1.2	3.066	3.728	14.9
Piperonyl butoxide	8	1.1	1.383	1.471	3.1
Pyridaben	15	1.2	0.258	0.309	1.2

See footnote(s) at end of table.

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**Pears: Agricultural Chemical Applications,  
Washington, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Insecticides (continued)</b>					
Pyriproxyfen	38	1.2	0.105	0.123	1.2
Spinosad	18	1.2	0.114	0.137	0.7
Thiamethoxam	62	1.2	0.075	0.094	1.5
<b>Fungicides</b>					
Basic copper sulfate	4	1.1	0.906	0.999	1.1
Boscalid	5	1.2	0.018	0.021	( <sup>3</sup> )
Calcium polysulfide	9	1.2	23.148	27.994	68.4
Copper hydroxide	31	1.2	2.385	2.855	23.2
Copper oxide	2	1.1	3.666	4.155	2.7
Copper sulfate	3	1.1	1.734	1.845	1.2
Fenarimol	3	1.7	0.081	0.140	0.1
Fosetyl-al	2	1.4	3.084	4.192	2.4
Kresoxim-methyl	3	1.0	0.179	0.187	0.1
Mancozeb	15	1.2	5.099	6.300	25.0
Myclobutanil	2	1.1	0.124	0.137	0.1
Oxytetracycline	34	1.9	0.167	0.325	2.9
Pyraclostrobin	5	1.2	0.001	0.001	( <sup>3</sup> )
Streptomycin	1	1.0	0.227	0.229	0.1
Sulfur	45	1.4	10.085	14.277	169.4
Thiophanate-methyl	5	1.0	0.766	0.774	1.0
Triadimefon	4	1.2	0.167	0.204	0.2
Trifloxystrobin	3	1.2	0.067	0.078	0.1
Triflumizole	50	1.3	0.264	0.333	4.4
Ziram	24	1.3	4.796	6.179	38.3
<b>Other Chemicals</b>					
Butenoic Acid Hydro.	1	1.2	0.102	0.121	( <sup>3</sup> )
Cytokinins	5	1.3	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Dodecadien-1-ol	5	1.0	0.106	0.110	0.2
NAA	26	1.2	0.051	0.060	0.4
NAA, Potassium salt	10	1.1	0.062	0.067	0.2
Octadecadien (E,Z)	6	1.2	0.104	0.124	0.2

See footnote(s) at end of table.

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**Pears: Agricultural Chemical Applications,  
Washington, 2005 <sup>1</sup> (continued)**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Other Chemicals (continued)					
Octadecadien (Z,Z)	6	1.2	1.458	1.743	2.8
Zinc phosphide	4	1.6	0.086	0.138	0.2

<sup>1</sup> Bearing acreage in 2005 for Washington was 26,300 acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

<sup>4</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.

**Plums: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	CA
<b>Herbicides</b>		
2,4-D, dieth sal	*	*
2,4-D, dimeth. salt	P	P
Fluazifop-P-butyl	*	*
Flumioxazin	*	*
Glyphosate	P	P
Glyphosate iso. salt	P	P
Norflurazon	P	P
Oryzalin	P	P
Oxyfluorfen	P	P
Paraquat	P	P
Pendimethalin	*	*
Simazine	P	P
<b>Insecticides</b>		
Benzoic acid	*	*
Bifenazate	P	P
Bt subsp. kurstaki	P	P
Carbaryl	*	*
Chlorpyrifos	P	P
Diazinon	P	P
Diflubenzuron	*	*
Esfenvalerate	P	P
Fenbutatin-oxide	*	*
Hexythiazox	P	P
Imidacloprid	*	*
Lambda-cyhalothrin	*	*
Methidathion	*	*
Petroleum distillate	P	P
Phosmet	P	P
Potassium salts	*	*
Propargite	*	*
Pyrethrins	*	*
Pyriproxyfen	P	P
Spinosad	P	P

See footnote(s) at end of table.

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**Plums: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States	
	ALL	CA
<b>Fungicides</b>		
Azoxystrobin	*	*
Basic copper sulfate	*	*
Boscalid	P	P
Captan	P	P
Chlorothalonil	*	*
Copper hydroxide	P	P
Copper oxide	P	P
Cyprodinil	P	P
Dicloran	*	*
Iprodione	P	P
Propiconazole	P	P
Pyraclostrobin	P	P
Sulfur	P	P
Thiophanate-methyl	P	P
Trifloxystrobin	*	*
Ziram	*	*
<b>Other Chemicals</b>		
Chloropicrin	*	*
Dichloropropene	*	*
Diphacinone	*	*
Dodecadien-1-ol	*	*
Strychnine	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Plums: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
California, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	36,000	67	55.0	57	729.9	45	79.0	1	20.5

**Plums: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	26	1.2	0.492	0.602	5.7
Glyphosate	6	1.7	0.789	1.319	2.8
Glyphosate iso. salt	60	1.6	0.761	1.245	27.0
Norflurazon	6	1.1	0.960	1.091	2.5
Oryzalin	12	1.2	1.783	2.189	9.6
Oxyfluorfen	22	1.2	0.425	0.522	4.1
Paraquat	10	1.1	0.422	0.481	1.7
Simazine	3	1.2	0.848	1.016	1.2
<b>Insecticides</b>					
Bifenazate	8	1.2	0.499	0.603	1.7
Bt subsp. kurstaki	3	1.0	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Chlorpyrifos	11	1.1	1.924	2.115	8.4
Diazinon	1	1.1	1.869	2.109	1.0
Esfenvalerate	43	1.1	0.041	0.046	0.7
Hexythiazox	6	1.3	0.152	0.191	0.4
Petroleum distillate	41	1.2	38.924	47.610	702.9
Phosmet	11	1.2	2.681	3.164	12.0
Pyriproxyfen	4	1.1	0.093	0.105	0.1
Spinosad	5	1.1	0.112	0.126	0.2
<b>Fungicides</b>					
Boscalid	4	1.1	0.012	0.012	( <sup>3</sup> )
Captan	2	1.1	2.815	2.963	2.3
Copper hydroxide	8	1.1	3.529	3.815	11.6
Copper oxide	10	1.3	3.061	3.928	13.7
Cyprodinil	8	1.3	0.242	0.307	0.9
Iprodione	6	1.1	0.654	0.745	1.7
Propiconazole	21	1.1	0.113	0.125	1.0
Pyraclostrobin	4	1.1	0.001	0.001	( <sup>3</sup> )
Sulfur	17	1.3	5.635	7.410	45.2
Thiophanate-methyl	2	1.1	0.973	1.063	0.9

<sup>1</sup> Total acreage in 2005 for California was 36,000 acres.

Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Prunes: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	CA
<b>Herbicides</b>		
2,4-D, dieth sal	*	*
2,4-D, dimeth. salt	P	P
Flumioxazin	*	*
Glufosinate-ammonium	*	*
Glyphosate	*	*
Glyphosate iso. salt	P	P
Norflurazon	*	*
Oryzalin	P	P
Oxyfluorfen	P	P
Paraquat	P	P
Pendimethalin	*	*
Sethoxydim	*	*
<b>Insecticides</b>		
Abamectin	*	*
Aluminum phosphide	*	*
Bifenazate	*	*
Bt subsp. kurstaki	*	*
Chlorpyrifos	P	P
Diazinon	P	P
Dicofol	*	*
Diflubenzuron	*	*
Esfenvalerate	P	P
Fenbutatin-oxide	*	*
Hexythiazox	*	*
Kaolin	*	*
Lambda-cyhalothrin	P	P
Methodathion	*	*
Methyl bromide	*	*
Neem oil, clar. hyd.	*	*
Petroleum distillate	P	P
Potassium salts	*	*
Propargite	*	*
Pyrethrins	*	*
Spinosad	*	*

See footnote(s) at end of table.

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**Prunes: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States	
	ALL	CA
<b>Fungicides</b>		
Azoxystrobin	P	P
Boscalid	P	P
Captan	P	P
Chlorothalonil	P	P
Copper hydroxide	P	P
Copper oxide	*	*
Cyprodinil	P	P
Iprodione	*	*
Myclobutanil	*	*
Phosphorous acid	*	*
Propiconazole	P	P
Pyraclostrobin	P	P
Sulfur	P	P
Thiophanate-methyl	*	*
Trifloxystrobin	*	*
<b>Other Chemicals</b>		
Dichloropropene	*	*
Diphacinone	*	*
Strychnine	P	P

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Prunes: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
California, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	67,000	60	71.8	55	660.4	55	414.8	3	26.4

**Prunes: Agricultural Chemical Applications,  
California, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Appli-cations	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	12	1.2	0.634	0.759	5.9
Glyphosate iso. salt	52	1.8	0.651	1.186	41.7
Oryzalin	9	1.1	1.368	1.534	9.3
Oxyfluorfen	25	1.3	0.213	0.272	4.6
Paraquat	12	1.4	0.553	0.787	6.3
<b>Insecticides</b>					
Chlorpyrifos	4	1.2	1.866	2.180	6.1
Diazinon	5	1.5	1.924	2.793	9.9
Esfenvalerate	29	1.1	0.040	0.044	0.9
Lambda-cyhalothrin	5	1.2	0.024	0.028	0.1
Petroleum distillate	38	1.1	20.941	23.772	612.2
<b>Fungicides</b>					
Azoxystrobin	1	1.2	0.191	0.225	0.2
Boscalid	5	1.1	0.013	0.015	0.1
Captan	23	1.1	2.774	3.018	47.5
Chlorothalonil	7	1.3	2.682	3.606	18.1
Copper hydroxide	4	1.1	2.424	2.700	7.0
Cyprodinil	8	1.1	0.213	0.231	1.3
Propiconazole	21	1.2	0.108	0.129	1.8
Pyraclostrobin	5	1.1	0.001	0.001	( <sup>2</sup> )
Sulfur	31	1.3	12.070	15.456	324.9
<b>Other Chemicals</b>					
Strychnine	3	1.3	0.012	0.016	( <sup>2</sup> )

<sup>1</sup> Total acreage in 2005 for California was 67,000 acres.  
Acreage includes both bearing and nonbearing acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Raspberries: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States		
	ALL	OR	WA
<b>Herbicides</b>			
Carfentrazone-ethyl	P	P	P
Clethodim	*	*	
Dichlobenil	*	*	*
Diuron	P	P	P
Fluazifop-P-butyl	*	*	*
Glyphosate iso. salt	*	*	
Isoxaben	*		*
Napropamide	*	*	
Norflurazon	P	P	P
Oryzalin	P	P	P
Oxyfluorfen	*	*	P
Paraquat	P	P	P
Pronamide	*	*	
Sethoxydim	*	*	
Simazine	P	P	P
Terbacil	*	*	
<b>Insecticides</b>			
Azadirachtin	*		*
Azinphos-methyl	*	*	
Bifenthrin	P	P	P
Bt subsp. kurstaki	P	P	P
Diazinon	P	P	P
Esfenvalerate	*	*	
Fenamiphos	P	*	*
Fenbutatin-oxide	*	*	*
Hexythiazox	*		*
Imidacloprid	*	*	
Malathion	P	P	P
Petroleum distillate	*	P	*
Piperonyl butoxide	*		*
Pyrethrins	*		*
Rotenone	*		*
Spinosad	*	*	P

See footnote(s) at end of table.

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**Raspberries: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States		
	ALL	OR	WA
<b>Fungicides</b>			
Azoxystrobin	*	P	*
Boscalid	P	P	P
Calcium polysulfide	P	P	P
Captan	P	P	P
Copper amm. complex	*	*	
Copper hydroxide	*	*	P
Copper sulfate	*	*	*
Cyprodinil	P	P	P
Fenbuconazole	*	*	
Fenhexamid	P	P	P
Fludioxonil	P	P	P
Fosetyl-al	*	*	*
Iprodione	*	*	*
Mancozeb	*		*
Mefenoxam	P	P	P
Myclobutanil	P	P	P
Phosphorous acid	*	*	
Pyraclostrobin	P	P	P
Sulfur	*	*	*
Vinclozolin	*		*
<b>Other Chemicals</b>			
Alk. dim. benzyl 60%	*	*	
Alk. dim. eth. benz.	*	*	
Cytokinins	*		*
Harpin protein	*	*	
Metaldehyde	*	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Raspberries: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
OR	3,200	80	6.7	64	8.7	76	28.6	3	( <sup>1</sup> )
WA <sup>2</sup>	9,500	93	15.0	88	17.9	98	83.0		
Total	12,700	90	21.7	82	26.6	93	111.6	3	0.0

<sup>1</sup> Total applied is less than 50 pounds.

<sup>2</sup> Insufficient reports to publish data for one or more pesticide classes.

**Raspberries: Agricultural Chemical Applications,  
Program States, 2005<sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Carfentrazone-ethyl	41	1.2	0.028	0.033	0.2
Diuron	18	1.1	0.767	0.825	1.9
Norflurazon	7	1.0	1.188	1.188	1.1
Oryzalin	21	1.0	2.126	2.130	5.6
Paraquat	76	1.6	0.392	0.637	6.2
Simazine	53	1.1	0.767	0.881	5.9
<b>Insecticides</b>					
Bifenthrin	70	1.4	0.094	0.135	1.2
Bt subsp. kurstaki	23	1.8	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Diazinon	44	1.3	1.076	1.388	7.7
Fenamiphos	3	1.0	4.286	4.286	1.7
Malathion	42	1.0	1.158	1.170	6.2
<b>Fungicides</b>					
Boscalid	56	1.1	0.019	0.021	0.1
Calcium polysulfide	37	1.1	10.356	11.060	52.4
Captan	81	2.7	1.342	3.673	37.6
Cyprodinil	83	1.6	0.277	0.431	4.6
Fenhexamid	31	1.4	0.626	0.873	3.4
Fludioxonil	83	1.6	0.185	0.287	3.0
Mefenoxam	24	1.1	0.467	0.530	1.6
Myclobutanil	12	1.0	0.050	0.050	0.1
Pyraclostrobin	56	1.2	0.005	0.006	( <sup>3</sup> )

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 12,700 acres. States included are OR and WA.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Raspberries: Agricultural Chemical Applications,  
Oregon, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Carfentrazone-ethyl	40	1.0	0.049	0.050	0.1
Diuron	21	1.0	0.756	0.756	0.5
Norflurazon	11	1.0	1.472	1.472	0.5
Oryzalin	29	1.0	3.782	3.801	3.5
Paraquat	61	1.0	0.394	0.414	0.8
Simazine	16	1.0	1.689	1.741	0.9
<b>Insecticides</b>					
Bifenthrin	41	1.0	0.095	0.100	0.1
Bt subsp. kurstaki	13	1.2	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Diazinon	6	1.1	1.956	2.104	0.4
Malathion	10	1.0	1.942	1.942	0.6
Petroleum distillate	25	1.1	7.172	7.722	6.3
<b>Fungicides</b>					
Azoxystrobin	13	1.1	0.097	0.111	( <sup>3</sup> )
Boscalid	47	1.1	0.020	0.021	( <sup>3</sup> )
Calcium polysulfide	42	1.0	16.257	16.264	22.1
Captan	57	1.2	1.928	2.335	4.2
Cyprodinil	55	1.3	0.327	0.428	0.8
Fenhexamid	7	1.2	0.671	0.791	0.2
Fludioxonil	55	1.3	0.218	0.285	0.5
Mefenoxam	13	1.0	0.778	0.778	0.3
Myclobutanil	13	1.0	0.035	0.035	( <sup>3</sup> )
Pyraclostrobin	48	1.1	0.007	0.008	( <sup>3</sup> )

<sup>1</sup> Bearing acreage in 2005 for Oregon was 3,200 acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Raspberries: Agricultural Chemical Applications,  
Washington, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Carfentrazone-ethyl	41	1.2	0.023	0.028	0.1
Diuron	17	1.1	0.772	0.854	1.4
Norflurazon	6	1.0	0.999	0.999	0.5
Oryzalin	18	1.0	1.226	1.226	2.1
Oxyfluorfen	42	1.4	0.072	0.102	0.4
Paraquat	81	1.8	0.392	0.694	5.3
Simazine	65	1.2	0.700	0.811	5.0
<b>Insecticides</b>					
Bifenthrin	80	1.5	0.094	0.142	1.1
Bt subsp. kurstaki	27	1.9	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>3</sup> )
Diazinon	56	1.3	1.049	1.362	7.3
Malathion	52	1.0	1.108	1.120	5.6
Spinosad	7	1.1	0.083	0.088	0.1
<b>Fungicides</b>					
Boscalid	59	1.1	0.018	0.021	0.1
Calcium polysulfide	36	1.1	8.194	8.973	30.3
Captan	89	3.1	1.292	3.962	33.3
Copper hydroxide	40	1.2	0.916	1.092	4.2
Cyprodinil	93	1.6	0.269	0.432	3.8
Fenhexamid	39	1.4	0.623	0.877	3.2
Fludioxonil	93	1.6	0.179	0.288	2.5
Mefenoxam	28	1.2	0.424	0.490	1.3
Myclobutanil	11	1.0	0.055	0.055	0.1
Pyraclostrobin	58	1.2	0.005	0.006	( <sup>3</sup> )

<sup>1</sup> Bearing acreage in 2005 for Washington was 9,500 acres.

<sup>2</sup> Rate per acre is less than 0.0005 lbs.

<sup>3</sup> Total applied is less than 50 lbs.

**Tangelos: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	FL
<b>Herbicides</b>		
2,4-D, isoprop. salt	P	P
Bromacil	*	*
Diuron	P	P
Glyphosate amm. salt	*	*
Glyphosate iso. salt	P	P
Norflurazon	P	P
Paraquat	P	P
Sethoxydim	*	*
Simazine	P	P
Sulfosate	*	*
Trifluralin	*	*
<b>Insecticides</b>		
Abamectin	P	P
Aldicarb	*	*
Carbaryl	*	*
Chlorpyrifos	*	*
Dicofol	*	*
Diflubenzuron	P	P
Fenbutatin-oxide	P	P
Fenpropathrin	*	*
Imidacloprid	*	*
Neem oil, clar. hyd.	*	*
Oxamyl	*	*
Petroleum distillate	P	P
Petroleum oil	*	*
Phosmet	*	*
Propargite	*	*
Pyrethrins	*	*
Pyridaben	P	P
Pyriproxyfen	*	*
Rotenone	*	*
Sulfur	P	P

See footnote(s) at end of table.

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**Tangelos: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States	
	ALL	FL
<b>Fungicides</b>		
Azoxystrobin	P	P
Bacillus subtilis	*	*
Basic copper sulfate	*	*
Copper hydroxide	P	P
Copper oxychloride	*	*
Copper sulfate	P	P
Fenbuconazole	*	*
Mefenoxam	*	*
Phosphorous acid	*	*
Pyraclostrobin	P	P
Trifloxystrobin	P	P
<b>Other Chemicals</b>		
Gibberellic acid	*	*
Hydrogen peroxide	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Tangelos: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Florida, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide <sup>1</sup>		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
FL	6,400	84	20.0	95	422.3	86	17.2	8	0.6

<sup>1</sup> Total Applied excludes Bt's (*Bacillus thuringiensis*) and other biologicals.

Quantities are not available because amounts of active ingredient are not comparable between products.

**Tangelos: Agricultural Chemical Applications,  
Florida, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Appli-cations	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, isoprop. salt	45	1.5	0.313	0.458	1.3
Diuron	19	1.4	1.119	1.559	1.9
Glyphosate iso. salt	79	2.4	1.023	2.451	12.4
Norflurazon	6	1.9	1.281	2.420	0.9
Paraquat	7	1.7	0.449	0.756	0.4
Simazine	14	1.3	1.735	2.196	1.9
<b>Insecticides</b>					
Abamectin	62	1.3	0.010	0.013	( <sup>2</sup> )
Diflubenzuron	4	1.0	0.197	0.203	0.1
Fenbutatin-oxide	17	1.1	1.004	1.151	1.2
Petroleum distillate	85	2.1	33.963	71.328	387.4
Pyridaben	14	1.0	0.311	0.318	0.3
Sulfur	33	1.4	9.600	13.156	27.7
<b>Fungicides</b>					
Azoxystrobin	30	1.8	0.205	0.373	0.7
Copper hydroxide	41	2.7	1.780	4.821	12.7
Copper sulfate	7	2.7	0.767	2.038	0.9
Pyraclostrobin	22	2.0	0.189	0.387	0.5
Trifloxystrobin	5	1.2	0.066	0.078	( <sup>2</sup> )

<sup>1</sup> Bearing acreage in 2005 for Florida was 6,400 acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Tangerines: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States		
	ALL	CA	FL
<b>Herbicides</b>			
2,4-D, dimeth. salt	*	*	
2,4-D, isoprop. salt	P		P
Bromacil	P	P	P
Diquat dibromide	*		*
Diuron	P	P	P
Glyphosate	*	*	
Glyphosate amm. salt	*	*	*
Glyphosate iso. salt	P	P	P
Norflurazon	P	P	P
Oryzalin	*	*	
Oxyfluorfen	*	*	
Paraquat	*	*	P
Pendimethalin	*	*	
Sethoxydim	*		*
Simazine	*	*	P
Sulfosate	P		P
Trifluralin	*	*	*
<b>Insecticides</b>			
Abamectin	*	*	P
Acephate	*	*	
Acetamiprid	*	*	
Aldicarb	*		*
Bt subsp. kurstaki	*	*	*
Buprofezin	*	*	
Carbaryl	P	*	*
Carbofuran	*		*
Chlorpyrifos	*	P	*
Cryolite	*	*	
Cyfluthrin	P	P	
Dicofol	*	*	*
Diflubenzuron	P		P
Dimethoate	P	P	
Fenbutatin-oxide	*	*	P
Fenpropathrin	*	*	
Formetanate hydro.	*	*	
Imidacloprid	*		*
Kaolin	*	*	
Malathion	*	*	
Petroleum distillate	P	P	P
Petroleum oil	*		*
Phosmet	*		*

See footnote(s) at end of table.

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**Tangerines: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States		
	ALL	CA	FL
<b>Insecticides (continued)</b>			
Propargite	*		*
Pyrethrins	*		*
Pyridaben	*	*	P
Pyriproxyfen	*	P	*
Rotenone	*		*
S-Methoprene	*		*
Sabadilla	P	P	
Soybean oil	*		*
Spinosad	*	P	*
Sulfur	P	P	P
<b>Fungicides</b>			
Azoxystrobin	P	P	P
Bacillus subtilis	P		P
Basic copper sulfate	*	P	*
Boscalid	*	*	
Copper hydroxide	P	P	P
Copper oxide	*	*	
Copper oxychlo. sul.	*		*
Copper oxychloride	*		*
Copper resinate	*		*
Copper sulfate	*	*	P
Fenbuconazole	*		*
Ferbam	*		*
Fosetyl-al	*		*
Mefenoxam	P	*	*
Phosphorous acid	*		*
Pyraclostrobin	*	*	P
Thiophanate-methyl	P		P
Trifloxystrobin	P		P

See footnote(s) at end of table.

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**Tangerines: Active Ingredients and  
Publication Status  
By Program States, 2005 (continued)**

Active Ingredient	Program States		
	ALL	CA	FL
Other Chemicals			
2,4-D, isoprop ester	P	P	
Diphacinone	P	P	
Gibberellic acid	P	P	
Hydrogen peroxide	*		*
Iron phosphate	*	*	
Metaldehyde	*	*	
Strychnine	*	*	

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Tangerines: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Program States and Total, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide <sup>1</sup>		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
CA	11,300	60	20.1	47	60.4	31	15.9	30	0.3
FL <sup>2</sup>	19,300	88	140.5	88	1,325.1	79	66.7		
Total	30,600	78	160.6	73	1,385.5	61	82.6	22	5.8

<sup>1</sup> Total Applied excludes Bt's (*Bacillus thuringiensis*) and other biologicals.

Quantities are not available because amounts of active ingredient are not comparable between products.

<sup>2</sup> Insufficient reports to publish data for one or more pesticide classes.

**Tangerines: Agricultural Chemical Applications,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Appli-cations	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, isoprop. salt	15	1.9	0.306	0.583	2.7
Bromacil	5	1.3	1.120	1.428	2.0
Diuron	32	1.7	2.254	3.776	36.8
Glyphosate iso. salt	68	2.6	1.018	2.602	53.8
Norflurazon	16	1.8	1.871	3.459	17.3
Sulfosate	13	2.2	2.703	5.903	23.1
<b>Insecticides</b>					
Carbaryl	3	1.3	5.554	7.024	5.6
Cyfluthrin	6	1.2	0.080	0.095	0.2
Diflubenzuron	9	1.3	0.251	0.321	0.9
Dimethoate	2	1.1	0.930	1.061	0.7
Petroleum distillate	53	2.2	34.468	76.897	1,254.2
Sabadilla	2	1.1	0.020	0.022	( <sup>2</sup> )
Sulfur	19	1.7	9.146	15.271	90.2
<b>Fungicides</b>					
Azoxystrobin	28	1.8	0.203	0.373	3.2
Bacillus subtilis <sup>3</sup>	11	1.9			
Copper hydroxide	43	3.1	1.341	4.135	54.1
Mefenoxam	12	1.0	0.857	0.893	3.4
Thiophanate-methyl	3	1.0	1.209	1.209	0.9
Trifloxystrobin	6	1.2	0.063	0.077	0.1
<b>Other Chemicals</b>					
2,4-D, isoprop ester	6	1.4	0.052	0.072	0.1
Diphacinone	2	3.8	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>2</sup> )
Gibberellic acid	7	1.2	0.037	0.046	0.1

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 30,600 acres.

States included are CA and FL.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.

<sup>4</sup> Rate per acre is less than 0.0005 lbs.

