



United States
Department of
Agriculture

National
Agricultural
Statistics
Service



Economic
Research
Service

Ag Ch 1(99)

Agricultural Chemical Usage 1998 Vegetable Summary

July 1999

USDA



1998 Agricultural Chemical Use Estimates for Vegetable Crops

Overview: This report, which summarizes the use of agricultural chemicals on vegetables in 1998, is issued by the National Agricultural Statistics Service (NASS) as part of its series on Agricultural Chemical Usage. Other publications in the series present statistics for on-farm agricultural chemical usage for field crops and fruits.

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 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.

NASS collects on-farm agricultural chemical use information to support the evaluation of food safety and water quality issues. The Economic Research Service (ERS) conducts research on the impact of alternative pesticide regulations, policies, and practices. The Agricultural Marketing Service (AMS) conducts a pesticide residue monitoring program.

This report includes farm use of 1998 crop year pesticide and fertilizers for selected vegetable crops in 16 major producing States.

The following table shows survey coverage for 1994 and 1998 by crop. In the table are statistics on the number of states surveyed, the number of reports summarized, and the percent of the U. S. crop acres accounted for in the surveyed states.

Agricultural Chemical Use Survey Coverage, 1994 and 1998

Crop	1994			1998		
	States : :Surveyed	Reports : :Summarized	:US Acreage: :Included	States : :Surveyed	Reports : :Summarized	:US Acreage: :Included
	--- Number ---	Percent	--- Number ---	Percent		
Asparagus	5	398	97	4	311	97
Beans, Lima, Fresh	1	78	100	1	36	100
Beans, Lima, Proc.	6	165	72	6	142	*
Beans, Snap, Fresh	7	619	76	7	426	76
Beans, Snap, Proc.	9	471	75	8	381	*
Broccoli	4	230	100	3	163	100
Cabbage, Fresh	9	718	88	9	518	88
Cabbage, Proc.	2	57	88	2	31	82
Carrots, Fresh	-			7	132	95
Carrots, Proc.	-			6	65	86
Carrots	9	337	94	-		
Cauliflower	6	221	100	5	142	*
Celery	4	72	125	3	72	100
Corn, Sweet, Fresh	12	1,447	68	12	945	70
Corn, Sweet, Proc.	7	792	91	6	629	90
Cucumbers, Fresh	8	663	83	8	478	85
Cucumbers, Proc.	9	319	69	9	291	*
Eggplant	2	197	100	2	105	100
Lettuce, Head	5	164	97	4	164	96
Lettuce, Other	3	138	99	3	137	99
Melons, Cantaloupe	5	438	89	7	493	95
Melons, Honeydew	3	71	100	3	55	100
Melons, Watermelon	6	798	71	8	702	77
Onions, Dry	9	787	77	8	494	78
Peas, Green, Proc.	6	564	91	5	459	85
Peppers, Bell	6	647	92	6	413	95
Spinach, Fresh	3	158	62	3	102	85
Spinach, Proc.	1	21	41	1	10	37
Strawberries	9	623	92	9	465	94
Tomatoes, Fresh	8	974	78	8	631	77
Tomatoes, Proc.	2	166	93	2	116	94

* Percent of US Acreage not published to avoid disclosure.

Highlights

Asparagus: Herbicides were applied to 81 percent of the four surveyed states, with the greatest coverage in Michigan at 99 percent. Diuron was applied to 51 percent of the crop, and the next most used herbicide, glyphosate, was applied to 36 percent. Insecticides were applied to 67 percent of the asparagus acres. The lowest coverage was in California, at 45 percent of the acres. Michigan applied insecticides to the largest percentage of the crop, 93 percent. Overall, fungicides were used on 39 percent of the acreage. Michigan applied fungicides to 75 percent of its asparagus while Washington applied fungicides to 44 percent of its asparagus. California, the largest acreage state, had low fungicide use.

Lima Beans: Georgia was the only state surveyed for fresh market lima bean growers. Herbicides were used to treat 85 percent of the Georgia acreage with trifluralin being the most utilized covering 76 percent. Insecticides were used on 22 percent of the acreage with permethrin being applied to 2 percent of those acres. Fungicides were applied to 71 percent of the acreage.

Growers of lima beans for processing applied herbicides to two-thirds of the acreage in the six states surveyed. Imazethapyr and trifluralin were used on 27 and 24 percent of the acreage, respectively. Metolachlor and Pendimethalin were each used on 22 percent of the acreage. Insecticides were more widely used being applied to 82 percent of the acreage. Dimethoate was most commonly used at 44 percent followed with applications of acephate on 39 percent of the acreage. Fungicides were used on 26 percent of the acres. Thiophanate-methyl was applied to 11 percent whereas both benomyl and sulfur were applied to 7 percent of the acres.

Snap Beans: Herbicides were applied to 32 percent of the fresh market acreage, and 80 percent of the acreage received insecticide treatments. Fungicides were applied to 74 percent of the acreage. Major herbicides used included metolachlor, applied to 15 percent of the acreage, followed by trifluralin and pendimethalin with each applied to 9 percent of the acres. Methomyl was the leading insecticide used covering 39 percent of the acreage. Acephate was used on 16 percent and Bacillus thuringiensis was put on 12 percent of the acreage. Chlorothalonil was the most widely used fungicide and was put on 61 percent of the acreage. Sulfur was the next most utilized being applied to 46 percent of the acreage, followed by copper hydroxide applied to 24 percent of the acres. Two states applied fungicides to over 90 percent of their acreage, Florida at 95 percent coverage and Georgia at 93 percent.

Pesticide coverage on processing snap bean acreage included: 92 percent of the acres treated with herbicides, 80 percent of the acreage received insecticides, and 46 percent received fungicides. The major herbicides applied were trifluralin applied to 56 percent of the acres, and both EPTC and metolachlor used on 53 percent of the acreage. Insecticides applied included acephate on 51 percent of the acreage, followed by dimethoate and methyl parathion at 24 and 22 percent coverage, respectively. Vinclozolin was the leading fungicide and was applied to 22 percent of the acreage.