**Tangerines: Agricultural Chemical Applications,  
California, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
Bromacil	4	1.6	1.282	1.990	0.9
Diuron	18	1.3	1.960	2.510	5.2
Glyphosate iso. salt	51	2.6	0.687	1.775	10.3
Norflurazon	5	1.4	1.713	2.408	1.3
<b>Insecticides</b>					
Chlorpyrifos	23	1.3	2.626	3.411	8.8
Cyfluthrin	16	1.2	0.080	0.095	0.2
Dimethoate	6	1.1	0.930	1.061	0.7
Petroleum distillate	9	1.5	21.596	31.332	31.6
Pyriproxyfen	4	1.3	0.102	0.130	0.1
Sabadilla	6	1.1	0.020	0.022	( <sup>2</sup> )
Spinosad	22	1.2	0.103	0.125	0.3
Sulfur	2	1.4	36.534	50.507	10.4
<b>Fungicides</b>					
Azoxystrobin	2	1.1	0.231	0.264	0.1
Basic copper sulfate	8	1.1	3.113	3.466	3.3
Copper hydroxide	9	1.1	2.247	2.431	2.4
<b>Other Chemicals</b>					
2,4-D, isoprop ester	15	1.4	0.052	0.072	0.1
Diphacinone	4	3.8	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>2</sup> )
Gibberellic acid	19	1.2	0.037	0.046	0.1

<sup>1</sup> Total acreage in 2005 for California was 11,300 acres.  
Acreage includes both bearing and nonbearing acres.  
Includes tangelos and tangors.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Tangerines: Agricultural Chemical Applications,  
Florida, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, isoprop. salt	24	1.9	0.306	0.583	2.7
Bromacil	5	1.1	1.014	1.159	1.1
Diuron	40	1.8	2.311	4.119	31.6
Glyphosate iso. salt	77	2.5	1.148	2.924	43.6
Norflurazon	23	1.9	1.885	3.588	15.9
Paraquat	6	1.1	0.322	0.338	0.4
Simazine	13	1.7	2.789	4.715	12.1
Sulfosate	20	2.2	2.703	5.903	23.1
<b>Insecticides</b>					
Abamectin	61	1.3	0.011	0.013	0.2
Diflubenzuron	14	1.3	0.251	0.321	0.9
Fenbutatin-oxide	35	1.0	1.011	1.038	7.1
Petroleum distillate	79	2.3	35.010	79.915	1,222.6
Pyridaben	37	1.5	0.281	0.419	3.0
Sulfur	30	1.7	8.333	13.999	79.8
<b>Fungicides</b>					
Azoxystrobin	43	1.9	0.203	0.376	3.1
Bacillus subtilis <sup>2</sup>	18	1.9			
Copper hydroxide	63	3.2	1.317	4.274	51.8
Copper sulfate	8	1.6	1.671	2.593	4.0
Pyraclostrobin	30	1.2	0.166	0.207	1.2
Thiophanate-methyl	4	1.0	1.209	1.209	0.9
Trifloxystrobin	9	1.2	0.063	0.077	0.1

<sup>1</sup> Bearing acreage in 2005 for Florida was 19,300 acres.

<sup>2</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.

**Temples: Active Ingredients and  
Publication Status  
By Program States, 2005**

Active Ingredient	Program States	
	ALL	FL
<b>Herbicides</b>		
2,4-D, isoprop. salt	P	P
Bromacil	*	*
Diuron	P	P
Glyphosate amm. salt	*	*
Glyphosate iso. salt	P	P
Norflurazon	P	P
Paraquat	*	*
Sethoxydim	*	*
Simazine	*	*
Sulfosate	*	*
<b>Insecticides</b>		
Abamectin	P	P
Carbaryl	*	*
Dicofol	*	*
Diflubenzuron	*	*
Fenbutatin-oxide	P	P
Petroleum distillate	P	P
Petroleum oil	*	*
Pyridaben	P	P
Pyriproxyfen	*	*
Sulfur	P	P
<b>Fungicides</b>		
Azoxystrobin	P	P
Basic copper sulfate	*	*
Copper hydroxide	P	P
Copper oxychloride	*	*
Copper sulfate	*	*
Fenbuconazole	*	*
Ferbam	*	*
Mefenoxam	*	*
Pyraclostrobin	P	P
Thiophanate-methyl	*	*
Trifloxystrobin	*	*
<b>Other Chemicals</b>		
Gibberellic acid	*	*

P Usage data are published for this active ingredient.

\* Usage data are not published for this active ingredient.

**Temples: Bearing Acreage, Pesticide,  
Percent of Area Receiving Applications and Total Applied,  
Florida, 2005**

State	Bearing Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide		Fungicide		Other	
	<i>Acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
FL <sup>1</sup>	2,900	88	16.7	89	204.5	89	5.9		

<sup>1</sup> Insufficient reports to publish data for one or more pesticide classes.

**Temples: Agricultural Chemical Applications,  
Florida, 2005 <sup>1</sup>**

Active Ingredient	Area Applied	Appli-cations	Rate per Application	Rate per Crop Year	Total Applied
	<i>Percent</i>	<i>Number</i>	<i>Pounds per Acre</i>	<i>Pounds per Acre</i>	<i>1,000 lbs</i>
Herbicides					
2,4-D, isoprop. salt	44	1.9	0.394	0.765	1.0
Diuron	30	2.6	0.925	2.402	2.1
Glyphosate iso. salt	69	2.2	1.333	2.914	5.8
Norflurazon	11	2.7	1.623	4.456	1.5
Insecticides					
Abamectin	29	1.4	0.009	0.012	( <sup>2</sup> )
Fenbutatin-oxide	10	1.1	0.961	1.048	0.3
Petroleum distillate	78	2.1	39.890	85.171	192.0
Pyridaben	20	1.8	0.306	0.554	0.3
Sulfur	17	1.7	14.091	23.780	11.7
Fungicides					
Azoxystrobin	51	1.9	0.192	0.359	0.5
Copper hydroxide	36	3.4	1.223	4.156	4.3
Pyraclostrobin	15	1.6	0.153	0.238	0.1

<sup>1</sup> Bearing acreage in 2005 for Florida was 2,900 acres.

<sup>2</sup> Total applied is less than 50 lbs.

## Distribution Tables – Highlights

This section provides details about the distribution of agricultural chemical active ingredients commonly applied to all targeted fruit crops. Chemical distribution rates are listed by active ingredient for the Percent of Acres Treated, Number of Applications, Rate per Application, and Rate per Crop Year. In order for an active ingredient to be published in these tables, at least 30 farm operators would have had to report applying the active ingredient on the specified crop. The data in each table are summarized for a specific group of States, called Program States. The Program States designation is specific for each crop and provided in tables within the publication.

These distribution tables show the 10<sup>th</sup> percentile, median, 90<sup>th</sup> percentile, mean, and coefficient of variation (cv) of the reported rates. The 10<sup>th</sup> 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<sup>th</sup> percentile value. Likewise, the 90<sup>th</sup> 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 that is 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 rate uses. 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 Number of Applications, Rate per Application, and Rate per Crop Year distribution tables are calculated using data only from reports where the farm operator applied the active ingredient. Data presented in the Percent of Acres Treated table account for all operations in the sample producing the target commodity, whether or not the listed active ingredient was applied.



**Apples: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, dimeth. salt	0	0	41	11	15
Diuron	0	0	2	6	17
Glyphosate iso. salt	0	19	100	33	7
Norflurazon	0	0	10	6	19
Paraquat	0	0	51	15	32
Simazine	0	0	30	10	14
Terbacil	0	0	0	1	23
<b>Insecticides</b>					
Abamectin	0	0	3	4	21
Acetamiprid	0	1	100	31	10
Azinphos-methyl	0	96	100	63	5
Benzoic acid	0	0	100	28	10
Bifenazate	0	0	17	4	33
Bt subsp. kurstaki	0	0	85	16	10
Carbaryl	0	67	100	56	6
Chlorpyrifos	0	55	100	50	4
Clofentezine	0	0	19	6	32
Cyd-X Granulo. Virus	0	0	12	6	30
Diazinon	0	0	13	6	23
Dimethoate	0	0	0	1	42
Endosulfan	0	0	40	11	21
Esfenvalerate	0	0	50	11	9
Etoxazole	0	0	48	9	11
Fenpropathrin	0	0	95	14	9
Fenpyroximate	0	0	3	2	22
Formetanate hydro.	0	0	33	7	44
Gamma-cyhalothrin	0	0	0	3	18
Hexythiazox	0	0	5	4	38
Imidacloprid	0	0	100	29	9
Indoxacarb	0	0	0	5	19
Kaolin	0	0	18	5	22
Lambda-cyhalothrin	0	0	5	8	16
Methomyl	0	0	0	4	16
Novaluron	0	0	52	13	24
Oxamyl	0	0	0	1	31
Permethrin	0	0	0	3	20
Petroleum distillate	0	59	100	53	12
Petroleum oil	0	0	0	2	31
Phosmet	0	12	100	33	6
Pyridaben	0	0	70	16	16
Pyriproxyfen	0	0	8	5	32
Spinosad	0	8	100	39	11
Thiacloprid	0	0	14	8	16
Thiamethoxam	0	0	0	3	26

See footnote(s) at end of table.

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**Apples: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Fungicides</b>					
Basic copper sulfate	0	0	0	3	22
Boscalid	0	0	37	9	20
Calcium polysulfide	0	0	70	17	10
Captan	0	0	100	34	3
Copper hydroxide	0	0	91	17	28
Copper oxychlor. sul.	0	0	0	3	23
Copper oxychloride	0	0	0	3	23
Copper sulfate	0	0	0	1	28
Cyprodinil	0	0	0	3	21
Dodine	0	0	0	2	15
Fenarimol	0	0	68	16	11
Kresoxim-methyl	0	0	71	17	9
Mancozeb	0	21	100	40	6
Metiram	0	0	50	10	11
Myclobutanil	0	23	100	40	11
Oxytetracycline	0	0	47	12	18
Pyraclostrobin	0	0	37	9	20
Pyrimethanil	0	0	0	3	16
Streptomycin	0	0	67	14	13
Streptomycin sulfate	0	0	0	2	27
Sulfur	0	0	100	35	14
Thiophanate-methyl	0	0	100	21	12
Thiram	0	0	0	5	22
Triadimefon	0	0	0	4	19
Trifloxystrobin	0	0	100	29	9
Triflumizole	0	0	100	30	11
Ziram	0	0	64	15	13
<b>Other Chemicals</b>					
Benzyladenine	0	0	57	19	14
Butenoic Acid Hydro.	0	0	27	8	14
Dodecadien-1-ol	0	0	0	3	29
Ethephon	0	0	66	22	12
Gibberellic acid	0	0	6	2	31
Gibberellins A4A7	0	0	46	14	18
NAA	0	10	100	29	12
NAA, Potassium salt	0	0	48	10	34
NAD	0	0	20	7	18
Octadecadien (E,Z)	0	0	12	7	29
Octadecadien (Z,Z)	0	0	12	7	29
Prohexadione calcium	0	0	62	16	18

<sup>1</sup> Bearing acreage in 2005 for the 8 Program States was 306,400 acres.

**Apples: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, dimeth. salt	1.0	1.0	2.0	1.3	6
Diuron	1.0	1.0	2.0	1.2	9
Glyphosate iso. salt	1.0	1.0	2.8	1.6	7
Norflurazon	1.0	1.0	4.0	1.5	22
Paraquat	1.0	1.0	1.6	1.2	6
Simazine	1.0	1.0	2.0	1.2	5
Terbacil	1.0	1.0	1.4	1.1	4
<b>Insecticides</b>					
Abamectin	1.0	1.0	2.0	1.3	6
Acetamiprid	1.0	1.0	2.2	1.4	5
Azinphos-methyl	1.0	1.8	4.8	2.4	4
Benzoic acid	1.0	1.1	3.0	1.5	7
Bifenazate	1.0	1.0	1.2	1.1	3
Bt subsp. kurstaki	1.0	1.0	3.0	1.6	7
Carbaryl	1.0	1.2	2.0	1.4	3
Chlorpyrifos	1.0	1.0	1.5	1.2	3
Clofentezine	1.0	1.0	1.0	1.1	3
Cyd-X Granulo. Virus	1.0	1.0	3.9	1.8	12
Diazinon	1.0	1.0	4.0	1.8	18
Dimethoate	1.0	1.0	2.0	1.5	15
Endosulfan	1.0	1.0	1.6	1.2	6
Esfenvalerate	1.0	1.0	2.4	1.6	7
Etoxazole	1.0	1.0	2.0	1.3	6
Fenpropathrin	1.0	1.9	3.5	1.9	7
Fenpyroximate	1.0	1.0	1.0	1.0	1
Formetanate hydro.	1.0	1.0	1.2	1.1	2
Gamma-cyhalothrin	1.0	1.8	3.5	2.3	20
Hexythiazox	1.0	1.0	1.0	1.0	1
Imidacloprid	1.0	1.1	2.1	1.5	4
Indoxacarb	1.0	1.0	2.0	1.3	7
Kaolin	1.0	1.0	2.0	1.3	10
Lambda-cyhalothrin	1.0	1.2	2.3	1.6	7
Methomyl	1.0	1.0	4.0	1.8	10
Novaluron	1.0	1.6	3.9	1.9	12
Oxamyl	1.0	2.0	5.0	2.2	21
Permethrin	1.0	1.0	2.0	1.2	6
Petroleum distillate	1.0	1.4	4.6	2.0	9
Petroleum oil	1.0	1.1	3.0	1.9	20
Phosmet	1.0	1.9	4.3	2.4	5
Pyridaben	1.0	1.0	2.2	1.3	17
Pyriproxyfen	1.0	1.0	1.3	1.1	4
Spinosad	1.0	1.2	1.8	1.3	5
Thiacloprid	1.0	1.1	3.4	1.8	17
Thiamethoxam	1.0	1.0	1.0	1.1	3

See footnote(s) at end of table.

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**Apples: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Percentile	Median	Percentile	Mean	cv(%)
<b>Fungicides</b>					
Basic copper sulfate	1.0	1.0	2.0	1.1	6
Boscalid	1.0	1.0	1.1	1.1	2
Calcium polysulfide	1.0	1.2	2.1	1.4	11
Captan	1.8	5.0	8.9	5.3	4
Copper hydroxide	1.0	1.0	1.0	1.1	5
Copper oxychlo. sul.	1.0	1.0	1.0	1.0	1
Copper oxychloride	1.0	1.0	1.0	1.1	6
Copper sulfate	1.0	1.0	1.0	1.0	3
Cyprodinil	1.0	1.2	2.3	1.5	12
Dodine	1.0	1.0	3.0	1.6	6
Fenarimol	1.0	1.0	2.0	1.5	6
Kresoxim-methyl	1.0	1.1	5.0	2.0	7
Mancozeb	1.0	3.0	6.0	3.2	6
Metiram	1.0	3.0	6.0	3.3	7
Myclobutanil	1.0	1.0	3.0	1.7	6
Oxytetracycline	1.0	1.0	1.5	1.2	8
Pyraclostrobin	1.0	1.0	1.1	1.1	2
Pyrimethanil	1.0	1.0	2.4	1.5	8
Streptomycin	1.0	1.9	4.0	2.0	7
Streptomycin sulfate	1.0	1.1	2.0	1.7	14
Sulfur	1.0	1.2	3.2	1.7	8
Thiophanate-methyl	1.0	2.5	6.0	3.2	9
Thiram	1.0	2.0	6.0	2.9	15
Triadimefon	1.0	1.0	3.0	1.5	8
Trifloxystrobin	1.0	1.3	2.3	1.6	4
Triflumizole	1.0	1.5	2.1	1.5	4
Ziram	1.0	1.2	4.0	2.3	9
<b>Other Chemicals</b>					
Benzyladenine	1.0	1.0	1.4	1.1	3
Butenoic Acid Hydro.	1.0	1.0	1.1	1.0	1
Dodecadien-1-ol	1.0	1.0	1.7	1.3	9
Ethephon	1.0	1.0	1.7	1.3	7
Gibberellic acid	1.0	1.0	2.1	1.3	12
Gibberellins A4A7	1.0	1.0	1.3	1.1	3
NAA	1.0	1.0	2.0	1.3	5
NAA, Potassium salt	1.0	1.0	1.2	1.1	5
NAD	1.0	1.0	1.2	1.1	3
Octadecadien (E,Z)	1.0	1.0	1.1	1.0	2
Octadecadien (Z,Z)	1.0	1.0	1.1	1.0	2
Prohexadione calcium	1.0	1.0	2.0	1.3	8

<sup>1</sup> Bearing acreage in 2005 for the 8 Program States was 306,400 acres.

**Apples: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, dimeth. salt	0.380	0.734	1.425	0.838	8
Diuron	0.300	1.600	2.000	1.363	8
Glyphosate iso. salt	0.375	0.825	1.500	0.938	6
Norflurazon	0.968	1.965	2.358	1.943	9
Paraquat	0.281	0.625	1.012	0.717	8
Simazine	0.590	1.200	2.500	1.477	7
Terbacil	0.148	0.320	0.800	0.519	18
<b>Insecticides</b>					
Abamectin	0.005	0.012	0.023	0.013	9
Acetamiprid	0.035	0.138	0.149	0.111	6
Azinphos-methyl	0.250	0.833	1.108	0.784	3
Benzoic acid	0.089	0.235	0.250	0.199	4
Bifenazate	0.267	0.396	0.500	0.433	6
Carbaryl	0.540	1.132	1.877	1.206	5
Chlorpyrifos	0.741	1.793	2.093	1.483	4
Clofentezine	0.122	0.135	0.218	0.161	20
Diazinon	0.250	0.593	2.000	0.889	18
Dimethoate	0.250	0.500	1.094	0.640	12
Endosulfan	0.750	1.416	2.039	1.411	7
Esfenvalerate	0.013	0.033	0.062	0.038	5
Etoxazole	0.022	0.076	0.090	0.078	12
Fenpropathrin	0.120	0.180	0.337	0.212	4
Fenpyroximate	0.025	0.073	0.100	0.067	8
Formetanate hydro.	0.460	0.694	0.920	0.719	5
Gamma-cyhalothrin	*	*	*	*	10
Hexythiazox	0.063	0.145	0.162	0.126	7
Imidacloprid	0.025	0.050	0.077	0.053	4
Indoxacarb	0.075	0.094	0.107	0.091	3
Kaolin	22.647	28.037	47.500	31.912	11
Lambda-cyhalothrin	0.020	0.039	0.043	0.043	15
Methomyl	0.113	0.675	0.900	0.598	8
Novaluron	0.032	0.130	0.207	0.119	8
Oxamyl	0.125	0.313	0.621	0.300	14
Permethrin	0.084	0.150	0.200	0.174	12
Petroleum distillate	5.600	11.550	28.419	14.497	8
Petroleum oil	1.378	3.600	22.050	8.471	25
Phosmet	0.412	1.400	3.200	1.558	4
Pyridaben	0.103	0.281	0.309	0.234	10
Pyriproxyfen	0.038	0.109	0.109	0.096	12
Spinosad	0.078	0.118	0.134	0.109	4
Thiacloprid	0.059	0.100	0.188	0.121	12
Thiamethoxam	0.031	0.070	0.088	0.070	7

See footnote(s) at end of table.

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**Apples: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup> (Continued)**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Fungicides</b>					
Basic copper sulfate	0.284	0.710	1.500	0.865	30
Boscalid	0.013	0.013	0.016	0.015	12
Calcium polysulfide	7.858	18.000	24.000	17.466	12
Captan	0.636	1.608	2.637	1.683	4
Copper hydroxide	0.600	2.400	3.500	2.169	11
Copper oxychlo. sul.	0.240	3.000	4.000	2.590	15
Copper oxychloride	1.000	2.000	4.000	2.425	10
Copper sulfate	0.209	1.000	2.016	1.089	17
Cyprodinil	0.059	0.124	0.234	0.122	16
Dodine	0.159	1.016	1.733	1.026	11
Fenarimol	0.023	0.066	0.094	0.064	7
Kresoxim-methyl	0.034	0.125	0.157	0.105	6
Mancozeb	1.150	2.250	4.500	2.488	4
Metiram	1.200	2.400	4.000	2.510	7
Myclobutanil	0.038	0.124	0.145	0.109	6
Oxytetracycline	0.166	0.183	0.215	0.186	3
Pyraclostrobin	0.001	0.001	0.001	0.001	37
Pyrimethanil	0.063	0.195	0.332	0.193	9
Streptomycin	0.057	0.142	0.255	0.148	7
Streptomycin sulfate	0.142	0.213	0.320	0.242	8
Sulfur	2.700	5.400	8.000	5.652	3
Thiophanate-methyl	0.131	0.310	0.700	0.376	8
Thiram	0.765	1.688	2.925	1.916	9
Triadimefon	0.054	0.106	0.250	0.157	23
Trifloxystrobin	0.031	0.063	0.078	0.060	3
Triflumizole	0.189	0.297	0.366	0.284	10
Ziram	0.760	2.655	4.560	2.615	5
<b>Other Chemicals</b>					
Benzyladenine	0.016	0.037	0.059	0.041	8
Butenoic Acid Hydro.	0.027	0.075	0.110	0.078	9
Dodecadien-1-ol	0.014	0.086	0.951	0.174	64
Ethephon	0.150	0.550	0.814	0.544	7
Gibberellic acid	0.003	0.013	0.022	0.018	33
Gibberellins A4A7	0.010	0.027	0.039	0.026	5
NAA	0.005	0.012	0.055	0.023	11
NAA, Potassium salt	0.007	0.031	0.034	0.025	18
NAD	0.009	0.042	0.084	0.046	12
Octadecadien (E,Z)	0.096	0.096	2.268	0.388	53
Octadecadien (Z,Z)	1.344	1.345	31.752	5.430	53
Prohexadione calcium	0.052	0.212	0.286	0.198	8

\* Rate per acre is less than 0.0005 lbs.

<sup>1</sup> Bearing acreage in 2005 for the 8 Program States was 306,400 acres.

**Apples: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, dimeth. salt	0.475	0.760	1.755	1.062	11
Diuron	0.300	1.600	3.200	1.626	14
Glyphosate iso. salt	0.375	1.125	2.880	1.499	8
Norflurazon	0.629	2.358	6.760	2.845	19
Paraquat	0.313	0.940	1.406	0.881	7
Simazine	0.716	2.000	3.000	1.775	8
Terbacil	0.106	0.431	0.800	0.575	18
<b>Insecticides</b>					
Abamectin	0.009	0.012	0.047	0.017	13
Acetamiprid	0.059	0.144	0.290	0.153	8
Azinphos-methyl	0.811	1.420	3.570	1.875	4
Benzoic acid	0.140	0.261	0.500	0.305	10
Bifenazate	0.313	0.396	0.618	0.459	9
Carbaryl	0.750	1.724	2.486	1.723	5
Chlorpyrifos	0.750	2.000	2.552	1.728	3
Clofentezine	0.122	0.142	0.218	0.170	19
Diazinon	0.271	1.923	2.500	1.601	10
Dimethoate	0.250	0.600	2.188	0.946	23
Endosulfan	0.750	1.500	2.364	1.705	8
Esfenvalerate	0.021	0.046	0.106	0.060	8
Etoxazole	0.045	0.090	0.114	0.098	10
Fenpropathrin	0.187	0.375	0.707	0.412	6
Fenpyroximate	0.025	0.076	0.100	0.069	8
Formetanate hydro.	0.476	0.694	1.011	0.769	7
Gamma-cyhalothrin	*	*	0.001	*	25
Hexythiazox	0.063	0.145	0.162	0.127	6
Imidacloprid	0.035	0.067	0.124	0.079	7
Indoxacarb	0.075	0.094	0.162	0.119	8
Kaolin	22.647	35.106	71.250	42.259	17
Lambda-cyhalothrin	0.029	0.041	0.094	0.068	17
Methomyl	0.300	0.900	1.800	1.104	10
Novaluron	0.090	0.207	0.389	0.229	9
Oxamyl	0.125	0.450	1.563	0.673	27
Permethrin	0.087	0.175	0.360	0.215	15
Petroleum distillate	7.875	28.000	48.007	29.422	4
Petroleum oil	2.756	8.820	43.613	15.687	25
Phosmet	1.000	3.200	6.300	3.695	5
Pyridaben	0.094	0.241	0.618	0.300	27
Pyriproxyfen	0.038	0.109	0.144	0.105	13
Spinosad	0.078	0.134	0.224	0.142	6
Thiacloprid	0.097	0.188	0.375	0.220	7
Thiamethoxam	0.031	0.070	0.125	0.074	8

See footnote(s) at end of table.

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**Apples: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup> (continued)**

Active Ingredient	Percentile	Median	Percentile	Mean	cv(%)
<b>Fungicides</b>					
Basic copper sulfate	0.284	0.852	1.596	0.970	29
Boscalid	0.013	0.013	0.016	0.016	13
Calcium polysulfide	10.140	22.370	43.200	24.653	22
Captan	2.500	7.550	16.000	8.879	5
Copper hydroxide	0.750	2.401	4.200	2.424	10
Copper oxychlo. sul.	0.240	3.000	4.000	2.663	15
Copper oxychloride	1.000	2.700	4.000	2.619	10
Copper sulfate	0.209	1.008	2.016	1.139	17
Cyprodinil	0.063	0.153	0.305	0.186	7
Dodine	0.325	1.300	3.331	1.681	14
Fenarimol	0.030	0.082	0.139	0.093	8
Kresoxim-methyl	0.100	0.158	0.400	0.214	7
Mancozeb	2.649	6.000	15.750	7.999	5
Metiram	2.400	6.982	14.400	8.296	10
Myclobutanil	0.075	0.145	0.306	0.187	5
Oxytetracycline	0.166	0.183	0.319	0.224	8
Pyraclostrobin	0.001	0.001	0.001	0.001	38
Pyrimethanil	0.094	0.234	0.625	0.283	11
Streptomycin	0.083	0.255	0.623	0.299	8
Streptomycin sulfate	0.160	0.320	0.844	0.413	16
Sulfur	3.638	7.795	18.000	9.790	7
Thiophanate-methyl	0.350	0.994	2.125	1.190	6
Thiram	1.683	4.167	13.000	5.561	11
Triadimefon	0.063	0.209	0.629	0.241	19
Trifloxystrobin	0.049	0.080	0.156	0.098	5
Triflumizole	0.219	0.443	0.612	0.414	11
Ziram	2.280	4.921	11.638	5.893	6
<b>Other Chemicals</b>					
Benzyladenine	0.019	0.048	0.059	0.046	7
Butenoic Acid Hydro.	0.027	0.081	0.120	0.081	9
Dodecadien-1-ol	0.018	0.124	0.561	0.225	64
Ethephon	0.300	0.550	1.073	0.686	12
Gibberellic acid	0.007	0.013	0.028	0.023	34
Gibberellins A4A7	0.013	0.027	0.044	0.029	5
NAA	0.006	0.018	0.083	0.030	9
NAA, Potassium salt	0.007	0.030	0.044	0.027	17
NAD	0.011	0.044	0.084	0.049	12
Octadecadien (E,Z)	0.096	0.096	2.268	0.403	53
Octadecadien (Z,Z)	1.344	1.345	31.752	5.640	53
Prohexadione calcium	0.120	0.272	0.341	0.259	4

\* Rate per acre is less than 0.0005 lbs.

<sup>1</sup> Bearing acreage in 2005 for the 8 Program States was 306,400 acres.



**Avocados: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides					
Glyphosate iso. salt	0	11	100	31	17
Insecticides					
Abamectin	0	6	93	33	21
Petroleum distillate	0	0	59	15	22

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 62,000 acres.

**Avocados: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides					
Glyphosate iso. salt	1.0	2.3	8.0	4.0	35
Insecticides					
Abamectin	1.0	1.0	2.0	1.2	5
Petroleum distillate	1.0	1.0	1.6	1.2	5

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 62,000 acres.

**Avocados: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Glyphosate iso. salt	0.171	0.264	1.000	0.458	27
Insecticides					
Abamectin	0.014	0.016	0.023	0.017	4
Petroleum distillate	14.000	20.516	55.541	26.452	14

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 62,000 acres.

**Avocados: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Glyphosate iso. salt	0.482	1.172	3.825	1.846	12
Insecticides					
Abamectin	0.014	0.019	0.031	0.021	7
Petroleum distillate	14.000	26.144	74.196	32.162	17

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 62,000 acres.

**Blackberries: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Carfentrazone-ethyl	0	0	100	24	31
Diuron	0	15	100	40	18
Paraquat	0	0	100	34	26
Simazine	0	0	100	26	26
<b>Insecticides</b>					
Carbaryl	0	0	100	24	15
<b>Fungicides</b>					
Boscalid	0	0	100	30	26
Calcium polysulfide	0	15	100	39	23
Captan	0	0	100	25	15
Cyprodinil	0	18	100	33	17
Fludioxonil	0	18	100	33	17
Pyraclostrobin	0	0	100	32	26

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 6,400 acres.

**Blackberries: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Carfentrazone-ethyl	1.0	1.0	2.4	1.6	14
Diuron	1.0	1.0	1.0	1.0	2
Paraquat	1.0	1.0	2.0	1.3	10
Simazine	1.0	1.0	2.0	1.2	9
<b>Insecticides</b>					
Carbaryl	1.0	1.0	2.0	1.2	8
<b>Fungicides</b>					
Boscalid	1.0	1.0	2.0	1.4	8
Calcium polysulfide	1.0	1.0	2.0	1.4	8
Captan	1.0	1.0	2.0	1.2	8
Cyprodinil	1.0	1.0	2.3	1.5	19
Fludioxonil	1.0	1.0	2.3	1.5	19
Pyraclostrobin	1.0	1.0	2.2	1.4	8

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 6,400 acres.

**Blackberries: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Carfentrazone-ethyl	0.030	0.031	0.094	0.048	19
Diuron	0.800	1.500	2.000	1.332	8
Paraquat	0.309	0.469	0.937	0.524	12
Simazine	0.900	1.250	2.000	1.498	7
<b>Insecticides</b>					
Carbaryl	0.500	1.250	2.000	1.267	8
<b>Fungicides</b>					
Boscalid	0.016	0.020	0.023	0.019	3
Calcium polysulfide	6.000	9.000	29.100	14.210	11
Captan	1.500	2.000	2.000	1.879	4
Cyprodinil	0.164	0.321	0.328	0.294	3
Fludioxonil	0.109	0.214	0.219	0.196	3
Pyraclostrobin	0.001	0.001	0.059	0.017	40

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 6,400 acres.

**Blackberries: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Carfentrazone-ethyl	0.031	0.063	0.125	0.075	11
Diuron	0.800	1.250	2.000	1.368	9
Paraquat	0.281	0.600	1.125	0.658	15
Simazine	0.800	1.800	2.500	1.759	11
<b>Insecticides</b>					
Carbaryl	0.750	1.250	2.500	1.517	13
<b>Fungicides</b>					
Boscalid	0.016	0.022	0.040	0.026	9
Calcium polysulfide	9.000	18.000	30.273	19.550	9
Captan	1.500	2.000	4.000	2.302	7
Cyprodinil	0.255	0.328	0.738	0.427	20
Fludioxonil	0.170	0.219	0.492	0.284	20
Pyraclostrobin	0.001	0.001	0.175	0.023	40

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 6,400 acres.

**Blueberries: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Diuron	0	0	100	21	20
Glyphosate iso. salt	0	0	100	21	10
Hexazinone	0	0	100	14	11
Norflurazon	0	0	88	14	27
Oryzalin	0	0	40	9	25
Paraquat	0	0	29	9	26
Simazine	0	0	85	15	18
Terbacil	0	0	100	17	15
<b>Insecticides</b>					
Azinphos-methyl	0	0	100	31	11
Carbaryl	0	0	100	17	20
Diazinon	0	0	100	20	27
Esfenvalerate	0	0	100	20	17
Imidacloprid	0	0	40	9	25
Malathion	0	0	100	38	7
Methomyl	0	0	100	20	18
Phosmet	0	0	100	40	6
Tebufenozide	0	0	92	15	17
<b>Fungicides</b>					
Azoxystrobin	0	0	41	10	27
Boscalid	0	0	100	24	14
Captan	0	39	100	47	8
Chlorothalonil	0	0	50	10	20
Copper hydroxide	0	0	0	4	19
Cyprodinil	0	0	0	5	25
Fenbuconazole	0	67	100	50	10
Fludioxonil	0	0	0	5	25
Pyraclostrobin	0	0	100	33	12
Thiophanate-methyl	0	0	100	20	11
Ziram	0	0	100	33	9
<b>Other Chemicals</b>					
Gibberellic acid	0	0	13	8	22

<sup>1</sup> Bearing acreage in 2005 for the 5 Program States was 39,100 acres.

**Blueberries: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Diuron	1.0	1.0	1.0	1.1	4
Glyphosate iso. salt	1.0	1.0	2.0	1.3	5
Hexazinone	1.0	1.0	1.0	1.0	2
Norflurazon	1.0	1.0	1.0	1.0	5
Oryzalin	1.0	1.0	2.0	1.2	7
Paraquat	1.0	1.0	2.0	1.3	9
Simazine	1.0	1.0	2.0	1.1	6
Terbacil	1.0	1.0	1.1	1.1	9
<b>Insecticides</b>					
Azinphos-methyl	1.0	1.0	2.1	1.7	16
Carbaryl	1.0	1.0	2.0	1.4	12
Diazinon	1.0	1.1	3.0	1.6	10
Esfenvalerate	1.0	1.5	3.0	1.7	7
Imidacloprid	1.0	1.0	4.0	1.7	31
Malathion	1.0	2.0	6.0	3.4	9
Methomyl	1.0	1.1	7.0	2.0	24
Phosmet	1.0	2.0	4.0	2.1	5
Tebufenozide	1.0	1.0	2.0	1.2	16
<b>Fungicides</b>					
Azoxystrobin	1.0	1.3	4.0	1.9	23
Boscalid	1.0	1.0	2.0	1.6	9
Captan	1.0	2.0	5.0	2.8	16
Chlorothalonil	1.0	1.0	2.0	1.3	11
Copper hydroxide	1.0	1.0	3.0	1.5	11
Cyprodinil	1.0	1.0	2.0	1.1	7
Fenbuconazole	1.0	2.0	4.0	2.2	5
Fludioxonil	1.0	1.0	2.0	1.1	7
Pyraclostrobin	1.0	2.0	2.0	1.8	6
Thiophanate-methyl	1.0	1.2	3.0	1.6	7
Ziram	1.0	2.0	3.0	2.2	12
<b>Other Chemicals</b>					
Gibberellic acid	1.0	2.0	3.0	1.8	6

<sup>1</sup> Bearing acreage in 2005 for the 5 Program States was 39,100 acres.

**Blueberries: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Diuron	0.480	1.200	2.400	1.313	16
Glyphosate iso. salt	0.225	0.750	2.250	0.948	19
Hexazinone	0.250	0.750	1.000	0.787	10
Norflurazon	0.694	2.358	3.144	2.243	14
Oryzalin	1.000	2.000	3.000	2.019	13
Paraquat	0.313	0.625	0.750	0.544	9
Simazine	0.700	1.800	2.700	1.626	9
Terbacil	0.400	0.800	2.000	0.824	19
<b>Insecticides</b>					
Azinphos-methyl	0.500	0.500	0.750	0.564	7
Carbaryl	1.000	1.488	2.000	1.396	6
Diazinon	0.500	0.794	1.000	0.772	8
Esfenvalerate	0.026	0.041	0.050	0.040	5
Imidacloprid	0.050	0.100	0.130	0.103	16
Malathion	0.493	0.758	2.000	1.047	5
Methomyl	0.450	0.600	0.900	0.642	6
Phosmet	0.650	0.910	0.931	0.865	2
Tebufenozide	0.125	0.250	0.250	0.228	6
<b>Fungicides</b>					
Azoxystrobin	0.163	0.208	0.228	0.201	2
Boscalid	0.011	0.018	0.023	0.018	5
Captan	1.000	2.346	2.500	2.068	3
Chlorothalonil	1.500	2.250	3.000	2.164	6
Copper hydroxide	0.750	2.376	3.000	2.087	10
Cyprodinil	0.164	0.293	0.328	0.284	5
Fenbuconazole	0.094	0.094	0.094	0.092	1
Fludioxonil	0.109	0.195	0.219	0.189	5
Pyraclostrobin	0.001	0.040	0.175	0.060	12
Thiophanate-methyl	0.680	0.700	0.700	0.702	3
Ziram	2.280	3.040	3.040	2.793	3
<b>Other Chemicals</b>					
Gibberellic acid	0.044	0.053	0.071	0.058	7

<sup>1</sup> Bearing acreage in 2005 for the 5 Program States was 39,100 acres.

**Blueberries: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Diuron	0.480	1.200	2.560	1.438	15
Glyphosate iso. salt	0.225	0.703	4.500	1.253	19
Hexazinone	0.250	0.750	1.500	0.823	10
Norflurazon	0.785	2.358	3.144	2.281	12
Oryzalin	1.000	2.000	4.000	2.368	18
Paraquat	0.281	0.750	1.250	0.710	12
Simazine	0.800	1.800	3.000	1.855	9
Terbacil	0.400	0.600	1.200	0.946	27
<b>Insecticides</b>					
Azinphos-methyl	0.500	0.559	1.500	0.962	15
Carbaryl	1.000	1.600	3.424	1.997	14
Diazinon	0.500	1.000	3.000	1.248	14
Esfenvalerate	0.041	0.062	0.093	0.066	6
Imidacloprid	0.050	0.097	0.522	0.175	46
Malathion	0.938	3.372	7.578	3.554	8
Methomyl	0.450	0.900	4.200	1.311	25
Phosmet	0.874	1.553	3.347	1.848	5
Tebufenozide	0.125	0.250	0.500	0.273	21
<b>Fungicides</b>					
Azoxystrobin	0.163	0.260	0.832	0.379	25
Boscalid	0.016	0.020	0.040	0.027	10
Captan	2.000	3.571	12.500	5.714	18
Chlorothalonil	1.500	2.813	4.500	2.745	10
Copper hydroxide	1.187	2.500	6.000	3.204	12
Cyprodinil	0.164	0.293	0.516	0.315	10
Fenbuconazole	0.094	0.188	0.375	0.199	5
Fludioxonil	0.109	0.195	0.344	0.210	10
Pyraclostrobin	0.001	0.002	0.350	0.107	14
Thiophanate-methyl	0.700	0.867	2.100	1.151	8
Ziram	2.432	5.700	9.120	6.194	13
<b>Other Chemicals</b>					
Gibberellic acid	0.044	0.088	0.141	0.104	9

<sup>1</sup> Bearing acreage in 2005 for the 5 Program States was 39,100 acres.



**Cherries, Sweet: Percent of Acres Treated Distribution,  
Program States, 2005<sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, dimeth. salt	0	0	4	5	16
Glyphosate iso. salt	0	0	100	29	9
Oryzalin	0	0	4	6	20
Oxyfluorfen	0	0	66	12	21
Paraquat	0	0	83	20	19
Simazine	0	0	0	2	23
<b>Insecticides</b>					
Azinphos-methyl	0	0	100	29	9
Benzoic acid	0	0	74	14	14
Carbaryl	0	0	100	28	8
Chlorpyrifos	0	0	100	26	7
Diazinon	0	0	31	8	15
Dimethoate	0	0	0	7	14
Endosulfan	0	0	16	6	15
Esfenvalerate	0	0	94	17	12
Imidacloprid	0	0	100	22	13
Lambda-cyhalothrin	0	0	1	3	32
Malathion	0	0	93	12	10
Permethrin	0	0	0	3	15
Petroleum distillate	0	4	100	41	8
Phosmet	0	0	0	2	37
Propargite	0	0	61	11	17
Spinosad	0	0	100	28	6
Thiamethoxam	0	0	0	3	17
<b>Fungicides</b>					
Boscalid	0	0	100	40	9
Calcium polysulfide	0	0	18	6	21
Captan	0	0	0	4	13
Chlorothalonil	0	0	50	9	7
Copper hydroxide	0	0	100	28	15
Copper oxide	0	0	0	4	38
Copper sulfate	0	0	0	3	16
Fenarimol	0	0	0	3	22
Fenbuconazole	0	0	50	10	9
Iprodione	0	0	59	11	15
Myclobutanil	0	0	100	20	19
Potassium bicarbon.	0	0	15	5	24
Propiconazole	0	0	100	16	10
Pyraclostrobin	0	40	100	46	6
Quintec	0	0	100	22	12
Sulfur	0	0	100	40	9
Tebuconazole	0	0	100	29	9
Trifloxystrobin	0	0	0	5	16
Triflumizole	0	0	100	20	11
Ziram	0	0	0	4	11
<b>Other Chemicals</b>					
Cytokinins	0	0	26	8	14
Ethephon	0	0	50	10	14
Gibberellic acid	0	5	100	33	6

<sup>1</sup> Bearing acreage in 2005 for the 4 Program States was 76,200 acres.

**Cherries, Sweet: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, dimeth. salt	1.0	1.0	2.0	1.3	6
Glyphosate iso. salt	1.0	1.1	3.0	1.5	4
Oryzalin	1.0	1.0	2.0	1.3	4
Oxyfluorfen	1.0	1.0	1.5	1.2	5
Paraquat	1.0	1.1	2.0	1.4	9
Simazine	1.0	1.0	2.0	1.2	6
<b>Insecticides</b>					
Azinphos-methyl	1.0	1.3	2.5	1.6	7
Benzoic acid	1.0	1.0	1.5	1.1	4
Carbaryl	1.0	1.0	2.0	1.3	4
Chlorpyrifos	1.0	1.0	1.4	1.1	3
Diazinon	1.0	1.0	1.4	1.1	4
Dimethoate	1.0	1.0	1.1	1.0	3
Endosulfan	1.0	1.0	1.8	1.2	5
Esfenvalerate	1.0	1.5	3.8	1.9	11
Imidacloprid	1.0	1.0	2.3	1.5	11
Lambda-cyhalothrin	1.0	1.0	1.2	1.1	4
Malathion	1.0	3.0	6.4	3.3	8
Permethrin	1.0	1.0	4.0	1.9	18
Petroleum distillate	1.0	1.1	3.0	1.7	6
Phosmet	1.0	1.0	1.0	1.1	4
Propargite	1.0	1.2	2.1	1.5	6
Spinosad	1.0	1.7	2.9	1.7	5
Thiamethoxam	1.0	1.0	2.0	1.2	9
<b>Fungicides</b>					
Boscalid	1.0	1.4	2.2	1.5	3
Calcium polysulfide	1.0	1.0	2.0	1.2	6
Captan	1.0	1.0	2.0	1.4	8
Chlorothalonil	1.0	2.0	3.0	2.1	5
Copper hydroxide	1.0	1.0	2.0	1.3	7
Copper oxide	1.0	1.0	3.0	1.5	12
Copper sulfate	1.0	1.0	2.0	1.5	19
Fenarimol	1.0	1.1	2.0	1.3	7
Fenbuconazole	1.0	1.0	3.0	1.9	8
Iprodione	1.0	1.0	1.6	1.2	5
Myclobutanil	1.0	1.2	2.0	1.4	6
Potassium bicarbon.	1.0	1.6	3.6	2.1	14
Propiconazole	1.0	1.0	2.0	1.4	3
Pyraclostrobin	1.0	1.6	2.9	1.7	4
Quintec	1.0	1.1	2.2	1.5	10
Sulfur	1.0	1.7	5.0	2.4	6
Tebuconazole	1.0	1.3	2.7	1.6	5
Trifloxystrobin	1.0	1.0	1.3	1.1	4
Triflumizole	1.0	1.0	2.0	1.4	3
Ziram	1.0	2.0	3.0	1.9	6
<b>Other Chemicals</b>					
Cytokinins	1.0	1.5	3.6	1.8	11
Ethephon	1.0	1.0	1.3	1.1	2
Gibberellic acid	1.0	1.0	2.0	1.2	6

<sup>1</sup> Bearing acreage in 2005 for the 4 Program States was 76,200 acres.

**Cherries, Sweet: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, dimeth. salt	0.285	0.520	0.950	0.627	10
Glyphosate iso. salt	0.225	0.750	1.500	0.824	7
Oryzalin	0.750	1.995	4.000	2.195	9
Oxyfluorfen	0.065	0.327	0.833	0.400	15
Paraquat	0.318	0.625	0.845	0.585	6
Simazine	0.522	1.000	3.000	1.234	16
<b>Insecticides</b>					
Azinphos-methyl	0.313	0.750	0.809	0.657	3
Benzoic acid	0.140	0.188	0.250	0.236	18
Carbaryl	0.875	1.737	3.000	1.777	5
Chlorpyrifos	1.000	2.000	2.000	1.835	2
Diazinon	0.500	1.895	2.000	1.544	8
Dimethoate	0.500	1.000	2.000	1.109	7
Endosulfan	0.750	2.000	2.000	1.661	9
Esfenvalerate	0.036	0.052	0.062	0.050	4
Imidacloprid	0.050	0.075	0.243	0.132	39
Lambda-cyhalothrin	0.020	0.031	0.034	0.029	5
Malathion	0.391	0.625	1.212	0.855	7
Permethrin	0.033	0.117	0.150	0.101	20
Petroleum distillate	7.000	18.571	35.000	20.336	5
Phosmet	0.700	1.050	1.400	1.084	6
Propargite	1.291	1.920	2.000	1.718	7
Spinosad	0.063	0.094	0.128	0.096	11
Thiamethoxam	0.020	0.063	0.078	0.056	14
<b>Fungicides</b>					
Boscalid	0.009	0.012	0.016	0.012	6
Calcium polysulfide	1.500	18.000	42.936	21.338	17
Captan	1.000	1.750	2.500	1.695	6
Chlorothalonil	1.125	2.227	3.000	2.108	6
Copper hydroxide	2.000	4.000	5.000	3.716	3
Copper oxide	2.127	5.625	8.500	5.463	12
Copper sulfate	0.630	2.520	5.300	3.049	18
Fenarimol	0.047	0.094	0.094	0.078	6
Fenbuconazole	0.059	0.094	0.094	0.084	3
Iprodione	0.500	0.750	0.811	0.666	5
Myclobutanil	0.100	0.125	0.125	0.117	3
Potassium bicarbon.	0.993	2.050	2.215	1.857	7
Propiconazole	0.090	0.113	0.113	0.114	2
Pyraclostrobin	0.001	0.001	0.095	0.029	12
Quintec	0.101	0.114	0.133	0.114	4
Sulfur	2.545	6.382	9.831	6.358	4
Tebuconazole	0.112	0.191	0.225	0.179	3
Trifloxystrobin	0.063	0.094	0.125	0.095	5
Triflumizole	0.188	0.313	0.500	0.332	4
Ziram	1.520	2.280	3.800	2.407	7
<b>Other Chemicals</b>					
Cytokinins	*	*	*	*	7
Ethephon	0.188	0.500	0.813	0.520	15
Gibberellic acid	0.018	0.044	0.088	0.049	8

\* Rate per acre is less than 0.0005 lbs.

<sup>1</sup> Bearing acreage in 2005 for the 4 Program States was 76,200 acres.

**Cherries, Sweet: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, dimeth. salt	0.314	0.625	1.444	0.790	11
Glyphosate iso. salt	0.375	1.019	2.450	1.270	7
Oryzalin	0.900	2.669	4.284	2.775	9
Oxyfluorfen	0.101	0.423	1.000	0.479	12
Paraquat	0.377	0.671	1.162	0.805	10
Simazine	0.522	1.080	4.000	1.499	17
<b>Insecticides</b>					
Azinphos-methyl	0.533	0.800	1.750	1.082	8
Benzoic acid	0.156	0.250	0.375	0.271	17
Carbaryl	1.000	2.000	4.000	2.315	5
Chlorpyrifos	1.470	2.000	2.677	2.044	4
Diazinon	0.632	2.000	2.500	1.723	7
Dimethoate	0.500	1.000	2.000	1.164	6
Endosulfan	0.924	2.000	3.000	1.972	10
Esfenvalerate	0.031	0.077	0.185	0.095	12
Imidacloprid	0.063	0.094	0.289	0.198	47
Lambda-cyhalothrin	0.020	0.031	0.036	0.032	4
Malathion	0.909	2.425	6.063	2.801	10
Permethrin	0.070	0.150	0.300	0.188	19
Petroleum distillate	8.750	34.080	58.045	34.481	5
Phosmet	0.887	1.050	1.400	1.160	7
Propargite	1.664	2.227	3.638	2.505	5
Spinosad	0.094	0.125	0.250	0.162	8
Thiamethoxam	0.039	0.070	0.086	0.070	11
<b>Fungicides</b>					
Boscalid	0.010	0.016	0.028	0.018	6
Calcium polysulfide	1.875	30.000	45.000	26.114	15
Captan	1.000	2.000	4.000	2.357	7
Chlorothalonil	1.564	3.750	8.910	4.407	6
Copper hydroxide	2.000	4.000	8.684	4.835	9
Copper oxide	1.406	5.625	25.500	8.048	21
Copper sulfate	0.504	4.032	10.080	4.650	23
Fenarimol	0.046	0.094	0.182	0.101	13
Fenbuconazole	0.094	0.094	0.281	0.160	7
Iprodione	0.500	0.799	1.048	0.790	6
Myclobutanil	0.100	0.125	0.250	0.167	7
Potassium bicarbon.	1.019	3.117	8.065	3.943	19
Propiconazole	0.113	0.113	0.225	0.155	4
Pyraclostrobin	0.001	0.001	0.141	0.049	14
Quintec	0.114	0.133	0.260	0.169	8
Sulfur	4.800	9.600	28.667	14.973	9
Tebuconazole	0.139	0.251	0.461	0.284	5
Trifloxystrobin	0.063	0.094	0.160	0.109	5
Triflumizole	0.250	0.441	0.726	0.449	5
Ziram	1.520	4.560	7.600	4.586	8
<b>Other Chemicals</b>					
Cytokinins	*	*	*	*	11
Ethephon	0.219	0.500	1.055	0.562	17
Gibberellic acid	0.018	0.053	0.105	0.060	8

\* Rate per acre is less than 0.0005 lbs.

<sup>1</sup> Bearing acreage in 2005 for the 4 Program States was 76,200 acres.

**Cherries, Tart: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Glyphosate iso. salt	0	33	100	34	16
Paraquat	0	0	50	12	55
Simazine	0	0	100	16	25
<b>Insecticides</b>					
Azinphos-methyl	0	50	100	61	7
Carbaryl	0	0	0	4	20
Chlorpyrifos	0	0	52	16	32
Esfenvalerate	0	0	71	18	17
Permethrin	0	0	50	13	24
Phosmet	0	50	100	54	9
<b>Fungicides</b>					
Boscalid	0	0	100	30	12
Captan	0	0	100	28	14
Chlorothalonil	50	100	100	77	3
Fenbuconazole	0	0	100	29	15
Myclobutanil	0	0	1	7	30
Pyraclostrobin	0	0	100	30	12
Sulfur	0	100	100	63	7
Tebuconazole	0	50	100	54	9
Trifloxystrobin	0	0	92	16	32
<b>Other Chemicals</b>					
Ethephon	0	100	100	69	6
Gibberellic acid	0	0	100	31	15

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 31,100 acres.