Broccoli: Herbicides were applied to 44 percent of the acreage from the three states surveyed. Insecticides were applied to 77 percent of the acreage whereas fungicides treated 23 percent of the acres. Leading herbicides included DCPA applied to 18 percent, and oxyfluorfen used on 15 percent of the acres. A wide range of insecticides were used. The most commonly used included: esfenvalerate on 40 percent of the acreage, oxydemeton-methyl on 35 percent, chlorpyrifos on 28 percent, dimethoate on 24 percent and spinosad on 17 percent. There was not wide-spread use of a single fungicide on the surveyed acreage with no single active ingredient covering 10 percent of the acres. Chlorothalonil was applied to 9 percent of the acreage followed by maneb, which was utilized on 7 percent of the acreage.

Cabbage: Herbicides were applied to 72 percent of the fresh market cabbage acres. The most commonly used herbicide was trifluralin at 42 percent followed by oxyfluralin which was applied to 13 percent of the acreage. High total usage percentages were recorded for Wisconsin and New York with the coverage estimated at 98 and 91 percent, respectively. Insecticides were applied to nearly all the acreage with 96 percent coverage reported. The most commonly used insecticides included: Bacillus thuringiensis on 69 percent of the acreage, lambda-cyhalothrin on 37 percent, and esfenvalerate on 29 percent. Fungicides were applied on 43 percent of the acreage. Chlorothalonil was most commonly used with 35 percent of the acres, maneb was utilized on 10 percent of the acreage.

Herbicides and insecticides were both widely utilized in the two states surveyed on cabbage for kraut. Overall, herbicides were applied to 95 percent of the total acreage with 90 percent being applied to New York acreage and all Wisconsin acres receiving herbicide treatments. Trifluralin was the most utilized herbicide as it was applied to 86 percent of the acres, Metolachlor was next, being applied to 54 percent and clomazone was applied to 39 percent of the treated acres. Insecticides were applied to nearly all the acreage in both New York and Wisconsin. Lambda-cyhalothrin was applied to 80 percent of the acreage followed by dimethoate which was applied to 36 percent, and permethrin on 21 percent. Fungicides were used more sparingly, being applied to only 17 percent of the acreage. Chlorothalonil was the main fungicide applied.

Carrots: Nearly all of the carrot acreage for fresh market production utilized herbicides. Herbicides were applied to 92 percent of the total surveyed acreage. The two herbicides used most were linuron on 90 percent of the acreage and trifluralin on 54 percent. Insecticides were reported on 42 percent of the acreage. The two most utilized were diazinon and esfenvalerate applied to 17 and 14 percent of the acres, respectively. Fungicides were used on 64 percent of the acreage. Mefenoxam was the most utilized covering 36 percent of the acreage followed by sulfur with 19 percent coverage and chlorothalonil with 18 percent.

Herbicides were also widely utilized on carrots for processing acreage. Applications were reported on 88 percent of the surveyed acreage. Linuron was the predominate choice covering 86 percent of the acreage followed by fluazifop-P-butyl on 24 percent, and trifluralin on 21 percent. Insecticides were applied to 45 percent of the acres. Esfenvalerate was used most being applied to 31 percent of the acres. Fungicides were applied to 60 percent of the acreage. Chlorothalonil was the most utilized covering 43 percent of the acreage followed by copper hydroxide on 9 percent.

Cauliflower: Herbicides were applied to 56 percent of the cauliflower acreage. The most widely used were oxyfluorfen on 34 percent of the acres and DCPA on 22 percent. Insecticides were used on most of the surveyed acreage. A wide array of different insecticides were utilized including: chlorpyrifos on 61 percent of the acreage, oxydemeton-methyl on 56 percent, imidacloprid on 53 percent, and esfenvalerate with 41 percent of the acres covered. Fungicides were least used being applied to 21 percent of the acreage. Chlorothalonil and maneb were applied to 9 and 6 percent of the acres, respectively.

Celery: Herbicides were applied to 85 percent of the celery acreage in the three states surveyed. Prometryn was predominately used being applied to 80 percent of the acreage followed by linuron on 39 percent. Insecticides were widely used being applied to 97 percent of the acreage. The most utilized were: permethrin on 90 percent of the acres, oxamyl on 82 percent, acephate on 70 percent, and methomyl on 65 percent of the acres. Fungicides were also widely used being applied to 98 percent of the acreage. Chlorothalonil was most common, being applied to 93 percent of the acreage followed by propiconazole on 86 percent and benomyl on 73 percent.

Sweet Corn: Herbicides were applied to 81 percent of the fresh market sweet corn acreage. Atrazine was used on 57 percent of the acres, followed by metolachlor on 31 percent, and alachlor on 15 percent. Insecticides were widely used, being applied to 86 percent of the surveyed acreage. The most commonly applied included: methomyl on 48 percent of the acres, lambda-cyhalothrin on 35 percent, chlorpyrifos on 32 percent, and esfenvalerate on 28 percent of the treated acres. Fungicides were used on 21 percent of the acreage. Mancozeb was used on 15 percent of the acreage and propiconazole was used on 12 percent.

A higher percentage of herbicides were used on processing sweet corn acres. Herbicides were used on 94 percent of the surveyed acres with five of the six states reporting over 90 percent coverage. Atrazine was applied to 51 percent of the acreage, metolachlor was on 37 percent, and bentazon on 24 percent. Nearly three-quarters of the acreage was treated with insecticides as states reported 74 percent of the acres covered. The two predominately used were permethrin on 43 percent of the acres and lambda-cyhalothrin on 32 percent. Fungicides were only reported on 10 percent of the acreage. Propiconazole was the main fungicide utilized.

Cucumbers: Herbicides were applied to 32 percent of the fresh market cucumber acreage. Ethalfluralin was the herbicide predominately used being applied to 21 percent of the acreage. Insecticides were more widely used being applied to 64 percent of the acreage. Several insecticides were used on similar proportions of the acreage including: endosulfan on 20 percent of the acreage, esfenvalerate and permethrin on 14 percent, and Bacillus thuringiensis on 11 percent. Fungicides were applied to three-quarters of the acreage. Florida and Georgia utilized fungicides most with both treating over 90 percent of their acreage. Chlorothalonil was predominately used being applied to 59 percent of the acreage. Maneb, benomyl, copper hydroxide, and fosetyl-al were applied to 15, 12, 12, and 11 percent of the acreage, respectively.