**Cherries, Tart: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Glyphosate iso. salt	1.0	1.0	1.5	1.1	4
Paraquat	1.0	1.0	1.0	1.1	3
Simazine	1.0	1.0	1.0	1.0	2
<b>Insecticides</b>					
Azinphos-methyl	1.0	2.0	3.0	2.0	9
Carbaryl	1.0	1.0	3.0	1.4	13
Chlorpyrifos	1.0	1.0	2.0	1.2	8
Esfenvalerate	1.0	1.0	2.5	1.6	7
Permethrin	1.0	1.1	3.0	1.8	15
Phosmet	1.0	1.5	3.0	1.6	5
<b>Fungicides</b>					
Boscalid	1.0	2.0	2.0	1.7	6
Captan	1.0	2.0	3.0	1.9	9
Chlorothalonil	1.0	3.0	4.2	2.9	4
Fenbuconazole	1.0	1.8	3.0	1.9	6
Myclobutanil	1.0	2.0	2.0	1.6	9
Pyraclostrobin	1.0	2.0	2.0	1.7	6
Sulfur	2.0	4.0	6.7	4.1	6
Tebuconazole	1.0	2.0	3.0	2.0	8
Trifloxystrobin	1.0	1.0	2.0	1.4	11
<b>Other Chemicals</b>					
Ethephon	1.0	1.0	1.3	1.1	3
Gibberellic acid	1.0	1.0	2.0	1.3	6

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 31,100 acres.

**Cherries, Tart: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Glyphosate iso. salt	0.250	0.750	1.313	0.718	8
Paraquat	0.125	0.313	0.750	0.392	35
Simazine	0.500	1.080	2.000	1.277	11
<b>Insecticides</b>					
Azinphos-methyl	0.188	0.437	0.750	0.503	6
Carbaryl	1.000	1.733	3.200	2.076	12
Chlorpyrifos	0.145	0.500	1.050	0.560	17
Esfenvalerate	0.015	0.031	0.059	0.036	9
Permethrin	0.037	0.094	0.192	0.104	21
Phosmet	0.537	1.021	1.575	1.049	7
<b>Fungicides</b>					
Boscalid	0.004	0.006	0.012	0.008	7
Captan	0.782	1.466	3.000	1.654	7
Chlorothalonil	0.762	1.647	2.681	1.750	5
Fenbuconazole	0.047	0.094	0.098	0.085	3
Myclobutanil	0.050	0.100	0.150	0.099	7
Pyraclostrobin	*	*	0.001	*	7
Sulfur	1.240	2.125	6.750	2.995	8
Tebuconazole	0.046	0.125	0.169	0.125	8
Trifloxystrobin	0.031	0.047	0.094	0.052	10
<b>Other Chemicals</b>					
Ethephon	0.075	0.125	0.250	0.169	9
Gibberellic acid	0.004	0.011	0.022	0.012	7

\* Rate per acre is less than 0.0005 lbs.

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 31,100 acres.

**Cherries, Tart: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Glyphosate iso. salt	0.375	0.750	1.500	0.794	7
Paraquat	0.125	0.341	0.937	0.416	37
Simazine	0.500	1.080	2.000	1.299	12
<b>Insecticides</b>					
Azinphos-methyl	0.375	0.813	1.875	1.028	8
Carbaryl	1.000	2.800	5.200	2.906	14
Chlorpyrifos	0.200	0.557	1.125	0.694	12
Esfenvalerate	0.015	0.049	0.112	0.058	13
Permethrin	0.070	0.192	0.337	0.188	11
Phosmet	0.788	1.418	3.150	1.699	8
<b>Fungicides</b>					
Boscalid	0.005	0.012	0.024	0.013	7
Captan	1.277	2.346	6.000	3.146	14
Chlorothalonil	2.254	4.500	9.000	5.163	5
Fenbuconazole	0.094	0.139	0.281	0.160	6
Myclobutanil	0.070	0.138	0.275	0.160	10
Pyraclostrobin	*	0.001	0.001	0.001	7
Sulfur	3.375	9.000	27.000	12.303	8
Tebuconazole	0.084	0.194	0.464	0.250	10
Trifloxystrobin	0.039	0.063	0.125	0.071	13
<b>Other Chemicals</b>					
Ethephon	0.094	0.172	0.250	0.186	8
Gibberellic acid	0.006	0.014	0.026	0.016	6

\* Rate per acre is less than 0.0005 lbs.

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 31,100 acres.



**Grapefruit: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Bromacil	0	0	100	27	20
Diuron	0	43	100	44	17
Glyphosate iso. salt	0	100	100	68	38
Simazine	0	0	100	30	74
<b>Insecticides</b>					
Abamectin	0	100	100	58	84
Aldicarb	0	0	100	23	97
Chlorpyrifos	0	0	100	14	12
Fenbutatin-oxide	0	0	100	28	135
Oxamyl	0	0	100	11	15
Petroleum distillate	0	100	100	66	84
Pyridaben	0	0	100	17	65
<b>Fungicides</b>					
Azoxystrobin	0	0	100	20	108
Copper hydroxide	0	100	100	62	16
Fenbuconazole	0	0	100	22	52
Pyraclostrobin	0	0	100	18	114
Sulfur	0	0	100	33	120
Trifloxystrobin	0	0	100	14	53
<b>Other Chemicals</b>					
Spirodiclofen	0	0	90	13	11

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 102,000 acres.

**Grapefruit: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Bromacil	1.0	2.0	2.2	1.7	43
Diuron	1.0	2.0	2.3	1.7	48
Glyphosate iso. salt	1.0	2.0	4.0	2.7	18
Simazine	1.0	1.3	9.1	2.6	39
<b>Insecticides</b>					
Abamectin	1.0	1.0	2.0	1.4	29
Aldicarb	1.0	1.0	1.0	1.0	1
Chlorpyrifos	1.0	1.0	4.0	1.9	39
Fenbutatin-oxide	1.0	1.0	2.0	1.4	11
Oxamyl	1.0	1.0	5.0	2.5	52
Petroleum distillate	1.0	2.0	7.0	2.9	18
Pyridaben	1.0	1.0	1.0	1.1	44
<b>Fungicides</b>					
Azoxystrobin	1.0	1.0	2.0	1.4	11
Copper hydroxide	1.0	4.0	7.0	4.0	47
Fenbuconazole	1.0	1.0	3.0	1.4	100
Pyraclostrobin	1.0	1.0	3.0	1.6	115
Sulfur	1.0	1.2	3.0	1.7	19
Trifloxystrobin	1.0	1.0	2.0	1.5	33
<b>Other Chemicals</b>					
Spirodiclofen	1.0	1.0	2.0	1.3	21

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 102,000 acres.

**Grapefruit: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Bromacil	0.596	0.960	1.590	0.889	40
Diuron	0.596	1.200	2.240	1.330	15
Glyphosate iso. salt	0.563	0.750	1.500	0.927	11
Simazine	1.888	2.408	2.700	2.312	13
<b>Insecticides</b>					
Abamectin	0.006	0.011	0.012	0.010	17
Aldicarb	2.761	4.800	4.950	4.118	21
Chlorpyrifos	2.000	2.440	2.500	2.343	3
Fenbutatin-oxide	0.510	1.000	1.305	0.993	38
Oxamyl	0.456	0.456	1.000	0.553	18
Petroleum distillate	21.000	27.000	39.667	29.314	10
Pyridaben	0.234	0.309	0.357	0.295	9
<b>Fungicides</b>					
Azoxystrobin	0.142	0.203	0.244	0.196	8
Copper hydroxide	1.112	1.400	2.519	1.623	44
Fenbuconazole	0.110	0.125	0.144	0.125	25
Pyraclostrobin	0.153	0.163	0.196	0.169	19
Sulfur	4.472	12.000	21.000	13.076	15
Trifloxystrobin	0.061	0.078	0.137	0.096	34
<b>Other Chemicals</b>					
Spirodiclofen	0.110	0.203	0.260	0.169	20

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 102,000 acres.

**Grapefruit: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Bromacil	0.800	1.327	2.008	1.509	7
Diuron	1.192	2.008	4.480	2.289	49
Glyphosate iso. salt	0.809	1.950	5.250	2.503	12
Simazine	1.500	3.600	21.838	6.051	35
<b>Insecticides</b>					
Abamectin	0.009	0.012	0.023	0.014	12
Aldicarb	3.000	4.800	4.950	4.124	20
Chlorpyrifos	2.000	2.500	9.760	4.465	42
Fenbutatin-oxide	1.000	1.020	2.610	1.345	37
Oxamyl	0.750	1.040	2.280	1.391	35
Petroleum distillate	35.000	56.000	189.000	83.545	24
Pyridaben	0.234	0.309	0.309	0.321	53
<b>Fungicides</b>					
Azoxystrobin	0.183	0.244	0.411	0.276	5
Copper hydroxide	1.313	5.584	14.152	6.475	88
Fenbuconazole	0.125	0.131	0.331	0.178	75
Pyraclostrobin	0.163	0.195	0.458	0.273	96
Sulfur	8.800	14.184	63.000	22.270	19
Trifloxystrobin	0.063	0.081	0.273	0.140	37
<b>Other Chemicals</b>					
Spirodiclofen	0.203	0.220	0.260	0.226	4

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 102,000 acres.

**Grapes, All: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, dimeth. salt	0	0	22	7	36
Diuron	0	0	8	5	25
Flumioxazin	0	0	10	3	26
Glyphosate iso. salt	0	39	100	44	11
Norflurazon	0	0	0	3	36
Oryzalin	0	0	26	8	19
Oxyfluorfen	0	2	94	23	11
Paraquat	0	0	82	17	22
Simazine	0	0	81	20	14
<b>Insecticides</b>					
Benzoic acid	0	0	23	7	26
Bifenazate	0	0	13	5	21
Carbaryl	0	0	0	2	16
Chlorpyrifos	0	0	12	5	29
Cryolite	0	0	7	4	20
Fenpropathrin	0	0	25	8	13
Imidacloprid	0	0	29	8	24
Petroleum distillate	0	0	40	9	29
Propargite	0	0	1	3	28
Spinosad	0	0	0	4	58
<b>Fungicides</b>					
Azoxystrobin	0	0	0	3	44
Boscalid	0	0	87	20	13
Calcium polysulfide	0	0	0	3	32
Copper hydroxide	0	0	99	24	14
Copper oxide	0	0	24	9	33
Cyprodinil	0	0	30	9	52
Fenarimol	0	0	58	11	20
Fenhexamid	0	0	8	5	21
Kresoxim-methyl	0	0	20	6	21
Mancozeb	0	0	25	8	26
Myclobutanil	0	0	0	4	62
Potassium bicarbon.	0	0	22	7	21
Pyraclostrobin	0	0	87	20	13
Quintec	0	0	33	9	44
Sulfur	0	100	100	69	6
Tebuconazole	0	0	82	17	17
Trifloxystrobin	0	0	89	21	13
Triflumizole	0	0	33	8	38
Ziram	0	0	0	3	32
<b>Other Chemicals</b>					
Gibberellic acid	0	0	53	10	27

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 885,000 acres.

**Grapes, All: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, dimeth. salt	1.0	1.0	1.2	1.1	3
Diuron	1.0	1.0	1.3	1.1	4
Flumioxazin	1.0	1.1	2.0	1.6	29
Glyphosate iso. salt	1.0	1.2	2.1	1.4	3
Norflurazon	1.0	1.0	1.4	1.1	8
Oryzalin	1.0	1.0	1.3	1.1	3
Oxyfluorfen	1.0	1.0	1.7	1.2	5
Paraquat	1.0	1.1	2.1	1.4	11
Simazine	1.0	1.0	1.3	1.1	2
<b>Insecticides</b>					
Benzoic acid	1.0	1.1	1.5	1.2	6
Bifenazate	1.0	1.0	1.3	1.1	6
Carbaryl	1.0	1.0	2.0	1.3	6
Chlorpyrifos	1.0	1.0	1.7	1.2	13
Cryolite	1.0	1.0	1.7	1.2	8
Fenpropathrin	1.0	1.0	2.0	1.2	6
Imidacloprid	1.0	1.0	1.3	1.1	3
Petroleum distillate	1.0	1.3	3.5	1.8	24
Propargite	1.0	1.0	1.2	1.1	5
Spinosad	1.0	1.1	1.3	1.1	6
<b>Fungicides</b>					
Azoxystrobin	1.0	1.3	2.0	1.4	16
Boscalid	1.0	1.1	2.0	1.3	6
Calcium polysulfide	1.0	1.0	1.4	1.1	4
Copper hydroxide	1.0	1.3	2.8	1.7	11
Copper oxide	1.0	1.2	2.5	1.8	12
Cyprodinil	1.0	1.0	1.6	1.2	10
Fenarimol	1.0	1.1	2.0	1.3	5
Fenhexamid	1.0	1.2	1.8	1.3	4
Kresoxim-methyl	1.0	1.0	1.4	1.2	4
Mancozeb	1.0	1.3	3.4	1.8	13
Myclobutanil	1.0	2.3	6.3	2.6	49
Potassium bicarbon.	1.0	1.0	2.9	1.4	11
Pyraclostrobin	1.0	1.1	2.0	1.3	6
Quintec	1.0	1.1	1.8	1.2	7
Sulfur	1.2	5.2	10.0	5.5	6
Tebuconazole	1.0	1.2	2.2	1.4	7
Trifloxystrobin	1.0	1.0	1.7	1.2	5
Triflumizole	1.0	1.0	1.9	1.2	9
Ziram	1.0	1.0	1.4	1.2	7
<b>Other Chemicals</b>					
Gibberellic acid	1.0	1.7	2.9	1.9	10

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 885,000 acres.

**Grapes, All: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, dimeth. salt	0.126	0.503	0.805	0.475	9
Diuron	0.400	0.613	1.600	0.817	11
Flumioxazin	0.044	0.134	0.191	0.148	15
Glyphosate iso. salt	0.343	0.692	1.388	0.816	4
Norflurazon	0.519	0.786	1.038	0.851	10
Oryzalin	0.816	1.262	3.000	1.637	9
Oxyfluorfen	0.064	0.333	1.000	0.437	9
Paraquat	0.250	0.515	0.862	0.551	6
Simazine	0.450	1.000	1.806	1.177	6
<b>Insecticides</b>					
Benzoic acid	0.128	0.167	0.200	0.170	5
Bifenazate	0.297	0.495	0.500	0.436	5
Carbaryl	0.550	1.993	2.250	1.591	7
Chlorpyrifos	1.788	2.000	2.006	1.913	3
Cryolite	3.345	5.760	7.680	5.261	7
Fenpropathrin	0.148	0.195	0.325	0.218	6
Imidacloprid	0.023	0.032	0.049	0.041	17
Petroleum distillate	1.850	6.212	9.335	5.753	10
Propargite	1.280	1.706	2.560	1.877	13
Spinosad	0.079	0.094	0.101	0.092	6
<b>Fungicides</b>					
Azoxystrobin	0.138	0.196	0.218	0.200	4
Boscalid	0.008	0.011	0.013	0.011	3
Calcium polysulfide	0.375	0.502	30.000	7.630	31
Copper hydroxide	0.375	0.526	0.915	0.618	4
Copper oxide	0.516	0.750	1.000	0.755	6
Cyprodinil	0.309	0.463	0.469	0.423	3
Fenarimol	0.023	0.031	0.040	0.032	4
Fenhexamid	0.336	0.500	0.500	0.474	3
Kresoxim-methyl	0.100	0.125	0.156	0.123	3
Mancozeb	0.923	1.667	3.000	1.859	9
Myclobutanil	0.050	0.067	0.125	0.070	16
Potassium bicarbon.	2.082	2.463	4.136	2.871	4
Pyraclostrobin	*	0.001	0.001	0.001	3
Quintec	0.065	0.087	0.103	0.085	5
Sulfur	2.850	8.029	14.326	8.691	4
Tebuconazole	0.103	0.113	0.121	0.112	3
Trifloxystrobin	0.055	0.063	0.094	0.068	4
Triflumizole	0.125	0.156	0.252	0.170	11
Ziram	2.280	3.006	3.040	2.822	3
<b>Other Chemicals</b>					
Gibberellic acid	0.014	0.026	0.062	0.041	16

\* Rate per acre is less than 0.0005 lbs.

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 885,000 acres.

**Grapes, All: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, dimeth. salt	0.126	0.533	0.679	0.525	11
Diuron	0.400	0.625	1.669	0.895	12
Flumioxazin	0.047	0.141	0.396	0.240	42
Glyphosate iso. salt	0.380	0.973	2.040	1.170	6
Norflurazon	0.519	0.884	1.769	0.946	11
Oryzalin	0.816	1.315	3.653	1.780	9
Oxyfluorfen	0.091	0.400	1.310	0.532	11
Paraquat	0.249	0.619	1.327	0.760	11
Simazine	0.531	1.149	2.073	1.321	6
<b>Insecticides</b>					
Benzoic acid	0.150	0.195	0.292	0.203	5
Bifenazate	0.250	0.500	0.621	0.499	9
Carbaryl	0.550	2.000	3.847	2.003	7
Chlorpyrifos	1.788	2.001	3.426	2.387	14
Cryolite	4.616	5.760	7.739	6.483	11
Fenpropathrin	0.171	0.254	0.381	0.259	7
Imidacloprid	0.023	0.035	0.054	0.046	19
Petroleum distillate	4.307	8.011	16.342	10.491	25
Propargite	1.340	1.920	2.886	2.050	9
Spinosad	0.088	0.097	0.129	0.103	5
<b>Fungicides</b>					
Azoxystrobin	0.195	0.244	0.390	0.273	16
Boscalid	0.010	0.013	0.024	0.015	5
Calcium polysulfide	0.377	0.571	30.000	8.647	30
Copper hydroxide	0.420	0.800	1.673	1.035	13
Copper oxide	0.707	1.083	2.338	1.386	13
Cyprodinil	0.304	0.469	0.749	0.504	10
Fenarimol	0.023	0.038	0.056	0.041	7
Fenhexamid	0.490	0.547	0.883	0.595	4
Kresoxim-methyl	0.109	0.147	0.175	0.145	4
Mancozeb	1.191	1.869	5.699	3.341	19
Myclobutanil	0.103	0.154	0.367	0.184	34
Potassium bicarbon.	2.196	3.182	6.565	3.880	11
Pyraclostrobin	*	0.001	0.001	0.001	5
Quintec	0.065	0.095	0.162	0.104	8
Sulfur	6.058	40.878	103.759	47.935	9
Tebuconazole	0.110	0.132	0.293	0.161	8
Trifloxystrobin	0.056	0.077	0.125	0.083	6
Triflumizole	0.133	0.168	0.469	0.206	18
Ziram	2.280	3.040	4.262	3.387	10
<b>Other Chemicals</b>					
Gibberellic acid	0.013	0.052	0.177	0.079	16

\* Rate per acre is less than 0.0005 lbs.

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 885,000 acres.



**Grapes, Raisin: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Glyphosate iso. salt	0	30	100	37	15
Oxyfluorfen	0	0	69	14	15
Simazine	0	2	100	29	20
<b>Fungicides</b>					
Copper hydroxide	0	0	100	19	26
Sulfur	0	100	100	65	11
<b>Other Chemicals</b>					
Gibberellic acid	0	0	98	19	17

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 242,000 acres.

**Grapes, Raisin: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Glyphosate iso. salt	1.0	1.0	2.0	1.3	5
Oxyfluorfen	1.0	1.0	1.9	1.2	7
Simazine	1.0	1.0	1.4	1.1	4
<b>Fungicides</b>					
Copper hydroxide	1.0	1.2	3.0	1.8	28
Sulfur	1.4	4.5	8.3	4.6	6
<b>Other Chemicals</b>					
Gibberellic acid	1.0	1.0	2.2	1.5	11

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 242,000 acres.

**Grapes, Raisin: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Glyphosate iso. salt	0.364	0.530	1.153	0.638	11
Oxyfluorfen	0.050	0.133	0.500	0.261	21
Simazine	0.450	0.933	1.350	0.946	7
<b>Fungicides</b>					
Copper hydroxide	0.501	0.804	0.915	0.771	6
Sulfur	3.200	10.677	15.827	9.848	6
<b>Other Chemicals</b>					
Gibberellic acid	0.013	0.028	0.076	0.049	24

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 242,000 acres.

**Grapes, Raisin: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Glyphosate iso. salt	0.375	0.750	1.405	0.856	9
Oxyfluorfen	0.055	0.187	1.049	0.325	20
Simazine	0.450	1.009	1.440	1.063	6
<b>Fungicides</b>					
Copper hydroxide	0.672	0.804	1.879	1.396	33
Sulfur	4.800	39.686	93.910	45.491	9
<b>Other Chemicals</b>					
Gibberellic acid	0.013	0.028	0.118	0.074	31

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 242,000 acres.

**Grapes, Table: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides Glyphosate iso. salt	0	19	100	36	22
Fungicides Sulfur	0	100	100	68	34
Other Chemicals Gibberellic acid	0	85	100	53	49

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 84,000 acres.

**Grapes, Table: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides Glyphosate iso. salt	1.0	1.1	2.3	1.3	10
Fungicides Sulfur	1.6	6.9	14.7	8.0	17
Other Chemicals Gibberellic acid	1.3	2.3	4.1	2.4	11

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 84,000 acres.

**Grapes, Table: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides Glyphosate iso. salt	0.409	0.898	1.310	0.836	9
Fungicides Sulfur	2.633	5.452	10.533	5.654	19
Other Chemicals Gibberellic acid	0.016	0.027	0.060	0.037	23

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 84,000 acres.

**Grapes, Table: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides Glyphosate iso. salt	0.381	0.750	2.095	1.091	16
Fungicides Sulfur	8.636	37.794	83.076	45.079	21
Other Chemicals Gibberellic acid	0.022	0.056	0.245	0.086	26

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 84,000 acres.

**Grapes, Wine: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Glyphosate iso. salt	0	45	100	47	14
Oryzalin	0	0	35	8	27
Oxyfluorfen	0	15	100	32	15
Paraquat	0	0	80	17	36
Simazine	0	0	60	18	21
<b>Insecticides</b>					
Benzoic acid	0	0	22	8	38
Bifenazate	0	0	10	4	27
Chlorpyrifos	0	0	22	6	35
Fenpropathrin	0	0	30	9	19
Imidacloprid	0	0	27	8	28
Petroleum distillate	0	0	55	12	39
<b>Fungicides</b>					
Boscalid	0	0	98	24	15
Copper hydroxide	0	0	98	25	15
Copper oxide	0	0	73	12	41
Cyprodinil	0	0	30	11	59
Fenhexamid	0	0	16	7	27
Potassium bicarbon.	0	0	41	11	22
Pyraclostrobin	0	0	98	24	15
Quintec	0	0	38	8	50
Sulfur	0	100	100	78	5
Tebuconazole	0	0	78	17	24
Trifloxystrobin	0	0	96	27	19

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 474,000 acres.

**Grapes, Wine: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Glyphosate iso. salt	1.0	1.2	2.2	1.5	6
Oryzalin	1.0	1.0	1.3	1.1	6
Oxyfluorfen	1.0	1.0	1.7	1.2	6
Paraquat	1.0	1.1	2.1	1.3	17
Simazine	1.0	1.0	1.4	1.1	4
<b>Insecticides</b>					
Benzoic acid	1.0	1.1	1.5	1.2	9
Bifenazate	1.0	1.0	1.3	1.1	9
Chlorpyrifos	1.0	1.2	1.7	1.3	16
Fenpropathrin	1.0	1.0	1.5	1.2	9
Imidacloprid	1.0	1.0	1.3	1.1	4
Petroleum distillate	1.0	1.3	2.3	1.6	38
<b>Fungicides</b>					
Boscalid	1.0	1.2	2.0	1.4	7
Copper hydroxide	1.0	1.3	3.0	1.7	13
Copper oxide	1.0	1.2	2.4	1.8	14
Cyprodinil	1.0	1.0	1.6	1.1	11
Fenhexamid	1.0	1.1	1.8	1.2	4
Potassium bicarbon.	1.0	1.1	2.9	1.5	12
Pyraclostrobin	1.0	1.2	2.0	1.4	7
Quintec	1.0	1.1	2.0	1.3	14
Sulfur	1.0	5.2	10.2	5.7	8
Tebuconazole	1.0	1.2	2.0	1.4	12
Trifloxystrobin	1.0	1.0	1.6	1.2	6

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 474,000 acres.

**Grapes, Wine: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Glyphosate iso. salt	0.343	0.750	1.378	0.845	6
Oryzalin	0.816	1.172	3.419	1.557	12
Oxyfluorfen	0.096	0.373	0.831	0.468	10
Paraquat	0.253	0.504	0.734	0.503	11
Simazine	0.667	1.128	1.891	1.268	10
<b>Insecticides</b>					
Benzoic acid	0.141	0.160	0.222	0.174	9
Bifenazate	0.250	0.455	0.500	0.435	10
Chlorpyrifos	1.960	2.000	2.006	1.985	1
Fenprothrin	0.186	0.197	0.325	0.233	8
Imidacloprid	0.023	0.031	0.040	0.032	5
Petroleum distillate	4.010	6.212	9.335	6.522	4
<b>Fungicides</b>					
Boscalid	0.009	0.012	0.014	0.012	5
Copper hydroxide	0.350	0.525	0.800	0.556	4
Copper oxide	0.503	0.627	0.955	0.689	5
Cyprodinil	0.309	0.463	0.469	0.433	4
Fenhexamid	0.447	0.500	0.500	0.477	3
Potassium bicarbon.	2.254	2.460	4.136	2.878	4
Pyraclostrobin	*	0.001	0.001	0.001	5
Quintec	0.070	0.093	0.103	0.090	3
Sulfur	2.431	8.930	14.700	9.102	5
Tebuconazole	0.103	0.112	0.116	0.109	4
Trifloxystrobin	0.057	0.063	0.094	0.070	5

\* Rate per acre is less than 0.0005 lbs.

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 474,000 acres.