Herbicides were applied to a larger percentage of the cucumbers for pickles acreage. Herbicides were applied to 77 percent of the crop with Texas and Wisconsin both applying herbicides to over 90 percent of the crop. The leading chemicals used were ethalfluralin on 63 percent of the acres and naptalam on 22 percent. Insecticides were applied to 38 percent of the acreage. Florida and Georgia used insecticides considerably more than the other states with over 90 percent of the acreage receiving treatments. Methomyl was most utilized as it was applied to 16 percent of the acreage. Fungicides were applied to 36 percent of the acreage. Chlorothalonil was used most covering 26 percent of the acreage followed by metalaxyl on 9 percent of the acres.

Eggplant: Herbicides were used on 73 percent of the eggplant acreage from the two states surveyed. Paraquat was predominately used being applied to 60 percent of the acreage. Insecticides were applied on 85 percent of the acreage. Oxamyl and fenbutatin-oxide were applied to similar proportions of the acreage at 21 and 20 percent coverage, respectively. Fungicides were applied to 82 percent of the eggplant acreage. Maneb was applied to 65 percent of the acres, copper hydroxide was on 59 percent, and mancozeb covered 16 percent.

Lettuce, Head: Herbicides were applied to 52 percent of the head lettuce acreage. Pronamide was applied to 35 percent of the acreage whereas benefin and bensulide were applied to 10 and 11 percent, respectively. Insecticides were more widely used being applied to 95 percent of the acreage. A very wide range of insecticides were used including: permethrin on 77 percent of the acres, acephate, cypermethrin and methomyl on 55 percent, and imidacloprid covering 45 percent of the acreage. Fungicides were applied to 85 percent of the acreage. Maneb was predominately used being applied to 76 percent of the acres followed by fosetyl-al and iprodione applied to 43 and 22 percent, respectively.

Lettuce, Other: Herbicides were applied to 54 percent of the other lettuce acreage surveyed from three states. Pronamide was applied to 39 percent of the acreage followed by bensulide on 10 percent. Insecticides were applied to 95 percent of the acreage. There was a wide array of insecticides used including: permethrin on 72 percent of the acreage, imidacloprid on 61 percent, and methomyl on 46 percent of the acres. Fungicides were applied to 88 percent of the acreage. Maneb was the leading fungicide as it was applied to 74 percent of the acreage.

Melons, Cantaloupe: Herbicides were used on 44 percent of the planted acreage. Bensulide and trifluralin were the most common herbicides used, at 18 percent and 17 percent of the acreage treated, respectively. Insecticides were applied to 66 percent of the cantaloupe acres planted, with imidacloprid being the most common, treating 27 percent of the acreage while *Bacillus thuringiensis* and methomyl were applied to 16 percent. Fifty-three percent of the acreage received fungicide treatment. Sulfur (24 percent), myclobutanil (13 percent), and mefenoxam (12 percent) were the most common fungicides used. Other chemicals were applied to 8 percent of the total cantaloupe acres.

Melons, Honeydew: Data was collected from three states for Honeydew melons. One-third of the total acreage received herbicide treatment and 78 percent were treated with insecticides. Fungicides were applied to 54 percent of the acreage while 6 percent received treatment from some other form of chemical. All of the herbicides used were applied to 9 percent of the land or less. The most common insecticide applied was imadacloprid (39 percent). Five other insecticides were used with percentages ranging from 15 to 19 percent of the planted acres. The fungicides azoxystrobin and myclobutanil were used most often, at 13 and 10 percent, respectively.

Melons, Watermelon: In the 8 states surveyed, herbicide were applied to 46 percent of the planted acreage, while 45 percent of the acreage was treated with insecticides. Fungicides were applied to 71 percent of the planted acreage, and 5 percent of the acreage was treated with other chemicals. Ethalfluralin and trifluralin, used on 16 percent of the acreage and 10 percent, respectively, were the most widely used herbicides. The insecticide methomyl was applied to 13 percent of the acreage. Endosulfan and *Bacillus thuringiensis* were both applied to 11 percent of the acreage. Over half (54 percent) of the planted acres were treated with the fungicide chlorothalonil. Other major fungicides applied to treated acres included: mancozeb (30 percent), benomyl (20 percent), and copper hydroxide (13 percent).

Onions, Dry: Eighty-five percent of the dry onion acreage received at least some herbicide application. Oxyfluorfen was used the most, being applied to 60 percent of the dry onion acreage. Insecticides were applied to 78 percent of the dry onion acreage. The range of insecticide treatments was from 59 percent of the Washington onion acres to 99 percent in New York. Chlorpyrifos and lambda-cyhalothrin were the predominant insecticides used, at 33 and 31 percent, respectively. Fungicides were applied to 86 percent of the acres planted. Chlorothalonil was used on 55 percent of the acreage planted, and mancozeb was used on 43 percent.

Green Peas, Processing: Herbicides were applied to 94 percent of the planted acreage of processing green peas. Across the five states surveyed, the application percentages ranged from 92 percent in Minnesota to 98 percent in Washington. Imazethapyr received the most coverage, on 32 percent of the crop. Trifluralin, at 31 percent coverage, and pendimethalin, at 28 percent, were the next two most used herbicides. Insecticides were applied to 38 percent of the acreage. Dimethoate was applied to 22 percent and esfenvalerate was applied to 20 percent of the green pea acreage. Fungicide use was minimal.

Peppers, Bell: Herbicides were applied to 69 percent of the planted acreage, and 87 percent of the acreage was treated with insecticides. Fungicides were applied to 72 percent of the acreage, and 43 percent of the planted acreage was treated with other chemicals. The major herbicide used was paraquat, applied to 40 percent of the acreage. Major insecticides applied included *Bacillus thuringiensis*, applied to 46 percent, methomyl, applied to 39 percent, and acephate, used on 34 percent of the acreage. Half of the pepper acreage received a fungicide treatment of copper hydroxide. Maneb was applied to 45 percent of the total acreage. In Florida, at least one fungicide was applied to 99 percent of the pepper acreage. Methyl bromide, a soil fumigant, was the major other chemical, applied to 38 percent of the total planted acreage. In Florida, 94 percent of the acreage was treated with this chemical.

Spinach: California, New Jersey and Texas reported chemicals used on spinach for fresh market. Herbicides were used on 41 percent of the planted acres. Cycloate was the major herbicide, being used on 27 percent of the acreage. Eighty percent of the total acreage was treated with an insecticide. Permethrin was used on 53 percent of the acreage to treat insects. Eight other insecticides were used to treat between 7 and 26 percent of the acreage. Fungicides were used on 46 percent of the fresh market spinach acres. Fosetyl-al and mefenoxam were the major fungicides used; each was applied to 22 percent of the acreage.

Chemical use on processing spinach was surveyed only in Texas. Metolachlor was the most used herbicide, with 90 percent of the crop treated. All of Texas' acreage was treated with at least one insecticide. Eighty-one percent received an application of *Bacillus thuringiensis*. Permethrin was applied to 49 percent and methomyl was applied to 27 percent of the acreage. Metalaxyl was the fungicide used on 26 percent of the processing spinach. Overall, 40 percent of the crop was treated with a fungicide.

Strawberries: In the 9 states surveyed, herbicides were used to treat 35 percent of the strawberry acres. Napropamide and paraquat were each used to treat 14 percent of the acreage. Insecticides and fungicides were more common forms of pesticides applied to strawberries. Eighty-nine percent of the acreage was treated to control insects; abamectin was used on 47 percent. Fungicides were used on 91 percent of the strawberry acreage, with Florida applying at least one fungicide to all of its acres. Captan was the most common fungicide, being used on 75 percent of the acres. Other common fungicides: benomyl, iprodione, myclobutanil, sulfur, thiram, and vinclozolin. For the other chemicals class, 63 percent of all strawberry acres were treated. Half of the acreage was treated with methyl bromide while 37 percent was treated with chloropicrin.

Tomatoes: Herbicides were applied to 57 percent of the fresh market tomato acreage. Metribuzin was applied to 24 percent of the acreage, and paraquat was applied to 23 percent. Insecticides were applied to 92 percent of the acreage with *Bacillus thuringiensis* used the most, on 52 percent. Esfenvalerate and permethrin were the next most common insecticides, being used to treat 39 and 37 percent, respectively. Fungicides were applied to 94 percent of the acreage; Florida treated 99 percent of its fresh market tomato acreage with at least one fungicide. Copper hydroxide was the most common fungicide, being applied to 60 percent of the total acres. Mancozeb and chlorothalonil usage followed at 52 and 47 percent, respectively. For the other chemical class, nearly half of the total acres were treated. Methyl bromide was used most often (47 percent of total acreage), mainly in Florida, Georgia and North Carolina.

California and Michigan were surveyed for chemicals used on processing tomatoes. Eighty-six percent of the acreage received herbicide treatment. Trifluralin and glyphosate were the leading chemicals at 58 percent and 54 percent of the acres, respectively. Insecticides were applied to 82 percent of the acres. Dimethoate was applied to 34 percent of the acres, while Esfenvalerate was used on 32 percent. Fungicide usage was high, at 96 percent of all acres. Copper hydroxide (65 percent), chlorothalonil (62 percent), and sulfur (62 percent) were the major fungicides used. On the 30 percent of acres treated with other chemicals, two compounds had approximately equal usage: ethephon at 14 percent of acres and metam-sodium at 16 percent.

Asparagus: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	34,000	69	2,834	21	364	30	793
MI	18,000	97	1,818	28	282	88	2,549
NJ	1,000	98	76	97	96	97	133
WA	23,000	83	2,194	37	594	29	569
Total	76,000	80	6,922	29	1,336	44	4,044

Asparagus: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	34,000					
Nitrogen		69	1.6	75	121	2,834
Phosphate		21	1.8	28	51	364
Potash		30	1.6	47	78	793
Michigan:	18,000					
Nitrogen		97	1.7	59	104	1,818
Phosphate		28	1.6	34	55	282
Potash		88	1.4	109	161	2,549
New Jersey:	1,000					
Nitrogen		98	1.5	50	78	76
Phosphate		97	1.5	63	99	96
Potash		97	1.5	88	137	133
Washington:	23,000					
Nitrogen		83	1.2	89	115	2,194
Phosphate		37	1.3	52	69	594
Potash		29	1.1	78	86	569
Total:	76,000					
Nitrogen		80	1.5	73	113	6,922
Phosphate		29	1.5	39	61	1,336
Potash		44	1.4	82	120	4,044

Asparagus: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed				
	ALL	CA	MI	NJ	WA
Herbicides:	:	:	:	:	:
2,4-D	P	P	P		P
Atrazine	*	:			*
Clopyralid	P	:			P
Dicamba	P	*		*	P
Diuron	P	P	P	P	P
Fluazifop-P-butyl	P	:	*	*	*
Glyphosate	P	P	P	*	*
Linuron	P	P	P		P
MCPA	*	:			*
Metribuzin	P	P	P	P	P
Napropamide	P	*		*	
Norflurazon	P	P	P	*	*
Paraquat	P	*	P	*	P
Pendimethalin	*	:			*
Sethoxydim	P	P	*		*
Simazine	P	*	P	*	P
Terbacil	P	:	P	*	*
Trifluralin	P	P			P
Insecticides:	:	:	:	:	:
Azinphos-methyl	*	:		*	
Bt (Bacillus thur.)	*	*			
Carbaryl	P	*	P	*	P
Carbofuran	*	:	*		
Chlorpyrifos	P	*	P		*
Diazinon	*	:	*	*	*
Dimethoate	*	:			*
Disulfoton	P	P	*		*
Fenamiphos	*	:		*	
Fonofos	P	*			*
Malathion	P	*	*		P
Methomyl	P	*	*	*	
Methoxychlor	*	:			*
Oxamyl	*	:		*	
Permethrin	P	*	P	*	*
Piperonyl butoxide	*	:	*		
Pyrethrins	*	:	*	*	
Rotenone	*	:		*	
Fungicides:	:	:	:	:	:
Basic copper sulfate	*	:	*		
Chlorothalonil	P	:	P		
Copper hydroxide	*	:		*	
Fenbuconazole	*	:	*		
Iprodione	*	:			*
Mancozeb	P	*	P		*
Maneb	*	:	*	*	
Mefenoxam	P	P			
Metalaxyl	*	:			*
Myclobutanil	*	:	*		
Sulfur	*	*			
Triforine	*	*			
Other Chemicals:	:	:	:	:	:
Metaldehyde	*	*			

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Asparagus: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

		Area Receiving and Total Applied					
State:	Planted						
:	Acreage	Herbicide	Insecticide 1/	Fungicide	Other Chemical		
:	Acres	Percent 1,000	Percent 1,000	Percent 1,000	Percent 1,000	Percent 1,000	
:		Lbs	Lbs	Lbs	Lbs	Lbs	
CA 2/:	34,000	66	67.2	45	33.2		
MI :	18,000	99	68.0	93	38.1	75 54.2	
NJ 2/:	1,000	86	3.7	90	3.1		
WA :	23,000	91	57.0	78	35.2	44 20.5	
Total:	76,000	81	195.9	67	109.6	39 81.6 * 0.1	

* Area applied is less than one percent.