**Grapes, Wine: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Glyphosate iso. salt	0.394	1.046	2.109	1.236	9
Oryzalin	0.816	1.254	4.000	1.725	11
Oxyfluorfen	0.117	0.458	1.310	0.563	13
Paraquat	0.249	0.533	1.327	0.672	18
Simazine	0.746	1.328	2.171	1.441	9
<b>Insecticides</b>					
Benzoic acid	0.155	0.197	0.296	0.211	8
Bifenazate	0.315	0.500	0.769	0.495	7
Chlorpyrifos	1.960	2.374	3.426	2.665	17
Fenprothrin	0.186	0.271	0.381	0.277	9
Imidacloprid	0.025	0.035	0.050	0.036	7
Petroleum distillate	4.307	8.011	16.110	10.563	36
<b>Fungicides</b>					
Boscalid	0.010	0.014	0.024	0.016	6
Copper hydroxide	0.329	0.751	1.673	0.932	13
Copper oxide	0.707	0.955	2.000	1.260	13
Cyprodinil	0.309	0.469	0.749	0.498	10
Fenhexamid	0.494	0.547	0.756	0.585	5
Potassium bicarbon.	2.196	3.915	6.565	4.195	12
Pyraclostrobin	0.001	0.001	0.001	0.001	6
Quintec	0.080	0.101	0.165	0.119	14
Sulfur	6.944	42.503	112.189	51.507	11
Tebuconazole	0.109	0.123	0.249	0.153	12
Trifloxystrobin	0.062	0.076	0.125	0.084	9

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 474,000 acres.



**Lemons: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides					
Glyphosate iso. salt	0	83	100	58	9
Insecticides					
Chlorpyrifos	0	0	92	22	16
Petroleum distillate	0	0	100	38	16
Other Chemicals					
Gibberellic acid	0	0	82	24	15
Metaldehyde	0	0	100	27	29

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 44,000 acres.

**Lemons: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides					
Glyphosate iso. salt	1.2	2.2	4.9	2.7	12
Insecticides					
Chlorpyrifos	1.0	1.1	5.7	1.6	28
Petroleum distillate	1.0	1.2	2.1	1.6	22
Other Chemicals					
Gibberellic acid	1.0	1.0	1.4	1.2	11
Metaldehyde	1.2	1.8	6.8	2.9	20

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 44,000 acres.

**Lemons: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Glyphosate iso. salt	0.265	0.550	1.569	0.795	21
Insecticides					
Chlorpyrifos	1.665	2.297	5.830	2.916	11
Petroleum distillate	27.855	40.651	88.022	46.506	16
Other Chemicals					
Gibberellic acid	0.016	0.033	0.051	0.035	14
Metaldehyde	0.300	0.406	0.891	0.526	17

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 44,000 acres.

**Lemons: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Glyphosate iso. salt	0.614	2.300	3.872	2.164	14
Insecticides					
Chlorpyrifos	1.469	4.031	12.997	4.777	21
Petroleum distillate	26.676	58.148	126.087	74.898	13
Other Chemicals					
Gibberellic acid	0.023	0.039	0.063	0.042	7
Metaldehyde	0.401	1.118	2.780	1.517	21

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 44,000 acres.

**Nectarines: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Glyphosate iso. salt	0	51	100	55	15
Oxyfluorfen	0	28	65	27	15
<b>Insecticides</b>					
Esfenvalerate	0	50	98	49	12
Petroleum distillate	0	50	93	43	7
Spinosad	0	25	75	25	23
<b>Fungicides</b>					
Copper hydroxide	0	48	65	33	26
Sulfur	0	86	100	58	14

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 36,500 acres.

**Nectarines: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Glyphosate iso. salt	1.0	1.3	2.0	1.5	14
Oxyfluorfen	1.0	1.0	1.5	1.1	6
<b>Insecticides</b>					
Esfenvalerate	1.0	1.0	1.9	1.2	11
Petroleum distillate	1.0	1.0	1.3	1.1	3
Spinosad	1.0	1.0	1.5	1.1	7
<b>Fungicides</b>					
Copper hydroxide	1.0	1.0	1.4	1.1	7
Sulfur	1.0	1.0	1.7	1.2	14

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 36,500 acres.

**Nectarines: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Glyphosate iso. salt	0.364	0.754	0.991	0.771	11
Oxyfluorfen	0.074	0.400	0.968	0.497	43
Insecticides					
Esfenvalerate	0.037	0.042	0.052	0.045	6
Petroleum distillate	34.220	56.000	56.207	49.478	8
Spinosad	0.094	0.099	0.115	0.101	3
Fungicides					
Copper hydroxide	2.950	5.000	5.020	4.393	8
Sulfur	4.000	4.808	9.500	5.512	16

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 36,500 acres.

**Nectarines: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Glyphosate iso. salt	0.663	0.867	1.567	1.122	11
Oxyfluorfen	0.074	0.593	0.968	0.563	40
Insecticides					
Esfenvalerate	0.041	0.050	0.069	0.052	7
Petroleum distillate	35.000	56.000	56.207	52.975	7
Spinosad	0.094	0.100	0.176	0.114	9
Fungicides					
Copper hydroxide	2.950	5.020	5.605	4.878	5
Sulfur	4.752	4.808	14.357	6.589	28

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 36,500 acres.

**Olives: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides Glyphosate iso. salt	0	14	100	42	19

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 32,000 acres.

**Olives: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides Glyphosate iso. salt	1.0	2.2	2.9	2.2	9

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 32,000 acres.

**Olives: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides Glyphosate iso. salt	0.233	0.515	0.918	0.514	21

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 32,000 acres.

**Olives: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides Glyphosate iso. salt	0.650	0.874	1.856	1.144	15

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 32,000 acres.

**Oranges: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, isoprop. salt	0	0	100	20	70
Bromacil	0	0	45	12	63
Diuron	0	42	100	46	15
Glyphosate iso. salt	0	100	100	78	22
Norflurazon	0	0	55	12	122
Paraquat	0	0	1	8	43
Simazine	0	0	100	30	49
<b>Insecticides</b>					
Abamectin	0	0	100	16	74
Bt subsp. kurstaki	0	0	41	11	55
Chlorpyrifos	0	0	81	17	29
Cyfluthrin	0	0	9	5	24
Dimethoate	0	0	0	2	37
Fenpropathrin	0	0	0	2	40
Petroleum distillate	0	100	100	66	44
Pyridaben	0	0	2	3	26
Pyriproxyfen	0	0	17	3	23
Spinosad	0	0	38	8	24
<b>Fungicides</b>					
Azoxystrobin	0	0	100	11	108
Basic copper sulfate	0	0	19	6	38
Copper hydroxide	0	0	100	34	33
Copper sulfate	0	0	0	5	108
Sulfur	0	0	1	5	114
Trifloxystrobin	0	0	0	4	98
<b>Other Chemicals</b>					
2,4-D, isoprop ester	0	0	35	8	8
Gibberellic acid	0	0	16	4	21

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 717,800 acres.

**Oranges: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, isoprop. salt	1.0	2.0	4.0	1.9	11
Bromacil	1.0	2.0	2.2	1.7	27
Diuron	1.0	1.2	3.0	1.7	10
Glyphosate iso. salt	1.1	2.0	4.0	2.5	8
Norflurazon	1.0	2.0	3.0	2.2	59
Paraquat	1.0	1.0	2.1	1.3	9
Simazine	1.0	1.0	3.0	1.4	93
<b>Insecticides</b>					
Abamectin	1.0	1.0	3.0	1.5	25
Bt subsp. kurstaki	1.0	1.0	1.4	1.1	3
Chlorpyrifos	1.0	1.4	4.0	1.7	18
Cyfluthrin	1.0	1.5	1.8	1.4	8
Dimethoate	1.0	1.0	1.3	1.1	4
Fenpropathrin	1.0	1.0	1.3	1.2	7
Petroleum distillate	1.0	2.0	4.0	2.4	7
Pyridaben	1.0	1.0	1.2	1.1	22
Pyriproxyfen	1.0	1.2	2.0	1.3	11
Spinosad	1.0	1.2	2.0	1.4	9
<b>Fungicides</b>					
Azoxystrobin	1.0	2.0	2.0	1.9	20
Basic copper sulfate	1.0	1.5	2.0	1.5	7
Copper hydroxide	1.0	1.4	3.9	2.0	31
Copper sulfate	1.0	1.0	3.0	2.0	58
Sulfur	1.0	1.2	3.0	1.6	17
Trifloxystrobin	1.0	1.0	2.0	1.2	47
<b>Other Chemicals</b>					
2,4-D, isoprop ester	1.0	1.3	2.0	1.4	4
Gibberellic acid	1.0	1.1	1.5	1.2	3

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 717,800 acres.



**Oranges: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, isoprop. salt	0.170	0.219	0.400	0.270	31
Bromacil	0.600	1.022	1.449	0.916	28
Diuron	0.551	1.514	2.382	1.435	11
Glyphosate iso. salt	0.375	1.005	1.994	1.123	11
Norflurazon	0.236	1.572	1.685	1.381	53
Paraquat	0.188	0.313	0.591	0.381	8
Simazine	1.800	2.281	2.700	2.324	3
<b>Insecticides</b>					
Abamectin	0.006	0.008	0.012	0.008	7
Chlorpyrifos	0.250	0.912	4.000	1.605	31
Cyfluthrin	0.035	0.050	0.100	0.059	15
Dimethoate	0.351	1.875	2.000	1.500	11
Fenpropathrin	0.300	0.334	0.400	0.334	4
Petroleum distillate	16.625	35.000	52.500	35.541	5
Pyridaben	0.234	0.300	0.338	0.306	4
Pyriproxyfen	0.101	0.107	0.112	0.106	1
Spinosad	0.085	0.101	0.125	0.105	4
<b>Fungicides</b>					
Azoxystrobin	0.141	0.202	0.202	0.186	8
Basic copper sulfate	2.650	3.705	4.887	3.657	5
Copper hydroxide	1.000	1.313	2.500	1.532	29
Copper sulfate	0.504	1.008	3.594	1.419	33
Sulfur	4.440	8.000	21.000	8.965	24
Trifloxystrobin	0.062	0.063	0.066	0.064	4
<b>Other Chemicals</b>					
2,4-D, isoprop ester	0.032	0.054	0.097	0.058	6
Gibberellic acid	0.044	0.087	0.104	0.081	6

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 717,800 acres.

**Oranges: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, isoprop. salt	0.200	0.680	0.800	0.525	28
Bromacil	0.600	1.240	2.400	1.566	54
Diuron	1.000	2.140	4.543	2.410	5
Glyphosate iso. salt	1.000	2.999	5.040	2.857	15
Norflurazon	0.472	3.144	5.055	3.069	112
Paraquat	0.188	0.375	0.750	0.489	12
Simazine	1.800	2.650	8.100	3.285	93
<b>Insecticides</b>					
Abamectin	0.005	0.011	0.022	0.013	28
Chlorpyrifos	0.808	1.826	5.000	2.751	15
Cyfluthrin	0.050	0.068	0.147	0.085	12
Dimethoate	0.351	1.937	2.191	1.686	13
Fenpropathrin	0.300	0.340	0.501	0.385	11
Petroleum distillate	28.000	70.000	140.000	86.596	10
Pyridaben	0.234	0.300	0.438	0.334	20
Pyriproxyfen	0.101	0.129	0.209	0.142	11
Spinosad	0.102	0.121	0.212	0.143	10
<b>Fungicides</b>					
Azoxystrobin	0.195	0.403	0.403	0.354	28
Basic copper sulfate	2.650	5.405	8.408	5.362	10
Copper hydroxide	1.313	2.500	5.600	2.997	11
Copper sulfate	1.008	1.512	6.048	2.829	66
Sulfur	3.922	9.600	18.800	14.139	17
Trifloxystrobin	0.063	0.063	0.124	0.079	44
<b>Other Chemicals</b>					
2,4-D, isoprop ester	0.047	0.079	0.127	0.084	8
Gibberellic acid	0.044	0.097	0.129	0.097	9

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 717,800 acres.

**Peaches: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, dimeth. salt	0	0	81	16	32
Diuron	0	0	30	7	28
Glyphosate iso. salt	0	37	100	40	10
Norflurazon	0	0	0	4	57
Oxyfluorfen	0	0	53	13	15
Paraquat	0	0	58	15	22
Simazine	0	0	80	18	22
Terbacil	0	0	3	4	45
<b>Insecticides</b>					
Azinphos-methyl	0	0	100	17	21
Benzoic acid	0	0	2	4	45
Carbaryl	0	0	81	13	16
Chlorpyrifos	0	0	100	18	27
Diazinon	0	0	0	3	33
Endosulfan	0	0	0	3	52
Esfenvalerate	0	27	100	37	16
Imidacloprid	0	0	0	2	9
Lambda-cyhalothrin	0	0	18	7	21
Malathion	0	0	0	2	35
Methomyl	0	0	0	5	47
Permethrin	0	0	0	8	23
Petroleum distillate	0	0	94	28	15
Petroleum oil	0	0	0	9	61
Phosmet	0	21	100	46	14
<b>Fungicides</b>					
Boscalid	0	0	50	16	19
Captan	0	0	100	25	13
Chlorothalonil	0	0	100	21	10
Copper hydroxide	0	0	77	23	12
Cyprodinil	0	0	71	14	21
Fenbuconazole	0	0	60	12	27
Iprodione	0	0	51	13	17
Myclobutanil	0	0	0	4	22
Oxytetracycline	0	0	13	7	35
Propiconazole	0	0	100	30	15
Pyraclostrobin	0	0	50	16	19
Sulfur	0	71	100	57	9
Tebuconazole	0	0	50	10	27
Thiophanate-methyl	0	0	9	8	35
Ziram	0	0	69	14	20
<b>Other Chemicals</b>					
E-8-Dodecenyl acetat	0	0	6	7	31
Z-8-Dodecanol	0	0	6	7	31
Z-8-Dodecen acetate	0	0	6	7	31

<sup>1</sup> Bearing acreage in 2005 for the 7 Program States was 114,800 acres.

**Peaches: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, dimeth. salt	1.0	1.0	1.7	1.2	7
Diuron	1.0	1.0	1.1	1.0	2
Glyphosate iso. salt	1.0	1.2	2.2	1.4	8
Norflurazon	1.0	1.2	2.0	1.3	9
Oxyfluorfen	1.0	1.0	1.4	1.1	2
Paraquat	1.0	1.0	3.5	1.6	22
Simazine	1.0	1.0	1.4	1.1	5
Terbacil	1.0	1.0	1.0	1.0	0
<b>Insecticides</b>					
Azinphos-methyl	1.0	3.0	4.0	2.7	11
Benzoic acid	1.0	2.0	4.0	1.8	19
Carbaryl	1.0	1.1	2.0	1.6	13
Chlorpyrifos	1.0	1.0	1.4	1.2	4
Diazinon	1.0	1.4	4.0	2.1	14
Endosulfan	1.0	2.0	4.0	2.2	12
Esfenvalerate	1.0	1.2	6.0	2.1	15
Imidacloprid	1.0	2.0	3.0	1.8	8
Lambda-cyhalothrin	1.0	1.7	3.0	1.7	8
Malathion	1.0	2.0	3.0	2.2	11
Methomyl	1.0	2.0	4.0	2.5	27
Permethrin	1.4	2.0	8.0	3.1	19
Petroleum distillate	1.0	1.0	1.5	1.2	4
Petroleum oil	1.0	2.0	2.0	1.6	18
Phosmet	1.0	3.0	6.0	3.2	12
<b>Fungicides</b>					
Boscalid	1.0	1.0	1.6	1.2	7
Captan	1.0	3.0	7.0	3.8	14
Chlorothalonil	1.0	2.0	3.0	2.1	6
Copper hydroxide	1.0	1.0	2.2	1.3	8
Cyprodinil	1.0	1.0	2.0	1.2	5
Fenbuconazole	1.0	2.0	4.0	2.6	9
Iprodione	1.0	1.0	1.4	1.1	3
Myclobutanil	1.0	3.0	7.0	4.0	32
Oxytetracycline	1.0	3.0	7.0	3.3	25
Propiconazole	1.0	1.2	2.3	1.7	11
Pyraclostrobin	1.0	1.0	1.6	1.2	7
Sulfur	1.0	3.0	8.0	3.6	8
Tebuconazole	1.0	1.3	2.1	1.5	9
Thiophanate-methyl	1.0	2.0	6.0	2.3	32
Ziram	1.0	1.1	1.9	1.3	5
<b>Other Chemicals</b>					
E-8-Dodecenyl acetat	1.0	1.2	2.6	1.4	9
Z-8-Dodecanol	1.0	1.2	2.6	1.4	9
Z-8-Dodecen acetate	1.0	1.2	2.6	1.4	9

<sup>1</sup> Bearing acreage in 2005 for the 7 Program States was 114,800 acres.

**Peaches: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, dimeth. salt	0.247	0.422	1.378	0.711	22
Diuron	0.288	1.200	2.400	1.465	32
Glyphosate iso. salt	0.206	0.595	0.869	0.591	9
Norflurazon	0.460	0.948	1.572	1.158	17
Oxyfluorfen	0.044	0.250	0.909	0.426	36
Paraquat	0.225	0.587	0.750	0.567	13
Simazine	0.444	1.000	2.000	1.096	14
Terbacil	0.240	0.300	1.600	0.579	31
<b>Insecticides</b>					
Azinphos-methyl	0.125	0.604	1.150	0.664	14
Benzoic acid	0.156	0.188	0.400	0.255	25
Carbaryl	0.250	1.000	2.000	1.277	21
Chlorpyrifos	0.500	1.000	2.000	1.239	13
Diazinon	0.405	1.333	2.000	1.204	12
Endosulfan	0.375	0.750	1.250	0.767	7
Esfenvalerate	0.008	0.041	0.134	0.051	35
Imidacloprid	0.012	0.028	0.075	0.047	17
Lambda-cyhalothrin	0.022	0.027	0.038	0.028	4
Malathion	0.545	1.250	1.875	1.416	15
Methomyl	0.150	0.345	0.900	0.478	23
Permethrin	0.100	0.188	0.250	0.182	5
Petroleum distillate	10.500	28.000	55.739	30.228	8
Petroleum oil	8.820	17.640	22.932	16.439	14
Phosmet	0.875	1.400	2.803	1.506	5
<b>Fungicides</b>					
Boscalid	0.010	0.012	0.014	0.012	3
Captan	0.463	1.643	2.875	1.645	11
Chlorothalonil	0.281	1.950	2.500	1.844	14
Copper hydroxide	0.750	4.000	5.000	3.180	9
Cyprodinil	0.187	0.234	0.238	0.230	3
Fenbuconazole	0.023	0.094	0.188	0.117	18
Iprodione	0.500	0.750	0.800	0.709	7
Myclobutanil	0.016	0.016	0.100	0.043	40
Oxytetracycline	0.085	0.160	0.170	0.146	8
Propiconazole	0.112	0.113	0.119	0.113	1
Pyraclostrobin	0.001	0.001	0.001	0.001	32
Sulfur	2.957	8.550	12.000	8.476	5
Tebuconazole	0.059	0.169	0.225	0.154	11
Thiophanate-methyl	0.350	0.672	1.050	0.718	14
Ziram	2.105	5.256	6.080	4.653	9
<b>Other Chemicals</b>					
E-8-Dodecenyl acetat	0.001	0.001	0.003	0.002	12
Z-8-Dodecanol	*	*	*	*	27
Z-8-Dodecen acetate	0.010	0.019	0.039	0.023	13

\* Rate per acre is less than 0.0005 lbs.

<sup>1</sup> Bearing acreage in 2005 for the 7 Program States was 114,800 acres.

**Peaches: Rate per Crop Year Distribution,  
Program States, 2005<sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, dimeth. salt	0.250	0.712	1.704	0.840	18
Diuron	0.288	1.200	2.612	1.513	34
Glyphosate iso. salt	0.362	0.750	1.275	0.836	9
Norflurazon	0.460	1.157	3.144	1.506	24
Oxyfluorfen	0.063	0.285	0.909	0.468	36
Paraquat	0.229	0.625	2.055	0.881	28
Simazine	0.439	1.000	2.000	1.241	16
Terbacil	0.240	0.300	1.600	0.580	31
<b>Insecticides</b>					
Azinphos-methyl	0.375	1.513	3.450	1.790	18
Benzoic acid	0.187	0.274	0.800	0.470	30
Carbaryl	0.500	1.024	4.000	2.099	31
Chlorpyrifos	0.500	1.000	2.740	1.429	15
Diazinon	0.938	2.031	4.000	2.480	16
Endosulfan	0.750	1.500	3.000	1.714	15
Esfenvalerate	0.032	0.059	0.145	0.108	46
Imidacloprid	0.025	0.054	0.150	0.085	23
Lambda-cyhalothrin	0.025	0.039	0.081	0.048	9
Malathion	0.603	2.500	5.625	3.093	24
Methomyl	0.436	1.380	1.800	1.185	7
Permethrin	0.200	0.400	1.600	0.566	19
Petroleum distillate	10.500	35.000	56.000	35.166	9
Petroleum oil	8.820	35.280	35.280	25.521	29
Phosmet	2.265	3.886	8.176	4.797	10
<b>Fungicides</b>					
Boscalid	0.010	0.012	0.017	0.014	9
Captan	2.000	6.000	11.500	6.211	13
Chlorothalonil	1.125	3.712	6.600	3.859	11
Copper hydroxide	1.000	4.000	7.136	4.102	10
Cyprodinil	0.210	0.234	0.468	0.283	7
Fenbuconazole	0.094	0.188	0.375	0.304	17
Iprodione	0.500	0.800	1.070	0.794	7
Myclobutanil	0.100	0.113	0.300	0.171	14
Oxytetracycline	0.085	0.383	1.190	0.480	31
Propiconazole	0.112	0.131	0.248	0.190	11
Pyraclostrobin	0.001	0.001	0.001	0.001	32
Sulfur	5.268	24.300	70.890	30.123	10
Tebuconazole	0.079	0.225	0.375	0.235	16
Thiophanate-methyl	0.525	1.050	4.032	1.654	32
Ziram	2.285	6.080	9.523	6.170	10
<b>Other Chemicals</b>					
E-8-Dodecenyl acetat	0.001	0.002	0.003	0.002	14
Z-8-Dodecanol	*	*	0.001	*	25
Z-8-Dodecen acetate	0.016	0.025	0.051	0.034	14

\* Rate per acre is less than 0.0005 lbs.

<sup>1</sup> Bearing acreage in 2005 for the 7 Program States was 114,800 acres.

**Pears: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, dimeth. salt	0	0	0	4	23
Glyphosate iso. salt	0	20	100	37	14
Paraquat	0	0	22	10	62
Simazine	0	0	30	10	52
<b>Insecticides</b>					
Abamectin	0	86	100	66	9
Acetamiprid	0	23	100	40	7
Azinphos-methyl	0	0	100	38	11
Benzoic acid	0	0	100	23	30
Bifenazate	0	0	67	15	29
Chlorpyrifos	0	0	100	16	17
Clothianidin	0	0	33	9	19
Endosulfan	0	0	100	28	11
Esfenvalerate	0	0	75	18	10
Fenpyroximate	0	0	69	15	28
Formetanate hydro.	0	0	17	9	31
Kaolin	0	0	100	29	23
Lambda-cyhalothrin	0	0	100	29	11
Petroleum distillate	0	100	100	83	6
Phosmet	0	0	100	24	25
Pyridaben	0	0	100	18	15
Pyriproxyfen	0	10	100	36	9
Spinosad	0	0	32	12	19
Thiamethoxam	0	0	100	34	6
<b>Fungicides</b>					
Calcium polysulfide	0	0	96	19	27
Copper hydroxide	0	0	100	28	15
Copper oxide	0	0	0	5	18
Fenarimol	0	0	36	7	24
Mancozeb	0	0	100	39	16
Oxytetracycline	0	0	100	34	22
Streptomycin	0	0	100	16	44
Sulfur	0	0	100	40	9
Thiophanate-methyl	0	0	23	6	27
Trifloxystrobin	0	0	100	29	20
Triflumizole	0	0	100	40	8
Ziram	0	0	100	27	16
<b>Other Chemicals</b>					
Cytokinins	0	0	5	6	21
Dodecadien-1-ol	0	0	71	18	26
NAA	0	0	100	29	11

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 59,700 acres.

**Pears: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
2,4-D, dimeth. salt	1.0	1.4	2.0	1.5	10
Glyphosate iso. salt	1.0	1.0	2.1	1.4	6
Paraquat	1.0	2.0	2.0	1.7	12
Simazine	1.0	1.0	1.0	1.1	4
<b>Insecticides</b>					
Abamectin	1.0	1.0	2.0	1.3	4
Acetamiprid	1.0	1.3	2.3	1.6	8
Azinphos-methyl	1.0	1.2	3.0	1.6	6
Benzoic acid	1.0	1.0	1.3	1.2	3
Bifenazate	1.0	1.0	1.4	1.2	6
Chlorpyrifos	1.0	1.0	1.1	1.0	2
Clothianidin	1.0	1.0	1.2	1.1	3
Endosulfan	1.0	1.0	1.8	1.2	4
Esfenvalerate	1.0	1.0	1.6	1.2	5
Fenpyroximate	1.0	1.0	1.4	1.1	4
Formetanate hydro.	1.0	1.1	1.4	1.2	6
Kaolin	1.0	2.3	3.1	2.3	12
Lambda-cyhalothrin	1.0	1.0	2.0	1.2	4
Petroleum distillate	1.9	4.0	6.8	4.0	4
Phosmet	1.0	1.1	3.6	1.8	26
Pyridaben	1.0	1.0	2.0	1.2	9
Pyriproxyfen	1.0	1.0	1.4	1.1	4
Spinosad	1.0	1.0	1.8	1.2	6
Thiamethoxam	1.0	1.0	1.9	1.2	4
<b>Fungicides</b>					
Calcium polysulfide	1.0	1.0	2.0	1.4	21
Copper hydroxide	1.0	1.0	1.8	1.3	6
Copper oxide	1.0	1.0	1.4	1.1	5
Fenarimol	1.0	1.2	2.0	1.5	12
Mancozeb	1.0	2.0	2.9	2.2	7
Oxytetracycline	1.0	2.2	6.1	3.3	17
Streptomycin	1.0	2.2	4.3	2.6	21
Sulfur	1.0	1.1	2.0	1.5	3
Thiophanate-methyl	1.0	1.0	1.0	1.0	2
Trifloxystrobin	1.0	1.2	2.9	1.6	13
Triflumizole	1.0	1.3	2.0	1.6	6
Ziram	1.0	1.1	3.6	1.6	8
<b>Other Chemicals</b>					
Cytokinins	1.0	1.0	3.0	1.4	10
Dodecadien-1-ol	1.0	1.0	1.4	1.1	4
NAA	1.0	1.0	2.0	1.2	5

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 59,700 acres.



**Pears: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, dimeth. salt	0.445	0.712	1.900	0.995	19
Glyphosate iso. salt	0.310	0.750	1.923	0.937	11
Paraquat	0.345	0.952	0.952	0.789	16
Simazine	1.000	3.040	3.040	2.498	17
<b>Insecticides</b>					
Abamectin	0.012	0.019	0.023	0.019	3
Acetamiprid	0.070	0.148	0.149	0.130	3
Azinphos-methyl	0.700	1.000	1.500	1.048	5
Benzoic acid	0.156	0.249	0.250	0.233	3
Bifenazate	0.341	0.500	0.500	0.444	5
Chlorpyrifos	1.375	2.000	2.804	2.021	7
Clothianidin	0.162	0.188	0.188	0.178	2
Endosulfan	0.833	2.250	2.500	2.067	6
Esfenvalerate	0.037	0.062	0.066	0.057	8
Fenpyroximate	0.077	0.100	0.100	0.093	2
Formetanate hydro.	0.203	0.530	0.690	0.524	8
Kaolin	23.721	44.828	63.983	41.748	14
Lambda-cyhalothrin	0.039	0.039	0.039	0.038	1
Petroleum distillate	8.698	14.000	24.500	15.852	4
Phosmet	2.250	3.500	4.900	3.459	5
Pyridaben	0.234	0.387	0.464	0.353	5
Pyriproxyfen	0.098	0.109	0.109	0.106	1
Spinosad	0.071	0.125	0.145	0.112	6
Thiamethoxam	0.059	0.078	0.086	0.076	7
<b>Fungicides</b>					
Calcium polysulfide	6.000	23.237	30.000	22.408	14
Copper hydroxide	0.350	1.875	5.000	2.288	11
Copper oxide	1.875	4.050	4.688	3.842	7
Fenarimol	0.063	0.078	0.093	0.078	5
Mancozeb	2.245	4.441	4.500	3.753	10
Oxytetracycline	0.049	0.157	0.170	0.129	12
Streptomycin	0.019	0.080	0.170	0.095	23
Sulfur	8.000	12.000	12.800	10.829	3
Thiophanate-methyl	0.700	0.700	1.133	0.732	8
Trifloxystrobin	0.063	0.064	0.079	0.068	5
Triflumizole	0.250	0.250	0.313	0.260	2
Ziram	2.984	4.665	6.080	4.700	4
<b>Other Chemicals</b>					
Cytokinins	*	*	*	*	11
Dodecadien-1-ol	0.005	0.021	0.305	0.088	54
NAA	0.041	0.062	0.083	0.065	5

\* Rate per acre is less than 0.0005 lbs.

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 59,700 acres.

**Pears: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
2,4-D, dimeth. salt	0.475	0.993	2.137	1.445	20
Glyphosate iso. salt	0.457	1.125	2.250	1.317	10
Paraquat	0.338	1.868	1.868	1.322	27
Simazine	1.050	3.040	3.047	2.653	13
<b>Insecticides</b>					
Abamectin	0.012	0.023	0.036	0.024	5
Acetamiprid	0.117	0.166	0.306	0.203	10
Azinphos-methyl	0.604	1.418	3.000	1.696	8
Benzoic acid	0.207	0.250	0.322	0.277	3
Bifenazate	0.348	0.500	0.720	0.521	10
Chlorpyrifos	1.517	2.000	3.000	2.114	6
Clothianidin	0.161	0.188	0.217	0.193	4
Endosulfan	0.808	2.250	3.207	2.397	7
Esfenvalerate	0.041	0.062	0.097	0.068	10
Fenpyroximate	0.097	0.100	0.129	0.106	3
Formetanate hydro.	0.203	0.633	0.885	0.636	11
Kaolin	42.552	74.621	164.880	94.338	10
Lambda-cyhalothrin	0.037	0.039	0.078	0.046	4
Petroleum distillate	25.200	56.955	112.000	64.084	4
Phosmet	2.500	4.900	12.682	6.142	27
Pyridaben	0.234	0.387	0.474	0.427	13
Pyriproxyfen	0.104	0.109	0.156	0.121	5
Spinosad	0.094	0.125	0.165	0.134	5
Thiamethoxam	0.063	0.086	0.145	0.094	6
<b>Fungicides</b>					
Calcium polysulfide	6.000	29.995	45.619	30.557	33
Copper hydroxide	0.497	2.015	5.167	2.937	12
Copper oxide	2.209	4.687	6.250	4.409	9
Fenarimol	0.078	0.097	0.156	0.114	8
Mancozeb	4.073	7.856	11.250	8.078	10
Oxytetracycline	0.170	0.324	0.837	0.421	10
Streptomycin	0.170	0.213	0.274	0.243	12
Sulfur	8.800	12.897	24.000	16.066	4
Thiophanate-methyl	0.700	0.700	1.133	0.763	8
Trifloxystrobin	0.063	0.079	0.226	0.109	17
Triflumizole	0.250	0.360	0.600	0.405	6
Ziram	3.800	6.080	13.095	7.425	8
<b>Other Chemicals</b>					
Cytokinins	*	*	*	*	16
Dodecadien-1-ol	0.009	0.030	0.306	0.100	51
NAA	0.041	0.082	0.122	0.081	8

\* Rate per acre is less than 0.0005 lbs.

<sup>1</sup> Bearing acreage in 2005 for the 3 Program States was 59,700 acres.

**Plums: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides					
Glyphosate iso. salt	0	81	100	60	15
Oxyfluorfen	0	9	76	22	28
Insecticides					
Esfenvalerate	0	42	95	43	18
Petroleum distillate	0	36	92	41	21
Fungicides					
Propiconazole	0	3	80	21	30

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 36,000 acres.

**Plums: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides					
Glyphosate iso. salt	1.0	1.7	2.1	1.6	7
Oxyfluorfen	1.0	1.1	1.8	1.2	8
Insecticides					
Esfenvalerate	1.0	1.0	1.4	1.1	4
Petroleum distillate	1.0	1.0	2.1	1.2	14
Fungicides					
Propiconazole	1.0	1.0	1.3	1.1	3

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 36,000 acres.

**Plums: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Glyphosate iso. salt	0.418	0.668	1.034	0.761	7
Oxyfluorfen	0.080	0.265	1.000	0.425	25
Insecticides					
Esfenvalerate	0.026	0.041	0.052	0.041	8
Petroleum distillate	21.208	35.000	56.000	38.924	15
Fungicides					
Propiconazole	0.112	0.113	0.114	0.113	0

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 36,000 acres.

**Plums: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Glyphosate iso. salt	0.693	1.156	2.107	1.245	9
Oxyfluorfen	0.088	0.274	1.133	0.522	26
Insecticides					
Esfenvalerate	0.035	0.045	0.059	0.046	6
Petroleum distillate	33.409	52.947	56.000	47.610	6
Fungicides					
Propiconazole	0.112	0.113	0.148	0.125	3

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 36,000 acres.

**Prunes: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Glyphosate iso. salt	0	60	100	52	13
Oxyfluorfen	0	0	79	25	18
<b>Insecticides</b>					
Esfenvalerate	0	0	95	29	16
Petroleum distillate	0	25	100	38	11
<b>Fungicides</b>					
Captan	0	0	88	23	11
Propiconazole	0	0	94	21	19
Sulfur	0	0	100	31	19

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 67,000 acres.

**Prunes: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Glyphosate iso. salt	1.0	1.4	3.3	1.8	8
Oxyfluorfen	1.0	1.0	1.8	1.3	9
<b>Insecticides</b>					
Esfenvalerate	1.0	1.0	1.4	1.1	3
Petroleum distillate	1.0	1.0	1.4	1.1	3
<b>Fungicides</b>					
Captan	1.0	1.0	1.3	1.1	2
Propiconazole	1.0	1.2	1.4	1.2	3
Sulfur	1.0	1.2	1.4	1.3	7

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 67,000 acres.

**Prunes: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Glyphosate iso. salt	0.321	0.600	1.084	0.651	6
Oxyfluorfen	0.021	0.125	0.441	0.213	20
Insecticides					
Esfenvalerate	0.013	0.041	0.062	0.040	10
Petroleum distillate	13.000	21.000	28.808	20.941	5
Fungicides					
Captan	2.100	3.000	3.005	2.774	3
Propiconazole	0.110	0.113	0.113	0.108	3
Sulfur	4.800	13.859	18.059	12.070	8

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 67,000 acres.

**Prunes: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Glyphosate iso. salt	0.538	1.053	1.914	1.186	7
Oxyfluorfen	0.060	0.164	0.500	0.272	22
Insecticides					
Esfenvalerate	0.018	0.042	0.062	0.044	9
Petroleum distillate	13.000	21.328	37.972	23.772	6
Fungicides					
Captan	2.100	3.000	3.839	3.018	3
Propiconazole	0.112	0.132	0.163	0.129	5
Sulfur	6.000	17.105	25.684	15.456	9

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 67,000 acres.

**Raspberries: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Carfentrazone-ethyl	0	41	100	41	14
Paraquat	0	100	100	76	5
Simazine	0	74	100	53	16
<b>Insecticides</b>					
Bifenthrin	0	100	100	70	8
Diazinon	0	0	100	44	14
<b>Fungicides</b>					
Boscalid	0	63	100	56	11
Calcium polysulfide	0	0	100	37	17
Captan	0	100	100	81	4
Cyprodinil	0	100	100	83	4
Fludioxonil	0	100	100	83	4
Pyraclostrobin	0	63	100	56	11

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 16,205 acres.

**Raspberries: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Carfentrazone-ethyl	1.0	1.0	2.0	1.2	6
Paraquat	1.0	1.5	2.9	1.6	12
Simazine	1.0	1.0	2.0	1.1	10
<b>Insecticides</b>					
Bifenthrin	1.0	1.0	2.0	1.4	15
Diazinon	1.0	1.0	1.8	1.3	10
<b>Fungicides</b>					
Boscalid	1.0	1.0	1.3	1.1	5
Calcium polysulfide	1.0	1.0	1.5	1.1	5
Captan	1.0	2.0	5.0	2.7	9
Cyprodinil	1.0	1.6	2.1	1.6	8
Fludioxonil	1.0	1.6	2.1	1.6	8
Pyraclostrobin	1.0	1.0	1.7	1.2	6

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 16,205 acres.

**Raspberries: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Carfentrazone-ethyl	0.015	0.018	0.094	0.028	24
Paraquat	0.281	0.363	0.693	0.392	11
Simazine	0.467	0.625	1.800	0.767	8
<b>Insecticides</b>					
Bifenthrin	0.089	0.094	0.110	0.094	5
Diazinon	1.000	1.000	1.500	1.076	4
<b>Fungicides</b>					
Boscalid	0.015	0.020	0.022	0.019	5
Calcium polysulfide	4.500	9.000	27.000	10.356	14
Captan	0.977	1.333	1.628	1.342	3
Cyprodinil	0.244	0.258	0.328	0.277	2
Fludioxonil	0.163	0.172	0.219	0.185	2
Pyraclostrobin	0.001	0.001	0.001	0.005	46

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 16,205 acres.

**Raspberries: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
<b>Herbicides</b>					
Carfentrazone-ethyl	0.015	0.018	0.094	0.033	24
Paraquat	0.281	0.478	1.283	0.637	15
Simazine	0.500	0.625	1.800	0.881	12
<b>Insecticides</b>					
Bifenthrin	0.094	0.110	0.219	0.135	12
Diazinon	1.000	1.102	1.760	1.388	9
<b>Fungicides</b>					
Boscalid	0.019	0.020	0.025	0.021	5
Calcium polysulfide	4.500	9.000	27.000	11.060	17
Captan	1.660	3.128	6.000	3.673	9
Cyprodinil	0.258	0.471	0.656	0.431	7
Fludioxonil	0.172	0.314	0.438	0.287	7
Pyraclostrobin	0.001	0.001	0.002	0.006	49

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 16,205 acres.



**Tangelos: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides					
Glyphosate iso. salt	0	100	100	79	12
Insecticides					
Abamectin	0	100	100	62	70
Petroleum distillate	0	100	100	85	17
Fungicides					
Copper hydroxide	0	0	100	41	36

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 6,400 acres.

**Tangelos: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
Herbicides					
Glyphosate iso. salt	1.0	2.0	3.0	2.4	28
Insecticides					
Abamectin	1.0	1.0	2.0	1.3	18
Petroleum distillate	1.0	2.0	3.0	2.1	38
Fungicides					
Copper hydroxide	1.0	3.0	4.0	2.7	46

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 6,400 acres.

**Tangelos: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Glyphosate iso. salt	0.574	0.750	1.575	1.023	58
Insecticides					
Abamectin	0.006	0.010	0.012	0.010	8
Petroleum distillate	17.500	35.000	49.000	33.963	6
Fungicides					
Copper hydroxide	1.073	1.667	2.750	1.780	8

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 6,400 acres.

**Tangelos: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Glyphosate iso. salt	1.125	1.950	3.150	2.451	31
Insecticides					
Abamectin	0.007	0.012	0.024	0.013	14
Petroleum distillate	35.000	70.000	147.000	71.328	36
Fungicides					
Copper hydroxide	1.500	3.377	10.000	4.821	46

<sup>1</sup> Bearing acreage in 2005 for the 1 Program State was 6,400 acres.

**Tangerines: Percent of Acres Treated Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Diuron	0	0	100	32	31
Glyphosate iso. salt	0	100	100	68	29
<b>Insecticides</b>					
Abamectin	0	0	100	41	72
Petroleum distillate	0	100	100	53	66
Pyridaben	0	0	100	24	71
<b>Fungicides</b>					
Azoxystrobin	0	0	100	28	81
Copper hydroxide	0	12	100	43	30
Sulfur	0	0	100	19	75

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 30,600 acres.

**Tangerines: Number of Applications Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
<b>Herbicides</b>					
Diuron	1.0	2.0	2.0	1.7	15
Glyphosate iso. salt	1.0	2.0	4.0	2.6	11
<b>Insecticides</b>					
Abamectin	1.0	1.0	2.0	1.3	9
Petroleum distillate	1.0	1.0	5.0	2.2	17
Pyridaben	1.0	1.0	2.0	1.5	16
<b>Fungicides</b>					
Azoxystrobin	1.0	1.3	3.0	1.8	25
Copper hydroxide	1.0	3.0	5.1	3.1	47
Sulfur	1.0	2.0	2.0	1.7	13

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 30,600 acres.

**Tangerines: Rate Per Application Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Diuron	0.800	2.548	3.200	2.254	27
Glyphosate iso. salt	0.307	0.750	1.995	1.018	12
Insecticides					
Abamectin	0.006	0.012	0.012	0.010	5
Petroleum distillate	16.625	35.000	52.938	34.468	5
Pyridaben	0.281	0.281	0.309	0.281	5
Fungicides					
Azoxystrobin	0.141	0.195	0.244	0.203	5
Copper hydroxide	1.108	1.173	1.906	1.341	18
Sulfur	4.000	8.000	12.000	9.146	13

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 30,600 acres.

**Tangerines: Rate per Crop Year Distribution,  
Program States, 2005 <sup>1</sup>**

Active Ingredient	10th Percentile	Median	90th Percentile	Mean	cv(%)
	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	<i>lbs per Acre</i>	
Herbicides					
Diuron	0.834	3.547	6.400	3.776	41
Glyphosate iso. salt	0.974	2.131	5.250	2.602	13
Insecticides					
Abamectin	0.008	0.012	0.021	0.013	9
Petroleum distillate	28.000	37.297	140.000	76.897	20
Pyridaben	0.281	0.344	0.562	0.418	15
Fungicides					
Azoxystrobin	0.208	0.244	0.585	0.373	21
Copper hydroxide	1.750	3.998	5.968	4.135	30
Sulfur	3.918	16.000	16.000	15.271	11

<sup>1</sup> Bearing acreage in 2005 for the 2 Program States was 30,600 acres.

## 2005 Fruit Crops Pest Management Practices

**Overview:** The following tables present data on pest management practices that growers use on fruit acres in an effort to enhance and improve the statistics available to control pests. Each question has been placed into one of three pest management categories: prevention, monitoring, or suppression. The actual questions used to collect these data are shown in the survey instrument on page 289. 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. This series of pest management practices data has been helpful in identifying crops where alternative pest management practices are needed.

The data are published in two tables: Percent of Acres Receiving Practice, and Percent of Farms Utilizing Practice. These percentages are published at the Program States and State levels. For all the crops in this survey, the percentages refer only to farms and fruit acres.

Producers were first asked how many total acres of fruit crops they grew in 2005, followed by questions regarding the use of specific pest management practices, in a yes/no format. Pests were defined as weeds, insects, or diseases. If the respondent used a specific practice on any fruit crop, it was assumed that the practice was used on all acres of fruit crops. For example, if a producer had 500 acres of various fruit crops, and used field mapping of previous weed problems to assist in making weed management decisions, it was assumed that all 500 acres were mapped.

**Highlights:** Chopping and mowing field edges was the most commonly reported prevention practice, used by 43 percent of the fruit farms on 77 percent of the acres. The next most commonly used prevention practices were cleaning implements after fieldwork and field cultivation for weed control, both used on 40 percent of the fruit farms. Cleaning implements after fieldwork and field cultivation for weed control were applied to 75 and 67 percent of the acres, respectively.

For monitoring practices, scouting for insects and mites along with scouting for diseases were the most commonly used scouting practice, both used on 96 percent of the fruit acres and by 61 percent of all fruit farms, respectively. Scouting was usually done by the operator, partner, or family member. Scouting for weeds was the next most common monitoring practice as it was used on 93 percent of the fruit acres and by 65 percent of the fruit farms. Scouting for weeds was usually done by the operator, partner, or family member.

The most widely used pest suppression practice was to maintain ground cover or physical barriers and alternate pesticides with different mechanism of action (MOA). Each was used on 27 percent of the fruit farms, these practices were used on 44 and 70 percent of all fruit acres, respectively.

**Pest Management Practices  
Percent of Acres Receiving Practices  
All Fruit Crops, 2005**

Practice	States				
	US	CA	FL	GA	MI
<b>Prevention Practices:</b>					
Remove or plow down crop residue	41	48	17	78	42
Clean implements after fieldwork	75	69	97	61	53
Field cultivated for weed control	67	79	52	36	43
Field edges/etc. chopped, mowed/etc	77	72	85	71	82
Water management practice	53	58	59	36	16
<b>Monitoring Practices:</b>					
Scouting by general observation	74	77	52	96	88
Deliberate scouting activities	24	22	43	3	11
Field was not scouted	2	1	5	1	1
Scouted for pests	61	64	42	71	75
Scouting due to pest advisory warning	30	28	20	60	50
Scouting due to pest development model	38	33	31	33	58
Scouted for weeds	93	94	95	99	83
Scouting for weeds was done by:					
Operator, partner, or family member	42	34	58	99	63
An Employee	21	18	37	*	2
Farm supply or chemical dealer	19	24	*		18
Indep. crop consultant or comm. scout	18	25	4	1	16
Scouted for insects and mites	96	96	94	99	98
Scouting for insects or mites was done by:					
Operator, partner, or family member	36	27	57	99	36
An Employee	18	15	34	*	2
Farm supply or chemical dealer	23	29	*		31
Indep. crop consultant or comm. scout	23	29	8	1	31
Scouted for diseases	96	96	94	99	98
Scouting for diseases was done by:					
Operator, partner, or family member	36	27	57	99	36
An Employee	19	15	38	*	2
Farm supply or chemical dealer	23	28	*		31
Indep. crop consultant or comm. scout	23	30	5	1	30
Records kept to track pests	59	59	48	52	77
Soil/plant tissue analysis to detect pests	51	54	46	45	44
Weather monitoring	79	73	84	96	92
Biological pest controls	42	47	17	36	58
<b>Suppression Practices:</b>					
Biological pesticides	28	28	13	2	27
Beneficial organisms	17	22	5	5	11
Scouting used to make decisions	55	53	41	63	78
Maintain ground cover or physical barriers	44	43	27	76	63
Alternate pesticides with different MOA	70	67	61	77	93

See footnote(s) at end of table.

--continued

**Pest Management Practices  
Percent of Acres Receiving Practices  
All Fruit Crops, 2005 (continued)**

Practice	States				
	NJ	NY	NC	OR	PA
<b>Prevention Practices:</b>					
Remove or plow down crop residue	67	58	69	47	29
Clean implements after fieldwork	86	57	86	70	61
Field cultivated for weed control	76	33	34	63	31
Field edges/etc. chopped, mowed/etc	82	90	92	80	87
Water management practice	52	9	30	57	4
<b>Monitoring Practices:</b>					
Scouting by general observation	88	92	90	90	94
Deliberate scouting activities	11	8	9	9	5
Field was not scouted	1	*	1	1	*
Scouted for pests	60	67	74	73	82
Scouting due to pest advisory warning	46	36	71	55	13
Scouting due to pest development model	61	39	9	57	55
Scouted for weeds	89	88	57	80	94
Scouting for weeds was done by:					
Operator, partner, or family member	30	58	91	56	53
An Employee	10	4	4	20	
Farm supply or chemical dealer	5	3		12	41
Indep. crop consultant or comm. scout	55	35	5	12	6
Scouted for insects and mites	99	99	98	97	97
Scouting for insects or mites was done by:					
Operator, partner, or family member	17	48	95	45	54
An Employee	6	3	2	17	
Farm supply or chemical dealer	11	7		20	40
Indep. crop consultant or comm. scout	65	42	3	18	6
Scouted for diseases	99	99	96	98	97
Scouting for diseases was done by:					
Operator, partner, or family member	16	48	95	48	54
An Employee	6	3	2	15	
Farm supply or chemical dealer	10	6		19	40
Indep. crop consultant or comm. scout	68	42	3	17	6
Records kept to track pests	68	59	63	66	69
Soil/plant tissue analysis to detect pests	41	18	34	51	40
Weather monitoring	91	90	90	95	93
Biological pest controls	47	18	18	57	72
<b>Suppression Practices:</b>					
Biological pesticides	29	33	46	42	57
Beneficial organisms	7	6	4	12	4
Scouting used to make decisions	67	73	75	70	83
Maintain ground cover or physical barriers	77	48	70	66	38
Alternate pesticides with different MOA	64	89	64	81	94

See footnote(s) at end of table.