1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.

2/ Insufficient reports to publish data for one or more of the pesticide classes.

Asparagus: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
2,4-D	15	1.2	1.15	1.38	16.2
Clopyralid	2	1.0	0.17	0.17	0.2
Dicamba	2	1.2	0.21	0.26	0.4
Diuron	51	1.2	1.30	1.62	62.7
Fluazifop-P-butyl	*	1.0	0.16	0.16	0.1
Glyphosate	36	1.3	0.80	1.11	30.0
Linuron	19	1.3	0.80	1.09	15.5
Metribuzin	25	1.4	0.61	0.90	17.3
Napropamide	1	1.5	1.47	2.29	0.9
Norflurazon	7	1.2	1.86	2.32	11.7
Paraquat	15	1.1	0.60	0.71	8.1
Sethoxydim	4	1.1	0.32	0.38	1.3
Simazine	9	1.4	1.08	1.57	11.1
Terbacil	2	1.0	0.53	0.53	0.7
Trifluralin	21	1.0	1.15	1.20	19.5
Insecticides:					
Carbaryl	33	2.1	0.80	1.74	44.0
Chlorpyrifos	10	1.0	0.80	0.86	6.7
Disulfoton	39	1.7	0.95	1.66	49.1
Fonofos	1	1.3	2.80	3.62	2.1
Malathion	4	1.6	1.00	1.62	4.5
Methomyl	1	2.2	0.59	1.31	1.1
Permethrin	12	2.2	0.08	0.17	1.6
Fungicides:					
Chlorothalonil	13	2.3	1.32	3.11	31.0
Mancozeb	24	1.6	1.40	2.28	42.0
Mefenoxam	6	1.3	0.37	0.48	2.4

* Area applied is less than 1 percent.

1/ Planted acres in 1998 for the 4 states surveyed were 76,000 acres. States included are CA, MI, NJ, and WA.

Asparagus: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
2,4-D	10	1.1	1.51	1.71	5.5
Diuron	37	1.0	1.65	1.80	22.5
Glyphosate	32	1.4	0.94	1.31	14.2
Linuron	25	1.3	0.89	1.18	10.0
Metribuzin	7	1.0	0.65	0.70	1.6
Norflurazon	6	1.3	1.82	2.54	5.2
Sethoxydim	9	1.2	0.32	0.38	1.2
Trifluralin	8	1.2	1.26	1.57	4.1
Insecticides:					
Disulfoton	41	1.9	0.96	1.88	25.9
Fungicides:					
Mefenoxam	14	1.3	0.37	0.48	2.4

1/ Planted acres in 1998 for California were 34,000 acres.

Asparagus: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
2,4-D	41	1.2	1.07	1.31	9.6
Diuron	81	1.5	1.05	1.60	23.4
Glyphosate	52	1.4	0.78	1.16	10.9
Linuron	13	1.4	0.76	1.07	2.5
Metribuzin	44	1.6	0.45	0.75	6.0
Norflurazon	8	1.0	1.50	1.54	2.2
Paraquat	41	1.2	0.55	0.68	5.0
Simazine	26	1.7	1.00	1.70	7.9
Terbacil	7	1.0	0.42	0.42	0.5
Insecticides:					
Carbaryl	85	2.7	0.70	1.94	29.8
Chlorpyrifos	39	1.0	0.78	0.80	5.6
Permethrin	49	2.2	0.08	0.18	1.6
Fungicides:					
Chlorothalonil	55	2.3	1.32	3.11	31.0
Mancozeb	48	1.7	1.45	2.53	21.6

1/ Planted acres in 1998 for Michigan were 18,000 acres.

Asparagus: Agricultural Chemical Applications,
New Jersey, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:	:				
Diuron	: 79	1.4	1.10	1.56	1.2
Metribuzin	: 78	1.1	0.60	0.66	0.5

1/ Planted acres in 1998 for New Jersey were 1,000 acres.

Asparagus: Agricultural Chemical Applications,
Washington, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:	:				
2,4-D	: 5	1.2	0.75	0.90	1.1
Clopyralid	: 6	1.0	0.17	0.17	0.2
Dicamba	: 4	1.4	0.19	0.27	0.2
Diuron	: 47	1.0	1.38	1.45	15.5
Linuron	: 15	1.4	0.61	0.89	3.1
Metribuzin	: 36	1.3	0.80	1.11	9.2
Paraquat	: 7	1.0	0.67	0.68	1.1
Simazine	: 10	1.0	1.23	1.23	2.9
Trifluralin	: 59	1.0	1.12	1.13	15.4
Insecticides:	:				
Carbaryl	: 35	1.0	1.02	1.09	8.8
Malathion	: 9	1.0	0.88	0.92	1.9

1/ Planted acres in 1998 for Washington were 23,000 acres.

Beans, Lima, Fresh: Fertilizer Use by State, 1998
 Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
GA	3,000	100	185	100	260	100	300

Beans, Lima, Fresh: Fertilizer Primary Nutrient Applications,
 States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
Georgia:	3,000					
Nitrogen		100	2.4	25	62	185
Phosphate		100	1.7	51	87	260
Potash		100	1.0	95	100	300

Beans, Lima, Fresh: Active Ingredient Publication Status
By States Surveyed, 1998

Active Ingredient	: GA
Herbicides:	:
Ethalfluralin	: *
Imazethapyr	: *
Pendimethalin	: *
Trifluralin	: P
Insecticides:	:
Carbaryl	: *
Cypermethrin	: *
Dimethoate	: *
Endosulfan	: *
Esfenvalerate	: *
Permethrin	: P
Fungicides:	:
Chlorothalonil	: *

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

Beans, Lima, Fresh: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
Georgia, 1998

Area Receiving and Total Applied						
State:	Planted	Acreage				
:	:	Herbicide	Insecticide	Fungicide	Other Chemical	
:	Acres	Percent 1,000	Percent 1,000	Percent 1,000	Percent 1,000	
:	:	Lbs	Lbs	Lbs	Lbs	
GA 1/:	3,000	85	1.9	22	0.9	

1/ Insufficient reports to publish data for one or more of the pesticide classes.

Beans, Lima, Fresh: Agricultural Chemical Applications,
Georgia, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
:	Percent	Number	Pounds per Acre	1,000 lbs	
Herbicides:	:	:	:	:	:
Trifluralin	: 76	: 1.0	: 0.64	: 0.64	: 1.5
Insecticides:	:	:	:	:	:
Permethrin	: 2	: 1.9	: 0.11	: 0.21	: *

* Total applied is less than 50 pounds.
1/ Planted acres in 1998 for Georgia were 3,000 acres.

Beans, Lima, Proc.: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	17,000	62	1,163	25	262	25	126
IL	1/	90		73		77	
NJ	1,800	100	51	100	53	100	56
OR	1/	100		100		90	
WA	5,200	94	623	72	308	61	54
WI	7,900	95	397	84	271	92	474
Total	36,400	80	3,189	55	1,652	55	1,333

1/ Planted acreage and total applied are not published to avoid disclosure.

Beans, Lima, Proc.: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	17,000					
Nitrogen		62	1.3	79	110	1,163
Phosphate		25	1.0	62	62	262
Potash		25	1.3	22	30	126
Illinois:	1/					
Nitrogen		90	1.3	33	43	
Phosphate		73	1.0	59	60	
Potash		77	1.0	91	91	
New Jersey:	1,800					
Nitrogen		100	1.0	28	29	51
Phosphate		100	1.0	29	30	53
Potash		100	1.0	31	31	56
Oregon:	1/					
Nitrogen		100	2.8	223	638	
Phosphate		100	1.9	242	474	
Potash		90	1.2	270	338	
Washington:	5,200					
Nitrogen		94	1.5	80	127	623
Phosphate		72	2.2	38	83	308
Potash		61	1.0	16	17	54
Wisconsin:	7,900					
Nitrogen		95	1.4	36	53	397
Phosphate		84	1.0	41	41	271
Potash		92	1.0	63	66	474
Total:	36,400					
Nitrogen		80	1.4	74	110	3,189
Phosphate		55	1.2	64	82	1,652
Potash		55	1.1	59	66	1,333

1/ Planted acreage and total applied are not published to avoid disclosure.

Beans, Lima, Proc.: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed						
	ALL	CA	IL	NJ	OR	WA	WI
Herbicides:							
Alachlor	P	*			*	*	
Bentazon	P		*	*		*	P
Ethalfluralin	P	P				*	
Glyphosate	P	*	*		*	*	*
Imazethapyr	P		*	*		*	P
Metolachlor	P	*	*	*	*	P	*
Pendimethalin	P		*			P	P
Quizalofop-ethyl	P		*			*	*
Sethoxydim	P		*			*	P
Sulfosate	*						*
Trifluralin	P	*	*	*	*	*	P
Insecticides:							
Acephate	P	P		*		*	P
Azadirachtin	*	*					
Azinphos-methyl	*					*	
Bt (Bacillus thur.)	*	*					
Carbaryl	*	*					
Cyromazine	*	*					
Diazinon	*	*					
Dicofol	P	*				*	
Dimethoate	P	P	*		*	P	P
Esfenvalerate	*	*					
Fonofos	*	*					
Malathion	*	*					
Methomyl	P	*		*			
Methyl parathion	*		*				
Naled	*	*					
Permethrin	*		*				
Petroleum distillate	*						*
Piperonyl butoxide	*	*					
Propargite	P	P					
Pyrethrins	*	*					
Spinosad	*	*					
Fungicides:							
Benomyl	P		*	*			
Copper hydroxide	*					*	*
Copper sulfate	*			*			
Iprodione	*			*	*		
Mefenoxam	*					*	
Metalaxyl	*			*		*	
PCNB	*			*		*	
Sulfur	P					P	
Thiophanate-methyl	P		*				*

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Beans, Lima, Proc.: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

Area Receiving and Total Applied							
State:	Planted	Acreage					
		Herbicide	Insecticide 1/	Fungicide	Other Chemical		
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	17,000	33	16.6	82	34.9		
IL	2/	100		100		100	
NJ	1,800	85	0.6	3	*	51	0.4
OR	2/	100		100		90	
WA	5,200	98	14.8	84	3.7	59	7.4
WI	7,900	99	8.8	87	7.6	13	1.2
Total:	36,400	67	56.5	82	48.9	26	15.8

* Total applied is less than 50 pounds.

1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.

2/ Planted acreage and total applied are not published to avoid disclosure.

Beans, Lima, Proc.: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Alachlor	14	1.1	3.04	3.41	17.6
Bentazon	15	1.0	0.97	0.98	5.3
Ethalfluralin	3	1.4	1.23	1.77	1.7
Glyphosate	11	1.0	0.55	0.59	2.3
Imazethapyr	27	1.0	0.02	0.02	0.2
Metolachlor	22	1.0	2.00	2.03	16.1
Pendimethalin	22	1.0	0.93	0.93	7.6
Quizalofop-ethyl	3	1.0	0.07	0.07	0.1
Sethoxydim	8	1.0	0.21	0.21	0.6
Trifluralin	24	1.0	0.57	0.58	5.0
Insecticides:					
Acephate	39	1.5	0.81	1.27	18.2
Dicofol	5	1.1	1.24	1.38	2.5
Dimethoate	44	1.3	0.40	0.53	8.4
Methomyl	8	1.2	0.67	0.81	2.4
Propargite	4	1.1	1.88	2.22	3.2
Fungicides:					
Benomyl	7	1.4	0.75	1.10	2.8
Sulfur	7	1.6	1.66	2.76	7.1
Thiophanate-methyl	11	1.2	0.70	0.89	3.5

1/ Planted acres in 1998 for the 6 states surveyed were 36,400 acres. States included are CA, IL, NJ, OR, WA, and WI.