--continued

**Pest Management Practices  
Percent of Acres Receiving Practices  
All Fruit Crops, 2005 (continued)**

Practice	States			
	SC	TX	WA	WI
<b>Prevention Practices:</b>				
Remove or plow down crop residue	75	10	47	49
Clean implements after fieldwork	89	58	80	59
Field cultivated for weed control	79	47	61	27
Field edges/etc. chopped, mowed/etc	50	65	80	86
Water management practice	9	9	58	10
<b>Monitoring Practices:</b>				
Scouting by general observation	90	67	90	90
Deliberate scouting activities	10	29	10	8
Field was not scouted	*	5	1	2
Scouted for pests	50	47	81	74
Scouting due to pest advisory warning	48	16	47	35
Scouting due to pest development model	38	8	70	44
Scouted for weeds	100	95	95	74
Scouting for weeds was done by:				
Operator, partner, or family member	92	37	24	85
An Employee	5	22	19	
Farm supply or chemical dealer		6	45	
Indep. crop consultant or comm. scout	3	35	12	15
Scouted for insects and mites	100	95	99	96
Scouting for insects or mites was done by:				
Operator, partner, or family member	92	31	20	73
An Employee	5	20	16	1
Farm supply or chemical dealer		11	47	
Indep. crop consultant or comm. scout	3	38	17	26
Scouted for diseases	100	95	98	96
Scouting for diseases was done by:				
Operator, partner, or family member	92	31	21	73
An Employee	5	20	19	1
Farm supply or chemical dealer		11	46	
Indep. crop consultant or comm. scout	3	38	14	26
Records kept to track pests	12	70	80	72
Soil/plant tissue analysis to detect pests	31	23	64	30
Weather monitoring	98	89	90	88
Biological pest controls	23	15	72	44
<b>Suppression Practices:</b>				
Biological pesticides	20	15	59	28
Beneficial organisms	20	12	28	1
Scouting used to make decisions	58	56	70	70
Maintain ground cover or physical barriers	76	16	73	57
Alternate pesticides with different MOA	92	74	86	77

\* Percentage is less than 0.5



**Pest Management Practices  
Percent of Farms Utilizing Practice  
All Fruit Crops, 2005**

Practice	States				
	US	CA	FL	GA	MI
<b>Prevention Practices:</b>					
Remove or plow down crop residue	23	24	7	33	29
Clean implements after fieldwork	40	34	57	39	41
Field cultivated for weed control	40	44	46	20	30
Field edges/etc. chopped, mowed/etc	43	39	37	54	65
Water management practice	23	29	20	17	8
<b>Monitoring Practices:</b>					
Scouting by general observation	38	35	30	40	56
Deliberate scouting activities	26	31	23	16	19
Field was not scouted	36	34	48	44	26
Scouted for pests	22	22	9	20	36
Scouting due to pest advisory warning	11	9	5	8	21
Scouting due to pest development model	11	9	4	9	24
Scouted for weeds	58	60	52	54	60
Scouting for weeds was done by:					
Operator, partner, or family member	65	60	69	96	72
An Employee	10	10	24	3	1
Farm supply or chemical dealer	11	13	1		12
Indep. crop consultant or comm. scout	13	17	6	2	15
Scouted for insects and mites	61	62	50	54	72
Scouting for insects or mites was done by:					
Operator, partner, or family member	58	52	68	89	56
An Employee	10	9	25	6	1
Farm supply or chemical dealer	15	17	1		18
Indep. crop consultant or comm. scout	17	22	7	5	25
Scouted for diseases	61	61	50	51	71
Scouting for diseases was done by:					
Operator, partner, or family member	59	52	68	89	56
An Employee	10	9	25	6	1
Farm supply or chemical dealer	15	18	1		18
Indep. crop consultant or comm. scout	16	21	7	5	24
Records kept to track pests	26	25	19	13	37
Soil/plant tissue analysis to detect pests	17	20	9	9	22
Weather monitoring	36	30	28	35	61
Biological pest controls	15	16	2	11	29
<b>Suppression Practices:</b>					
Biological pesticides	10	11	1	1	11
Beneficial organisms	7	10	1	2	9
Scouting used to make decisions	22	18	19	9	38
Maintain ground cover or physical barriers	27	26	17	19	42
Alternate pesticides with different MOA	27	20	21	22	55

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Farms Utilizing Practice  
All Fruit Crops, 2005 (continued)**

Practice	States				
	NJ	NY	NC	OR	PA
<b>Prevention Practices:</b>					
Remove or plow down crop residue	37	30	47	27	32
Clean implements after fieldwork	49	41	48	34	35
Field cultivated for weed control	48	25	17	33	14
Field edges/etc. chopped, mowed/etc	49	64	64	47	71
Water management practice	11	5	6	24	3
<b>Monitoring Practices:</b>					
Scouting by general observation	35	57	55	40	66
Deliberate scouting activities	30	21	19	20	12
Field was not scouted	36	22	26	39	22
Scouted for pests	16	27	33	24	36
Scouting due to pest advisory warning	14	19	34	18	13
Scouting due to pest development model	16	18	4	16	14
Scouted for weeds	56	64	42	52	73
Scouting for weeds was done by:					
Operator, partner, or family member	72	75	97	85	77
An Employee	6	7	1	4	
Farm supply or chemical dealer	2	5		8	21
Indep. crop consultant or comm. scout	21	13	2	4	2
Scouted for insects and mites	58	73	69	57	77
Scouting for insects or mites was done by:					
Operator, partner, or family member	61	72	98	78	77
An Employee	4	5	*	3	
Farm supply or chemical dealer	7	9		12	21
Indep. crop consultant or comm. scout	28	15	1	7	2
Scouted for diseases	60	76	66	58	75
Scouting for diseases was done by:					
Operator, partner, or family member	62	73	98	80	76
An Employee	4	6	*	3	
Farm supply or chemical dealer	7	7		12	21
Indep. crop consultant or comm. scout	28	14	1	6	2
Records kept to track pests	20	28	28	21	30
Soil/plant tissue analysis to detect pests	13	8	16	14	14
Weather monitoring	35	60	53	45	73
Biological pest controls	13	6	10	21	24
<b>Suppression Practices:</b>					
Biological pesticides	4	12	23	12	16
Beneficial organisms	1	3	3	7	5
Scouting used to make decisions	24	37	32	22	47
Maintain ground cover or physical barriers	47	28	48	33	32
Alternate pesticides with different MOA	20	49	35	27	67

See footnote(s) at end of table.

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**Pest Management Practices  
Percent of Farms Utilizing Practice  
All Fruit Crops, 2005 (continued)**

Practice	States			
	SC	TX	WA	WI
<b>Prevention Practices:</b>				
Remove or plow down crop residue	49	11	27	39
Clean implements after fieldwork	54	25	49	32
Field cultivated for weed control	37	26	33	10
Field edges/etc. chopped, mowed/etc	63	32	51	52
Water management practice	5	8	27	1
<b>Monitoring Practices:</b>				
Scouting by general observation	29	31	49	39
Deliberate scouting activities	39	14	22	18
Field was not scouted	32	56	29	43
Scouted for pests	12	16	38	21
Scouting due to pest advisory warning	8	4	21	10
Scouting due to pest development model	10	2	25	13
Scouted for weeds	68	41	67	42
Scouting for weeds was done by:				
Operator, partner, or family member	95	58	58	98
An Employee	1	12	7	
Farm supply or chemical dealer		8	24	
Indep. crop consultant or comm. scout	3	22	11	2
Scouted for insects and mites	68	42	68	53
Scouting for insects or mites was done by:				
Operator, partner, or family member	95	56	51	94
An Employee	1	10	7	*
Farm supply or chemical dealer		10	28	
Indep. crop consultant or comm. scout	3	24	14	6
Scouted for diseases	68	41	68	52
Scouting for diseases was done by:				
Operator, partner, or family member	95	55	53	94
An Employee	1	11	8	*
Farm supply or chemical dealer		10	27	
Indep. crop consultant or comm. scout	3	24	12	6
Records kept to track pests	7	21	41	24
Soil/plant tissue analysis to detect pests	6	5	26	9
Weather monitoring	63	35	51	47
Biological pest controls	4	5	31	12
<b>Suppression Practices:</b>				
Biological pesticides	1	4	19	7
Beneficial organisms	1	4	7	*
Scouting used to make decisions	17	14	33	27
Maintain ground cover or physical barriers	46	11	41	27
Alternate pesticides with different MOA	60	23	44	30

\* Percentage is less than 0.5

## Survey & Estimation Procedures

**Survey Procedures:** There were 6,943 samples drawn from the NASS List Sampling Frame for the Fruit Chemical Usage Survey. This extensive sampling frame covers all types of farms and accounts for about 90 percent of all land in farms in the United States. Samples were selected from States with the largest production for the selected fruit crops. The sample design for the Fruit Chemical Use Survey (FCUS) uses a Multivariate Probability Proportional to Size (MPPS) design. The probability of being selected for the sample was based on the percentage of acreage for a given crop that a grower had on a State's list frame. The maximum of these probabilities was selected to draw the sample. The general idea is to assure that the total acreage of all targeted fruit crops that a grower has on the list frame was included when determining a grower's probability of selection. Personal interviews were conducted to obtain information on chemical applications made to each sampled farm.

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

Estimates of the total amount of active ingredient applied are based on the acreage estimates published in the annual NASS report "**Citrus Fruits - 2005 Summary**" [Fr Nt 4-5(05)] released on September 22, 2005 and "**Noncitrus Fruits and Nuts - 2005 Summary**" [Fr Nt 1-3 (05)] released on January 24, 2006. The estimates for total amount applied will not be revised even if there are subsequent revisions to acreage for a given crop. Detailed data within a table may not multiply across or add down due to independent rounding of the published values.

## Reliability

**Reliability:** The probability nature of the survey provides expansion of data so that the estimates are statistically representative of chemical use on the targeted crops in the surveyed States. The reliability of these survey results is affected by non-sampling errors and sampling variability. The sampling variability, expressed as a percentage of the estimate, is referred to as the coefficient of variation (cv).

Non-sampling errors are errors that occur during a survey process and, unlike sampling variability, are difficult to measure. They may be caused by interviewers failing to follow instructions, poorly worded questions, non-response, problematic survey procedures, or data handling between collection and publication. In these surveys, all survey procedures and analysis were carried out in a consistent and orderly manner to minimize the occurrence of these types of errors.

Since all operations producing the crops of interest are not included in the sample, survey estimates are subject to sampling variability. Variability for estimates of acres treated will be higher than the variability for estimates of application rates. This is because application rates have a narrower range of responses, are recommended by the manufacturer of the product, and are generally followed. Sampling variability of the estimates differed considerably by chemical and crop. In general, the more often the chemical 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.

The variability of estimates also depends on such factors such as how similar agricultural practices are across States or within a State. Some active ingredients have widely varying recommended rates with different application approaches. This can increase the variability of the rates and acres treated. The differing intensity of the pest problem can influence the variability of acres treated and rate. The more consistent the intensity of the pest problem, the more likely the acres treated and rates are to be similar. These are just a few examples of how the estimates' variability can be influenced. A commonly used active ingredient is defined as an active ingredient used on at least 40 percent of the acres planted for a crop at the U.S. level. For these active ingredients, cv's range from 4 percent to 48 percent at the program State level and 5 percent to 54 percent at the individual State level. Active ingredients that are less frequently used have cv's that range from 6 percent to 65 percent.

## Terms and Definitions

**Active ingredient:** The active ingredient is the specific chemical which kills or controls the target pests. 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 acid equivalent.

**Allelopathic:** The release of chemical compounds from a plant that will inhibit the growth of another plant, such as weeds.

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

**Area applied:** Represents the percentage of crop acres receiving one or more applications of a specific primary nutrient or active ingredient. This report does not contain acre treatments. However, acre treatments can be calculated by multiplying the acres planted by the percent of area applied and the average number of applications.

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

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

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

**Crop year:** Refers to the period immediately following harvest of the previous crop through harvest of the current crop.

**Cultivars:** A horticulturally or agriculturally derived variety of a plant, as distinguished from a natural variety.

**Farm:** Any establishment from which \$1,000 or more of agricultural products were sold or would normally be sold during the year. Government payments are included in sales. Places with all acres enrolled in the Conservation Reserve Program or other government programs are considered operating farms.

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

**Land in Farms:** All land operated as part of a farming operation during the year. It includes crop and livestock acreage, wasteland, woodland, pasture, land in summer fallow, idle cropland, and land enrolled in the Conservation Reserve Program or other government programs. It excludes public, industrial, and grazing association land, and nonagricultural land. It excludes all land operated by establishments not qualifying as farms.

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

**Monitoring:** Includes proper identification of pests through surveys or scouting programs, including trapping, weather monitoring, and soil testing where appropriate.

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

In 2005, how were your fruit acres primarily scouted for insects, weeds, diseases and/or beneficial organisms? (By conducting general observations while performing routine tasks? By deliberately going to the fruit acres specifically for scouting activities? The fruit acres were not scouted?)

Was an established scouting process used (systematic sampling, recording counts, etc.) or were insect traps used on any fruit acres?

Was scouting for pests done on these fruit acres due to a pest advisory warning?

Was scouting for pests done on these fruit acres due to a pest development model?

Were your fruit acres scouted for weeds? (If so, Who did the majority of the scouting? Operator, partner or family member, OR An employee, OR Farm supply or chemical dealer, OR Independent crop consultant or commercial scout?)

Were your fruit acres scouted for insects or mites? (If so, Who did the majority of the scouting? Operator, partner or family member, OR An employee, OR Farm supply or chemical dealer, OR Independent crop consultant or commercial scout?)

Were your fruit acres scouted for diseases? (If so, Who did the majority of the scouting? Operator, partner or family member, OR An employee, OR Farm supply or chemical dealer, OR Independent crop consultant or commercial scout?)

Were written or electronic records kept to track the activity or numbers of weeds, insects or diseases?

Was scouting data compared to published information on infestation thresholds to determine when to take measures to manage pests?

Was field mapping data used for making pest management decisions?

Were the services of a diagnostic laboratory used for pest identification or soil or plant tissue pest analysis?

Was weather data used to assist in determining either the need or when to make pesticide applications?

Were floral lures, attractants, repellants, pheromone traps or other biological pest controls used on any fruit acres?

**Nematodes:** Microscopic, worm-shaped parasitic animals. Damage to many crops can be severe.

**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 nematocides are included as insecticides while soil fumigants, growth regulators, defoliants, and desiccants 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, preventing weeds from reproducing, choosing cultivars with genetic resistance to insects or disease, irrigation scheduling to avoid situations conducive to disease development, cleaning tillage and harvesting equipment between fields or operations, using field sanitation procedures, and eliminating alternate hosts or sites for insect pests and disease organisms.

The following questions were categorized as prevention practices:

Were field edges, lanes, ditches, roadways or fence lines chopped, mowed, plowed, or burned to manage pests on any fruit acres?

Were crop residues (including drops, rotting fruit and/or debris) removed to manage pests?

Were any fruit acres cultivated for weed control during the growing season?

Were equipment and implements cleaned after completing field work to reduce the spread of pests?

Were water management practices (excluding chemigation) such as irrigation scheduling, controlled drainage, or treatment of retention water used to manage pests?

**Suppression:** Tactics include cultural practices such as narrow row spacings or optimized in-row plant populations, alternative tillage approaches such as no-till or strip-till systems, 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 controls, including mating disruption for insects, could be considered as alternatives to conventional pesticides, especially where long-term control of an especially troublesome pest species can be obtained.

The following questions were categorized as suppression practices:

Were any biological pesticides such as Bt (*Bacillus thuringiensis*), insect growth regulators (Courier, intrepid, etc.) neem or other natural/biological based products sprayed or applied to manage pests?

Were pesticides with different mechanisms of action rotated or tank mixed for the primary purpose of keeping pests from becoming resistant to pesticides?



Was scouting data used to assist in determining the need for or when to make pesticide applications?

Were ground covers, mulches, or other physical barriers maintained to manage pest problems?

Were any beneficial organisms (insects, nematodes, or fungi) applied or released to manage pests?

**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 active ingredients arranged by common name. 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 fruit crops. NASS does not mean to promote use of any specific trade name.

Class	Common Name	Trade Name
H	24-D	Envy 24-D Unison
H	24-D 2-EHE	WECO MAX, Weedone LV4 Solventless
H	24-D BEE	Crossbow, Weedone 638 (USE-4296)
H	24-D dieth sal	Hi-Dep, Weedar 64A
H	24-D dimeth. salt	2,4-D Amine 4, Dri-Clean, Formula 40, Green Light Wipe Out, Hi-Dep, Saber, Savage, Weedar 64, Weedaxe Herbicide
O	24-D isoprop ester	Citrus Fix, Hivol-44
H	24-D isoprop. salt	Landmaster II
I	Abamectin	Abba, Agri Mek 0.15EC, Clinch Ant Bait, Epi-mek 0.15 EC
I	Acephate	Orthene 75 S (USE-1102), Orthene 75 WSP, Orthene 9
O	Acequinocyl	Kanemite 15 SC
I	Acetamiprid	Assail 70WP
H	Acetochlor	Keystone
F	Agrobacterium radio.	Galltrol-A
H	Alachlor	Bronco (4EC)
I	Aldicarb	Temik 15G
O	Alk. dim. benzyl 60%	Physan 20
O	Alk. dim. eth. benz.	Physan 20
I	Aluminum phosphide	Fumiphos, Fumitoxin Tablets (55%), Gastoxin Tablet Phostoxin
H	Atrazine	Atrazine 4L, Atrazine 90DF, Keystone, Ready Master ATZ, Sutazine+ (EC)
I	Azadirachtin	Agrooneem, Aza-Direct, Ecozin 3% EC, Neemix 4.5
I	Azinphos-methyl	Azinphos-M 2 EC, Azinphos-M 50 WP, Azinphosmethyl 50W, Guthion 2L, Guthion 35% WP, Guthion 3F, Guthion Solupak 50%, Sniper 50W
F	Azoxystrobin	Amistar, Quadris
F	Bacillus pumilus	Sonata AS
F	Bacillus subtilis	Serenade Biofungicide (WP), Serenade MAX, Serenade WP Biofungicide
F	Basic copper sulfate	Basic Copper Sulfate, Bonide Garden Dust, C-O-C-S WDG, CSC Copper Sulfur Dust, Cop-O-Zinc, Nu-Cop WDG, Nutra-Spray 17 <sup>1</sup> 2-4-4, Nutra-Spray Copper Bordeaux, Tri-Basic Copper
F	Benomyl	Benlate, Benlate 50 DF, Benlate PNW, Benlate SP
I	Benzoic acid	Intrepid 2F, Intrepid 80 WSP
O	Benzyladenine	Accel PGR, Exilis Plus, Fascination Plant Growth Regulator, Maxcel, Perlan PGR, Promalin PGR, Typy
I	Bifenazate	Acramite 50WS
I	Bifenthrin	Attain Total Release, Brigade WSB 10WP, Capture 2E Discipline 2EC

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**Pesticide class, Common name, and Trade name**

Class	Common Name	Trade Name
F	Borax Decahydrate	Prevam Ultra
I	Boric acid	Bushwhacker Fire Ant Control, Sporax
F	Boscalid	Endura (70WG), Pristine
H	Bromacil	Hyvar DF (80%), Hyvar X (80WP), Krovar I DF, Krovar II DF
O	Bromadiolone	Maki Paraffinized Pellet Rat Bait
H	Bromoxynil heptanoat	WECO MAX
H	Bromoxynil octanoate	WECO MAX
I	Bt subsp. aizawai	Xentari WDG
I	Bt subsp. kurstaki	Biobit FC, Biobit HP WP, Britz BT Dust, Condor, Crymax WDG, Deliver, Dipel 10G, Dipel 2X (WP), Dipel DF, Dipel ES, Dipel SG Plus, Dipel WP, Javelin ECB, Javelin WG, Javelin WG (USE-1142), Lepinox WDG, MVP II Bioinsecticide, Thuricide 48 L Thuricide Bt
I	Bt. (Berliner)	Bt Sulfur 15-50 Dust
I	Buprofezin	Applaud 70WP, Centaur, Courier
F	Butanone	Triadimefon 50% DF
O	Butenoic Acid Hydro.	ReTain
H	Butoxyethyl triclopy	Crossbow
H	Butylate	Sutazine+ (EC)
F	Calcium polysulfide	Lime Sulfur Solution, Oil & Lime Sulfur Spray, Orthorix Spray, Polysul, Sulforix, Tetrasul 4s5
I	Canola oil	NEU1161
O	Capsaicin	Hot Sauce Animal Repellent
F	Captafol	Difolatan
F	Captan	Agway Fruit Tree Spray, Captan 4L, Captan 50W, Captan 80 WDG, Captan 80-WP, Captan Sulfur 10-50 Dust, Captec 4L, Captevate 68 WDG, Ortho Home Orchard Spray
I	Carbaryl	Carbaryl 4L, Carbaryl 50W, Carbaryl 80S, Meta Carbaryl 2-4 Snail Pellets, Sevin 10%, Sevin 4F, Sevin 5 Pellets, Sevin 50W, Sevin 80S, Sevin 80WSP, Sevin Bait (5%), Sevin Liquid, Ortho, Sevin SL, Sevin XLR Plus
I	Carbofuran	Furadan 15G, Furadan 3G, Furadan 4F
H	Carfentrazone-ethyl	Aim, Aim EC, Aim EW
H	Chlorimuron-ethyl	Synchrony STS
F	Chloroneb	Scotts Fungicide IX
O	Chlorophacinone	Double Rozol, Rozol (Pellets)
O	Chloropicrin	InLine, MBC 67-33, Telone C-17, Tri-Clor Chloropicrin
F	Chlorothalonil	Bravo 720, Bravo Ultrex, Bravo Weather Stik, Bravo ZN, Chloronil 720, Chlorothalonil 4L, Chlorthalonil 720 F, Echo 720, Echo 90DF, Ensign Zn (aka Bravo 500), Equus 500 ZN, Equus 720 Equus 720 SST, Equus DF, Ridomil Gold + Bravo Liquid
I	Chlorpyrifos	Chlorpyrifos 4E AG, Dursban 1% Granules, Govern 4E

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**Pesticide class, Common name, and Trade name**

Class	Common Name	Trade Name
		Lorsban 15G, Lorsban 4E, Lorsban 4E (USE-1069), Lorsban 50W, Lorsban 75WG, Nufos 4E, Warhawk, Whirlwind, Yuma 4E
H	Clethodim	Prism, Select 2 EC
I	Clofentezine	Apollo 42%, Apollo SC
H	Clomazone	Command 4EC
H	Clopyralid	Stinger (3EC)
I	Clothianidin	Clutch 50 WDG
I	Clove oil	GC-Mite
F	Copper (metallic)	C-O-C-S 3 Dust
F	Copper amm. complex	Copper-Count-N
F	Copper chloride hyd.	Agra-cop 50WP, Microspense COC 50DF
F	Copper hydroxide	Blue Shield WP, Champ Dry Prill, Champ Flowable, Champ Formula 2, Champ Formula II DF WSP, Champion Flowable, Champion WP, Coppercide 50, Kocide 101 (WP), Kocide 20/ 20 (WP), Kocide 2000, Kocide 4.5 LF, Kocide DF, Kocide LF, Kop-Hydroxide 50, Nu-Cop 3L, Nu-Cop 50DF
F	Copper oxide	Nordox, Nordox (WP)
F	Copper oxychlo. sul.	C-O-C-S 15 Sulfur 25, C-O-C-S 50WP, C-O-C-S Copodust, Oxycop Dust #3
F	Copper oxychloride	C O C WP, C-O-C-S WDG, CSC Copper Sulfur Dust
F	Copper resinate	Camelot, Copper Fungicide 4E, Tenn-Cop 5E
F	Copper sulfate	Basicop, Copper Sulfate, Copper Sulfate Powdered Bluestone
I	Cottonseed oil	GC-Mite
F	Cresol	Gallex
I	Cryolite	Cryolite 50 Dust (Use 1325), Cryolite 96 Dust, Cryolite WP (84.5%), Kryocide (96% dry)
O	Cyanamid	Dormex
H	Cycloate	Ro-Neet 6E
I	Cyd-X Granulo. Virus	CYD-X, Carpovirusine, Virosoft Bioinsecticide
I	Cyfluthrin	Baythroid 2 (EC), Renounce 20WP, Tempo SC Ultra
F	Cyprodinil	Switch 62.5WG, Vanguard WG
O	Cytokinins	Cytokin Bioregulator Concentrate, Cyzer Plant Growth Regulator, Stimplex
H	DCPA	Dacthal Flowable
O	DNOC	Elgetol (Thinner)
O	Dazomet	Basamid Granular
O	Decenol	Checkmate PTB Dispenser, Checkmate SF-200
O	Decenyl acetate	Checkmate PTB Dispenser, Checkmate SF-200
I	Deltamethrin	Decis 1.5EC
I	Diazinon	D-264 EC500, D-z-n Diazinon 50W, D-z-n Diazinon AG500 (4E), Diazinon 25% Spray (2EC), Diazinon 4 Spray, Diazinon 40WP, Diazinon 4E, Diazinon 50W, Diazinon AG500 (4E), Diazinon AG600 WBC, Spectracide 25
H	Dicamba Dimet. salt	Banvel (4L), Green Light Wipe Out
H	Dichlobenil	Casoron 4G
O	Dichloropropene	InLine, Telone C-17, Telone II

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**Pesticide class, Common name, and Trade name**

Class	Common Name	Trade Name
F	Dicloran	Botran 6 Dust, Botran 75W, Sclerban 75 WDG
I	Dicofol	Dicofol 4 E, Kelthane 50 (WP), Kelthane EC, Kelthane MF
I	Diflubenzuron	Dimilin 2F, Dimilin 2L, Micromite 25WS, Micromite 4L, Micromite 80 WGS
I	Dimethoate	Cygon 267, Cymate 267, Digon 400, Dimate 4EC, Dimate 4EC (USE-1212), Dimethoate 2.67 EC, Dimethoate 25WP, Dimethoate 400, Dimethoate 4EC, Dimethoate 5 lb., Dimethoate E-267
F	Dinocap	Dikar (WP)
I	Dinotefuran	Venom 20 SG
O	Diphacinone	Diphacinone (.005%), Ramik Brown (G), Ramik Green (G)
H	Diquat dibromide	Diquat, Reglone, Roundup Weed & Grass Killer Concentrate
I	Disulfoton	Terraclor 6.5% Plus Di-Syston 6.5% G
H	Diuron	Direx 4L, Direx 80DF, Diuron 4L, Diuron 80DF, Diuron 80W, Karmex DF, Krovar I DF, Krovar II DF
O	Dodecadien-1-ol	3M MEC-CM Sprayable Pheromone, Checkmate CM, Checkmate CM Puffer Dispenser, Checkmate CM-F, Isomate-C Pheromone, Isomate-C Special, Isomate-C TT, Last Call CM, NoMate CM Spiral, Puffer CM (USE-9371)
O	Dodecanol	Isomate-C Pheromone, Isomate-C Special, Isomate-C TT
F	Dodine	Cyprex 65-W, Dodine 65W, Syllit 65W, Syllit FL
O	E-8-Dodecenyl acetat	Checkmate OFM, Checkmate SF-200, Consep OFM Spr2m Pheromone Sprayable, Isomate - OFM TT, Isomate M Pheromone, Isomate-M 100
I	Endosulfan	Endosulfan 3EC, Endosulfan 50W, Endosulfan 50WP (Use-1231), Thiodan 3EC, Thiodan 50WP, Thiodan Hi-Yield Insect Spray, Thionex (Thiodan) 3EC, Thionex 50W
I	Esfenvalerate	Asana, Asana XL
O	Ethephon	Ethephon 2, Ethephon 6, Ethrel Plant Regulator (2EC)
I	Ethion	Ethion 4 Miscible
I	Ethyl parathion	Aqua 8 Parathion, Parathion 25W, Phoskil 15 WP
I	Etoxazole	TetraSan 5 WDG, Zeal (aka Secure)
F	Etridiazole	Truban 30% Wettable Powder
O	Farnesol	Stirrup M (Biocontrol agent)
I	Fenamiphos	Nemacur 15G, Nemacur 3 Turf, Nemacur 3E
F	Fenarimol	Rubigan A.S., Rubigan EC
F	Fenbuconazole	Enable 2F, Indar 75 WSP
I	Fenbutatin-oxide	Vendex 4L, Vendex 50WP
F	Fenhexamid	Captivate 68 WDG, Decree 50 WDG, Elevate 50 WDG
H	Fenoxaprop-p-ethyl	Puma 1EC (Bronate Pro #1)
I	Fenpropathrin	Danitol 2.4 EC Spray
I	Fenpyroximate	FujiMite

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**Pesticide class, Common name, and Trade name**