Beans, Lima, Proc.: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Ethalfluralin	5	1.4	1.27	1.89	1.6
Insecticides:					
Acephate	54	1.4	0.84	1.21	11.1
Dimethoate	44	1.3	0.39	0.54	4.0
Propargite	8	1.1	1.88	2.22	3.2

1/ Planted acres in 1998 for California were 17,000 acres.

Beans, Lima, Proc.: Agricultural Chemical Applications,
Washington, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Metolachlor	73	1.0	1.89	1.89	7.2
Pendimethalin	69	1.0	0.83	0.83	3.0
Insecticides:					
Dimethoate	82	1.3	0.50	0.67	2.9
Fungicides:					
Sulfur	49	1.6	1.66	2.76	7.1

1/ Planted acres in 1998 for Washington were 5,200 acres.

Beans, Lima, Proc.: Agricultural Chemical Applications,
Wisconsin, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	24	1.0	1.00	1.04	2.0
Imazethapyr	90	1.0	0.02	0.02	0.1
Pendimethalin	46	1.0	1.02	1.02	3.7
Sethoxydim	21	1.0	0.19	0.19	0.3
Trifluralin	36	1.0	0.59	0.59	1.7
Insecticides:					
Acephate	54	1.9	0.75	1.46	6.3
Dimethoate	33	1.2	0.25	0.32	0.8

1/ Planted acres in 1998 for Wisconsin were 7,900 acres.

Beans, Snap, Fresh: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	4,700	86	452	75	214	66	167
FL	36,000	99	4,270	98	5,178	98	5,806
GA	13,000	100	1,035	96	486	100	1,251
MI	1,800	92	62	93	96	88	91
NJ	4,000	100	192	100	286	100	286
NY	5,400	71	177	71	262	71	208
NC	7,000	97	370	95	385	88	581
Total	71,900	96	6,558	94	6,907	93	8,390

Beans, Snap, Fresh: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	4,700					
Nitrogen		86	2.9	38	112	452
Phosphate		75	1.2	48	61	214
Potash		66	1.2	43	54	167
Florida:	36,000					
Nitrogen		99	6.7	18	119	4,270
Phosphate		98	5.3	27	147	5,178
Potash		98	5.7	28	165	5,806
Georgia:	13,000					
Nitrogen		100	1.6	48	80	1,035
Phosphate		96	1.2	32	39	486
Potash		100	1.3	73	96	1,251
Michigan:	1,800					
Nitrogen		92	1.6	23	38	62
Phosphate		93	1.0	55	58	96
Potash		88	1.0	54	58	91
New Jersey:	4,000					
Nitrogen		100	1.0	46	48	192
Phosphate		100	1.0	70	72	286
Potash		100	1.0	70	72	286
New York:	5,400					
Nitrogen		71	1.0	45	46	177
Phosphate		71	1.0	68	69	262
Potash		71	1.0	54	55	208

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Beans, Snap, Fresh: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998 (continued)

Primary Nutrient	: Planted Acreage	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Acres	Percent	Number	Pounds per Acre		1,000 Lbs
North Carolina:	7,000					
Nitrogen		97	1.6	34	55	370
Phosphate		95	1.0	57	58	385
Potash		88	1.0	93	94	581
Total:	71,900					
Nitrogen		96	4.3	22	95	6,558
Phosphate		94	3.3	31	103	6,907
Potash		93	3.6	35	126	8,390

Beans, Snap, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed							
	ALL	CA	FL	GA	MI	NJ	NY	NC
Herbicides:								
Alachlor	*						*	
Atrazine	*						*	
Benefin	*							*
Bentazon	P	*		*	*	*	P	*
Bromoxynil	*			*				
Clomazone	*					*		
DCPA	*	*						
EPTC	P	*	*		*	*	*	
Ethalfluralin	*			*				
Fluazifop-P-butyl	*		*					
Glyphosate	P	*	*	*	*	*		
Imazethapyr	*					*		
Metolachlor	P	*	P	*	*	P	P	P
Metribuzin	*						*	
Napropamide	*							*
Oxyfluorfen	*	*						
Paraquat	*	*	*			*		*
Pendimethalin	P	*	*	P	*		*	*
Propachlor	*						*	
Sethoxydim	P	*						*
Trifluralin	P	*	P	*	P	*	P	P

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Beans, Snap, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed								
	ALL	CA	FL	GA	MI	NJ	NY	NC	
Insecticides:									
Acephate	P	*	P	P	*		*	P	
Azinphos-methyl	*		*			*			
Bt (Bacillus thur.)	P	P	P		*	*		*	
Carbaryl	P		P	P	P	P	P	P	
Chlorpyrifos	*		*	*					
Cypermethrin	*			*					
Diazinon	P	*	*	*		*		*	
Dicofol	*	*							
Dimethoate	P	P	P	*	*			*	
Disulfoton	*	*			*				
Endosulfan	P		P	P		*	*	P	
Esfenvalerate	P	*	*	P	P	*		P	
Ethoprop	*		*						
Fenamiphos	*			*					
Fonofos	*	*							
Malathion	P	*	*					*	
Methomyl	P	P	P	P	*	P	*	P	
Methyl parathion	*			*			*		
Neem oil	*	*							
Permethrin	P		*	*		*	*	*	
Phorate	*		*						
Piperonyl butoxide	*		*						
Potassium salts	*		*						
Propargite	*	*							
Pyrethrins	*		*						
Rotenone	*					*			
Spinosad	*			*					
Thiodicarb	*				*				
Fungicides:									
Basic copper sulfate	*		*						
Benomyl	P	*	*		*			*	
Captan	*						*		
Chlorothalonil	P	*	P	P	*	*	*	P	
Copper ammonium	*							*	
Copper chloride hyd.	*							*	
Copper hydroxide	P		P	*	*	*		*	
Copper resinate	*	*		*			*		
Copper sulfate	*		*			*			
Dicloran	*	*		*					
Fosetyl-al	*		*						
Iprodione	*		*						
Mancozeb	*		*		*				
Maneb	*		*				*	*	
Mefenoxam	*	*							
Metalaxyl	P		P	P		*	*	*	
PCNB	P	*	*	P				*	
Sulfur	P	*	P	*				*	
Thiophanate-methyl	*		*					*	
Other Chemicals:									
Dichloropropene	*			*					
Metaldehyde	*	*							
Methyl bromide	*		*						