Class	Common Name	Trade Name
F	Ferbam	Carbamate 76WDG, Ferbam Granuflo
H	Fluazifop-P-butyl	Fusilade 2000 (1EC), Fusilade DX
F	Fludioxonil	Switch 62.5WG
H	Flumioxazin	Chateau WDG (USE 4409), Valor WP
I	Formetanate hydro.	Carzol SP
F	Fosetyl-al	Aliette (80WP), Aliette WDG
O	GABA	Auxigro
I	Gamma-cyhalothrin	Proaxis
O	Garlic oil	GC-Mite
O	Gibberellic acid	Falgro 20SP, Falgro 4L, GA3 4%, GibGro 20% Powder, GibGro 2LS, GibGro 4LS, Gibbex 4%, ProGibb 4%, ProGibb 40%, ProGibb Plus 2X, ProVide Plant Growth Regulator, RyzUp
O	Gibberellins A4A7	Accel PGR, Fascination Plant Growth Regulator, Perlan PGR, Promalin PGR, TypRus Plant Growth Regulator, Typy
H	Glufosinate-ammonium	Finale, Liberty, Rely Herbicide, Rely Herbicide (aka Ignite 1SC)
F	Glyodin	Glyodin
H	Glyphosate	Engame, Roundup Weed & Grass Killer Concentrate, Touchdown Herbicide, Touchdown Herbicide (USE 4848 Touchdown Total
H	Glyphosate amm. salt	Credit Duo Extra, Glyphosate-4DS, Roundup Ultra Dr
H	Glyphosate iso. salt	Bronco (4EC), Buccaneer Herbicide, ClearOut 41 Plu Cornerstone, Credit, Credit Duo Extra, Fire Power, Gly Star Original, Gly Star Plus, Gly-4 Plus, Gly-Flo Herbicide, Glyphos X-TRA, Glyphomax, Glyphomax Plus, Glyphosate 4, Glyphosate Original, Glyphosate-4DS, Helosate Plus, Honcho, Jury, Landmaster II, Mad Dog Glyphosate, Mirage (4EC), Protocol, Rattler, Ready Master ATZ, Roundup Custo Roundup Export, Roundup Original, Roundup Original II, Roundup Original Max, Roundup Pro, Roundup Ultra, Roundup Ultra Max, Roundup UltraMax II, Roundup Weather Max
O	Harpin protein	Messenger STS
O	Hexadecenal	Checkmate DBM-F
O	Hexadecenyl acetate	Checkmate DBM-F
H	Hexazinone	Velpar (90SP), Velpar L (2EC)
I	Hexythiazox	Hexygon DF, Onager, Savey 2E (aka Onager), Savey 50 DF, Savey 50 WP
O	Hydrogen peroxide	Oxidate
I	Imidacloprid	Admire 2 Flowable, Admire Pro, Merit 75 WP, Provado 1.6 Flowable, Provado Solupak (75WSP)
I	Indoxacarb	Avaunt Insecticide
F	Iprodione	Iprodione 4L, Iprodione 50WP, Rovral (50WP), Rovral 4 Flowable, Sextant (2L)
O	Iron phosphate	Sluggo
H	Isoxaben	Gallery 75 Dry Flowable
I	Kaolin	Kaolin, Surround WP

--continued

**Pesticide class, Common name, and Trade name**

Class	Common Name	Trade Name
F	Kresoxim-methyl	Sovran
O	L-Glutamic acid	Auxigro
O	Lactic acid	Propel Plant Growth Regulator (EC)
I	Lambda-cyhalothrin	Silencer (aka Lambda-CY 1EC), Warrior, Warrior (Use-1553)
H	MCPA dimethyl. salt	Rhomene MCPA Amine
H	MCPP DMA salt	Green Light Wipe Out
H	MSMA	Ansar 529 HC, MSMA 6 Plus
I	Malathion	Agway Fruit Tree Spray, Atrapa 5E, Cythion ULV (9.33 lbs), Fyfanon, Fyfanon ULV 9.9lbs. (96.5%), Malathion 25 WP, Malathion 5 Dust, Malathion 5 EC (55%), Malathion 5 EC (57%), Malathion 8 Flowable, Malathion 8E, Malathion Aquamul (8E), Malathion Spray 50%, Malathion ULV 9.7lbs. (95%), Ortho Home Orchard Spray
F	Mancozeb	Dikar (WP), Dithane 75DF Rainshield, Dithane DF (Use-7127), Dithane F-45 Rainshield, Dithane M-45 (WP), Dithane T/ O, Dithane WF Turf & Ornamental (4L), Mancozeb 80% WP Manex II (4EC), Manzate 200 (WP), Manzate 75DF, Manzate 75DF (USE-7025), Manzate Flowable, Penncozeb (80WP), Penncozeb 75DF, Pentathlon DF, Protect T/ O (Turf and Ornamental), Ridomil Gold MZ
F	Maneb	Amazin (80WP), Dithane M-22 Dust, Dithane M-22 Special (80WP), Maneb 75DF, Manex, Manex (USE-7064)
F	Mefenoxam	Ridomil Gold + Bravo Liquid, Ridomil Gold EC, Ridomil Gold MZ, Ultra Flourish
O	Mepiquat chloride	Ponnax Growth Regulator
O	Mepiquat pentaborate	Pentia
F	Metaxyl	Ridomil 2E, Ridomil 5G
O	Metaldehyde	Bug-Geta Slug and Snail Bait Pellets, Deadline Bullets, Deadline M-Ps, Meta Carbaryl 2-4 Snail Pellets, Metaldehyde 3.5G (aka Trail's End), Metaldehyde 7.5G (aka Trail's End), OR-CAL Snail & Slug Bait
O	Metam-sodium	Metam Sodium 32.7%, Vapam, Vapam HL (4.26 lb.)
I	Methodathion	Supracide 25WP, Supracide 2E
I	Methomyl	Lannate L (1.8 lbs.) Canceled 1998, Lannate LV (2.4 lbs.), Lannate SP
I	Methoxychlor	Agway Fruit Tree Spray, Ortho Home Orchard Spray
O	Methyl anthranilate	Bird Shield, ReJex-iT AG-145 Bird Repellent (14.5%
I	Methyl bromide	MBC 67-33, Methyl Bromide 98%, Methyl Bromide 99.5
I	Methyl parathion	Methyl Parathion 4EC, Penncap-M
F	Metiram	Polyram 80 DF, Polyram 80WP
O	Mineral oil	ProNatural Dormant Oil
O	Monocarbamide dihyd.	Engame, Wilthin
F	Myclobutanil	Laredo EC, Nova 40W, RH-144228, Rally 40W

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**Pesticide class, Common name, and Trade name**

Class	Common Name	Trade Name
I	Myrothecium verruc.	DiTera DF Biological Nematicide, Ditera Biological Nematicide
O	NAA	Alphaspra 200, Alphaspra 800, Fruit Fix Concentrate 800, Fruitone-N, Liqui-Stik Concentrate, NAA 2% WP, NAA-200, NAA-80 Stop Drop
O	NAA Potassium salt	Fruit Fix 200, Fruit Fix 800
O	NAD	Amid-Thin W
I	Naled	Dibrom 8 Emulsive
H	Napropamide	Devrinol 50-DF, Devrinol 50-WP
I	Neem oil clar. hyd.	Triact 70 Flowable, Trilogy
O	Nerolidol	Stirrup M (Biocontrol agent)
H	Norflurazon	Predict, Solicam DF
I	Novaluron	Rimon 0.83EC
O	Octadecadien (EZ)	Isomate - LPTB, Isomate-P Pheromone
O	Octadecadien (ZZ)	Isomate - LPTB, Isomate-P Pheromone
H	Oryzalin	Oryza AG, Oryzalin 4 A.S., Surflan 75WP, Surflan A
I	Oxamyl	Vydate L
H	Oxyfluorfen	Fire Power, Goal 1.6E, Goal 2XL, Goaltender
F	Oxytetracycline	Mycoshield, Mycoshield (WP)
F	Oxytetracycline calc	Tree Tech OTC
F	PCNB	Defend 10G, Scotts Proturf FF II, Terraclor 6.5% Plus Di-Syston 6.5% G
H	Paraquat	Cyclone Concentrate, Gramox Extra (Misnumbered, a Herbicide), Gramoxone Extra, Gramoxone Max, Gramoxone Super, Starfire (1.5L)
O	Pelargonic acid	Scythe, Thinex Blossom Thinner
H	Pendimethalin	Pendimax 3.3, Pendulum 2G, Prowl (4EC), Prowl 3.3 EC, Prowl H2O
I	Permethrin	Ambush, Ambush 25W, Last Call CM, Perm-UP 3.2 EC, Permethrin 3.2 AG, Permethrin 3.2 EC, Pounce 25WP, Pounce 3.2EC
I	Petroleum distillate	Citrus Soluble Oil, Damoil, Dormant Emulsion Oil, Dragon Horticultural Spray Oil, Gavicide C, Gavicide Super 90, JMS Stylet-Oil, JMS Stylet-Oil (Use-1222), Oil, Saf-T-Side, Sunspray 11E, Sunspray 6E, Sunspray Ultra-Fine Spray Oil, Superior Oil, Supreme Oil Spray, Volck Supreme Spray
I	Petroleum oil	Biocover UL, Damoil Dormant Oil Spray, Mite-e-Oil
I	Phorate	Phorate 20-G
I	Phosmet	Imidan 12.5%, Imidan 50-WSB, Imidan 70 WSB (WP)
F	Phosphorous acid	Agri-Fos Systemic Fungicide, Fosphite Fungicide, Phostrol, Prophyt, Topaz
H	Picloram K salt	Tordon 22K (2EC)
I	Piperonyl butoxide	Evergreen Crop Protection EC 60-6, PBO-8 (EC), Pyrenone Crop Spray, Pyrocide Emulsifiable 60-6
F	Potassium bicarbon.	Armicarb 100, Kaligreen (WP), MilStop Broad Spectrum Foliar Fungicide
F	potassium Phosphate	Ekspunge

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**Pesticide class, Common name, and Trade name**

Class	Common Name	Trade Name
I	Potassium salts	Insecticidal Soap 49.52CF, M-Pede, Safer Insecticidal Soap
O	Prohexadione calcium	Apogee PGR
H	Prometryn	Caparol 4L
H	Pronamide	Kerb 50-W
I	Propargite	Comite, Omite 30WS, Omite 6E
F	Propiconazole	Bumper 41.8 EC, Orbit (3.6EC), Orbit 45 WP, PropiMax EC, Tilt
F	Pseudomonas fluores.	BlightBan A506, Frostban B (71%WP)
I	Pymetrozine	Endeavor (WDG)
F	Pyraclostrobin	Cabrio EG, Headline, Pristine
I	Pyrethrins	Bonide Garden Dust, Evergreen Crop Protection EC 60-6, Evergreen Growers Spray, NEU1161, PyGanic EC 1.4 I, PyGanic EC 5.0 II, Pyrellin E.C., Pyrenone Crop Spray, Pyroicide Emulsifiable 60-6
I	Pyridaben	Nexter, Pyramite, Sanmite 75 WP
F	Pyrimethanil	SCALA SC
I	Pyriproxyfen	Esteem 35 WP, Knack (aka Esteem 0.86EC), Seize 35 WP
F	Quintec	Quintec
H	Rimsulfuron	Basis
I	Rotenone	Bonide Garden Dust, Pyrellin E.C.
I	S-Methoprene	Extinguish
H	S-Metolachlor	Dual II Magnum, Dual Magnum
I	Sabadilla	Sabadilla 0.3% Wettable, Veratran D
H	Sethoxydim	Poast, Poast HC, Poast Micro Flo, Poast Plus, Torpedo Herbicide
H	Simazine	Princep 4L, Princep 4L TO, Princep 80W, Princep Caliber 90, Sim-Trol 4L, Sim-Trol 90DF, Simazine 4L, Simazine 80W, Simazine 90 WDG, Simazine 90DF
O	Sodium tetrathiocarb	Enzone
I	Soybean oil	Golden Citrus Natur'l Spray Oil
I	Spinosad	Entrust, GF-120 NF Naturalyte Fruit Fly Bait, NAF-550 Fruit Fly Bait, SpinTor 2SC, Success
O	Spirodiclofen	Envidor 2 SC
F	Streptomycin	Agri-Mycin 17, Agri-Strep (17WP), Agri-Strep 500 (50WP), Streptomycin 3000 Dust
F	Streptomycin sulfate	Firewall 17 WP, Flame Out, Streptomycin sulfate
O	Strychnine	Cooke Gopher Mix, Gopher Getter AG Bait, Strychnine 1.8%, Strychnine Bait (.35%), Strychnine Bait (.5%)
O	Sulfaquinoxaline	Raze Rat & Mouse Bait
H	Sulfentrazone	Spartan 4F
H	Sulfosate	Touchdown 5, Touchdown 6
F	Sulfur	Alfa (97WP), Bonide Garden Dust, C-O-C-S 15 Sulfur 25, CSC Copper Sulfur Dust, Golden-Dew, Kumulus DF, Microfine Sulfur, Microspense Wettable Sulfur, Microthiol Disperss,

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**Pesticide class, Common name, and Trade name**

Class	Common Name	Trade Name
		Microthiol Disperss (USE-7449), Microthiol Special RH-144228, Redball EM-53 Liquid Sulfur, Special Electric Dusting Sulfur, Sulfur (92%), Sulfur 6L (52%), Sulfur 90W, Sulfur DF (80%), Sulfur Dusting (90%), Sulfur Dusting (92%), Sulfur Dusting (98%), Sulfur Flowable (6F), Sulfur Wettable Powder (95%), Sulfur, Dual Spraying and Dusting, Super Six, Super-Sul (80WP), That Flowable Sulfur (52% L), Thiolum (80DF)
F	Tebuconazole	Elite 45 DF
I	Tebufenozide	Confirm 2F
H	Tebuthiuron	Spike 40P
H	Terbacil	Sinbar (80WP)
O	Tetradecanol	Isomate-C Pheromone, Isomate-C Special, Isomate-C TT
O	Tetradecen-1-OL (Z)	3M Pheromone-Mating Disruption, Checkmate OLR-F, Isomate OBLR/ PLR, Isomate-C Special
O	Tetradecen-1-yl (E)	Checkmate OLR-F
I	Thiacloprid	Calypso
I	Thiamethoxam	Actara, Centric, Platinum
H	Thiazopyr	Mandate 2E (aka Visor)
H	Thifensulfuron	Basis, Synchrony STS
F	Thiophanate-methyl	Scotts Fungicide IX, T-Methyl 70W WSB, Thiophanate Methyl 85 WDG, Topsin M 4.5F, Topsin M 70WP, Topsin M 85 WDG, Topsin M WSB
F	Thiram	Thiram 65WP, Thiram 75WP
F	Triadimefon	Bayleton 009 EC T&O Fungicide, Bayleton 25 T&O, Bayleton 50% DF
H	Triallate	Far-Go Granular (10%)
F	Trichoderma harz.	RootShield Drench
H	Triclopyr	Remedy
O	Tridecen-1-YL-Acetate	NoMate TPW Spiral
O	Tridecanyl acetate	NoMate TPW Spiral
F	Trifloxystrobin	Flint, Gem
F	Triflumizole	Procure 50WS, Procure 50WS (Use 7242)
H	Trifluralin	Treflan HFP, Trifluralin 4 (EC), Trilin, Trilin 5
F	Triforine	Funginex (1.6EC)
F	Triphenyltin hydrox.	Super Tin 4L
F	Vinclozolin	Ronilan DF (50%)
O	Warfarin	Raze Rat & Mouse Bait
F	Xylenol	Gallex
O	Z-8-Dodecanol	Checkmate OFM, Checkmate SF-200, Consep OFM Spr2m Pheromone Sprayable, Isomate - OFM TT, Isomate M Pheromone, Isomate-M 100
O	Z-8-Dodecen acetate	Checkmate OFM, Checkmate SF-200, Consep OFM Spr2m Pheromone Sprayable, Isomate - OFM TT, Isomate M Pheromone, Isomate-M 100

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**Pesticide class, Common name, and Trade name**

Class	Common Name	Trade Name
I	Zeta-cypermethrin	Mustang Max
O	Zinc phosphide	ZP Rodent Bait AG, Zinc Phosphide Oat Bait
F	Ziram	Ziram 76 DF, Ziram 87.3 WP, Ziram F-4, Ziram Granuflo



**NATIONAL  
AGRICULTURAL  
STATISTICS  
SERVICE**

**2005  
FRUIT**

Form Approved  
OMB Number 0535-0218  
Approval Expires 8/31/2007  
Project code 141

**CHEMICAL USE SURVEY**

ENTERPRISE

U.S. Department of Agriculture  
Rm. 5030, South Building  
1400 Independence Avenue, S.W.  
Washington, D.C. 20250-2000  
Toll Free: 1-800-727-9540  
Fax: 202-690-2090  
E-mail: nass@nass.usda.gov

VERSION	ID	SUBTRACT	T-TYPE	TABLE	LINE
01	_____	_____	0	000	00

CONTACT RECORD		
DATE	TIME	NOTES

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

We are collecting information on chemical use and need your help to make the information as accurate as possible. Authority for collection of information on the Fruit Chemical Use Survey is Title 7, Section 2204 of the U.S. Code. This information will be used for analysis and to compile and publish estimates for your state and the United States. Response to this survey is confidential and voluntary.

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

BEGINNING TIME [MILITARY] ..... 004

Name _____
Address _____
Phone(____) _____

[Check if name and address are verified.]

[Read or show label to respondent to verify the name(s) and spelling. Make corrections or additions **on label**

- During 2005, were any crops (including new plantings) livestock or poultry on the total acres operated?.....  YES - [Go to item 5, page 2.]  NO-[Continue.]
- During 2005, did this operation sell any agricultural products or receive government agricultural payments?.....  YES - [Go to item 5, page 2.]  NO-[Continue.]
- During 2005, were any crops stored on the total acres operated? (Exclude crops produced by a tenant if [target] operator is landlord only.).....  YES - [Go to item 5, page 2.]  NO-[Continue.]
- During 2005, did this operation have any fruit acres which were operated by a management firm?.....  YES - [Go to item 5, page 2.]  NO-[Go to page 4.]

Now I have some questions about pesticide and chemical applications to your **bearing fruit acreage** before harvest. Please consider all applications made to trees, vineyards or bushes which occurred **after last season's harvest**.

1. Since last year's (2004) harvest, did you use **herbicides** on any of your bearing fruit acreage? .....  YES  NO
2. Since last year's (2004) harvest, did you use **insecticides, nematicides or miticides** on any of your bearing fruit acreage? .....  YES  NO
3. Since last year's (2004) harvest, did you use any **fungicides** on any of your bearing fruit acreage? .....  YES  NO
4. Since last year's (2004) harvest, did you use any other chemicals such as chemical thinners, growth regulators, microbial agents, pheromones, rodenticides, soil fumigants, etc. on any of your bearing fruit acreage? .....  YES  NO
5. **[ENUMERATION ACTION: If ALL items 1 – 4 = NO, go to Section E, page 14; else continue.]**

D

PESTICIDE APPLICATIONS

D

6. Now I need to get complete information on all of the chemicals applied, including applications made by you and/or by custom applications during the 2005 crop year to each of the target fruit crops you grew. **Let's start with the first application to your [crop] since the 2004 crop year harvest.**

[Complete the table for all chemical applications to the target fruit crops. Use supplemental tables if necessary. Include bearing acres only. Exclude applications made to fruits after harvest, and foliar applications of nutrients.]

**ENUMERATOR NOTE:** [If respondent is not able to report columns 6 or 7, ask respondent to report: Amount of product mixed with 100 gallons of water, number of gallons per tank and number of tanks used.]

		LINES IN TABLE OFFICE USE	T-TYPE	3	TABLE	001	LINE 99	399
NOTES:		1 CROP	2 CROP CODE	3 What products were applied to the [crop]? [Enter product code.]	4 Was this product bought in liquid or dry form? [Enter L or D.]	5 Was this part of a tank mix? [If tank mix, enter line number of first product in mix.]		
	01		304	305				306
	02		304	305				306
	03		304	305				306
	04		304	305				306
	05		304	305				306
	06		304	305				306
	07		304	305				306
	08		304	305				306
	09		304	305				306
	10		304	305				306
	11		304	305				306
	12		304	305				306
	13		304	305				306
	14		304	305				306
	15		304	305				306

[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.
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

CODES FOR COLUMN 8

1 POUNDS	30 GRAMS
12 GALLONS	40 KILOGRAMS
13 QUARTS	41 LITERS
14 PINTS	46 SPIRALS
15 OUNCES, LIQUID	47 PACKETS
28 OUNCES, DRY	50 OTHER (Specify _____)

LINE	6	OR	7	8	9	10	11
	How much was applied per acre per application?		What was the total amount applied per application?	[Enter unit code from above.]  CODE	What percent of the rows were covered? 100 All Rows 50 Every Other Row --- Other  [Enter percent covered.]	How many acres were treated with this product? [Include only bearing acres.]  BEARING ACRES	How many times was it applied?  NUMBER
01	308		309	310	315	312	313
02	308		309	310	315	312	313
03	308		309	310	315	312	313
04	308		309	310	315	312	313
05	308		309	310	315	312	313
06	308		309	310	315	312	313
07	308		309	310	315	312	313
08	308		309	310	315	312	313
09	308		309	310	315	312	313
10	308		309	310	315	312	313
11	308		309	310	315	312	313
12	308		309	310	315	312	313
13	308		309	310	315	312	313
14	308		309	310	315	312	313
15	308		309	310	315	312	313

[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.
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

E

PEST MANAGEMENT PRACTICES

E

Now I have some questions about pest management practices you may have used on any of the total fruit acres on this operation (Include bearing and non-bearing acreage of both target and non-target fruit crops grown.) By pests, we mean insects, weeds, and diseases.

Table with 3 columns: T-TYPE, TABLE, LINE. Values: 0, 000, 00.

1. [Enumerator Action: Were PESTICIDE APPLICATIONS reported in Section D?] YES - [Continue.] No - [Go to item 5.]

2. Was weather data used to assist in determining either the need or when to make pesticide applications? YES = 1 CODE 600

3. Were any biological pesticides such as Bt (Bacillus thuringiensis), insect growth regulators (Courier, intrepid, etc.) neem or other natural/biological based products sprayed or applied to manage pests? YES = 1 CODE 601

4. Were pesticides with different mechanisms of action rotated or tank mixed for the primary purpose of keeping pests from becoming resistant to pesticides? YES = 1 CODE 602

5. In 2005, how were your fruit acres primarily scouted for insects, weeds, diseases and/or beneficial organisms-- CODE 608. Includes sub-options: 1 By deliberately going to the fruit acres specifically for scouting activities? (Enter code 1 and go to item 6.) 2 By conducting general observations while performing routine tasks? (Enter code 2 and go to item 8.) 3 The fruit acres were not scouted? (Enter code 3 and go to item 11.)

6. Was an established scouting process used (systemic sampling, recording counts, etc.) or were insect traps used on any fruit acres? YES = 1 CODE 609

7. Was scouting for pests done on these fruit acres due to-- CODE 610, 611. Includes sub-options: a. a pest advisory warning? YES = 1 b. a pest development model? YES = 1



1	2 [If column 1 = YES, ask---] Who did the majority of the scouting for [column 1]—	
	1 Operator, partner or family member 2 An employee 3 Farm supply or chemical dealer 4 Independent crop consultant or commercial scout	
8. Were your fruit acres scouted for ---	YES = 1	CODE
a. weeds?.....	612	614
b. insects and mites?.....	615	617
c. disease?.....	618	620

	YES = 1	CODE
9. Were written or electronic records kept to track the activity or numbers of weeds, insects or diseases?.....	YES = 1	623
10. Was scouting data compared to published information on infestation thresholds to determine when to take measures to manage pests?.....	YES = 1	624
11. Was field mapping data used for making pest management decisions?.....	YES = 1	625
12. Were the services of a diagnostic laboratory used for pest identification or soil or plant tissue pest analysis?.....	YES = 1	626
13. Were crop residues (including drops, rotting fruit and/or debris) removed to manage pests?.....	YES = 1	627
14. Were ground covers, mulches, or other physical barriers maintained to manage pest problems?.....	YES = 1	629
15. Were any beneficial organisms (insects, nematodes, fungi) applied or released to manage pests?.....	YES = 1	636
16. Were floral lures, attractants, repellants, pheromone traps or other biological pest controls used on any fruit acres?.....	YES = 1	637
17. Were any fruit acres cultivated for weed control during the growing season?.....	YES = 1	640
18. Were field edges, lanes, ditches, roadways or fence lines chopped, mowed, plowed, or burned to manage pests on any fruit acres?.....	YES = 1	642
19. Were equipment and implements cleaned after completing field work to reduce the spread of pests?.....	YES = 1	643
20. Were any fruit acres irrigated for the 2005 crops?.....	YES = 1	644
[If item 20 = YES, ask---]		
a. Were water management practices (excluding chemigation) such as irrigation scheduling, controlled drainage, or treatment of retention water used to manage pests?.....	YES = 1	645

COMPLETION CODE for PESTICIDE APPLICATIONS		COMPLETION CODE for PEST MANAGEMENT PRACTICES	
1 Incomp/R	300	1 Incomp/R	500
3 Valid Zero			

## Report Features

**Released July 26, 2006 by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, U.S. Department of Agriculture. For information on "Agricultural Chemical Usage" call (202) 720-6146, office hours 7:30 a.m. to 4:00 p.m. ET.**

The next "Agricultural Chemical Usage" report will be released October 4, 2006. This report will cover restricted use pesticide data compiled from the field and fruit crops agricultural chemical usage reports for the 2005 crop year.

The next "Agricultural Chemical Usage" report for fruit crops will be released July 2008. This report will cover agricultural chemical and fertilizer use for the 2007 crop year for major states.

Listed below are persons within the National Agricultural Statistics Service to contact for additional information.

Doug Farmer, Environmental Statistician	(202) 720-7492
Mark R. Miller, Head, Environmental and Demographics Section	(202) 720-0684
Linda Hutton, Chief, Environmental, Economics and Demographics Branch	(202) 720-6146

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