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Beans, Snap, Fresh: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

: : Area Receiving and Total Applied									

State: Planted :-----									
: Acreage : Herbicide : Insecticide 1/: Fungicide : Other Chemical									

	Acres	Percent	1,000	Percent	1,000	Percent	1,000	Percent	1,000
			Lbs		Lbs		Lbs		Lbs

CA	4,700	19	1.5	33	2.4	10	0.7		
FL 2/	36,000	16	5.9	89	129.5	95	636.4		
GA 2/	13,000	34	6.0	88	8.0	93	38.7		
MI 2/	1,800	80	3.0	53	1.1				
NJ 2/	4,000	10	0.5	80	1.6				
NY	5,400	94	10.8	39	2.0	35	3.9		
NC	7,000	67	7.3	91	2.3	68	39.8		
Total:	71,900	32	35.0	80	146.9	74	719.7	1	35.1

- 1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Beans, Snap, Fresh: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	2	1.0	0.92	0.97	1.3
EPTC	3	1.0	1.45	1.46	3.3
Glyphosate	1	1.0	0.63	0.65	0.6
Metolachlor	15	1.0	1.68	1.74	18.2
Pendimethalin	9	1.0	0.91	0.96	6.0
Sethoxydim	1	1.0	0.13	0.13	0.1
Trifluralin	9	1.0	0.71	0.74	4.7
Insecticides:					
Acephate	16	1.8	0.58	1.06	12.2
Bt (Bacillus thur.)2/	12	2.4			
Carbaryl	5	1.6	0.77	1.28	4.3
Diazinon	2	1.0	1.32	1.38	1.6
Dimethoate	8	1.9	0.47	0.91	5.2
Endosulfan	20	3.3	0.68	2.25	32.4
Esfenvalerate	25	6.9	0.04	0.28	5.1
Malathion	*	1.4	1.46	2.18	0.1
Methomyl	39	5.7	0.47	2.70	75.4
Permethrin	*	1.2	0.16	0.20	0.1
Fungicides:					
Benomyl	3	1.9	0.90	1.76	4.2
Chlorothalonil	61	4.7	1.42	6.75	294.8
Copper hydroxide	24	7.1	0.50	3.59	60.8
Metalaxyl	13	1.0	0.17	0.18	1.7
PCNB	9	1.0	0.94	0.96	6.3
Sulfur	46	5.9	1.78	10.50	347.1

* Area applied is less than 1 percent.

1/ Planted acres in 1998 for the 7 states surveyed were 71,900 acres. States included are CA, FL, GA, MI, NJ, NY, and NC.

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

Beans, Snap, Fresh: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides:					
Bt (Bacillus thur.)2/	13	1.0			
Dimethoate	13	2.0	0.42	0.86	0.5
Methomyl	9	2.4	0.30	0.75	0.3

1/ Planted acres in 1998 for California were 4,700 acres.

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

Beans, Snap, Fresh: Agricultural Chemical Applications,
Florida, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Metolachlor	7	1.0	1.27	1.34	3.2
Trifluralin	5	1.0	0.79	0.79	1.4
Insecticides:					
Acephate	13	2.7	0.54	1.49	6.8
Bt (Bacillus thur.)2/	21	2.5			
Carbaryl	2	1.9	0.98	1.87	1.2
Dimethoate	12	2.0	0.48	0.97	4.1
Endosulfan	38	3.4	0.68	2.33	31.7
Methomyl	62	6.7	0.48	3.23	72.5
Fungicides:					
Chlorothalonil	82	5.9	1.46	8.73	258.7
Copper hydroxide	43	7.7	0.50	3.88	59.9
Metalaxyl	11	1.1	0.14	0.16	0.6
Sulfur	81	6.4	1.65	10.59	307.6

1/ Planted acres in 1998 for Florida were 36,000 acres.

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

Beans, Snap, Fresh: Agricultural Chemical Applications,
Georgia, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Pendimethalin	25	1.0	0.87	0.92	3.0
Insecticides:					
Acephate	24	1.2	0.60	0.73	2.3
Carbaryl	6	2.5	0.81	2.02	1.5
Endosulfan	6	1.4	0.58	0.82	0.6
Esfenvalerate	5	3.0	0.03	0.09	0.1
Methomyl	10	1.9	0.38	0.74	1.0
Fungicides:					
Chlorothalonil	88	2.3	1.15	2.74	31.3
Metalaxyl	17	1.0	0.26	0.27	0.6
PCNB	10	1.0	0.94	1.00	1.3

1/ Planted acres in 1998 for Georgia were 13,000 acres.

Beans, Snap, Fresh: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Trifluralin	37	1.2	0.80	1.02	0.7
Insecticides:					
Carbaryl	3	1.7	1.00	1.71	0.1
Esfenvalerate	8	1.1	0.03	0.03	*

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Michigan were 1,800 acres.

Beans, Snap, Fresh: Agricultural Chemical Applications,
New Jersey, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Metolachlor	9	1.2	1.31	1.59	0.5
Insecticides:					
Carbaryl	32	1.0	0.51	0.52	0.7
Methomyl	67	1.0	0.34	0.34	0.9

1/ Planted acres in 1998 for New Jersey were 4,000 acres.

Beans, Snap, Fresh: Agricultural Chemical Applications,
New York, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	4	1.0	0.62	0.62	0.1
Metolachlor	54	1.0	1.78	1.86	5.4
Trifluralin	50	1.0	0.72	0.72	2.0
Insecticides:					
Carbaryl	3	1.3	0.93	1.29	0.2

1/ Planted acres in 1998 for New York were 5,400 acres.

Beans, Snap, Fresh: Agricultural Chemical Applications,
North Carolina, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Metolachlor	46	1.0	2.02	2.02	6.6
Trifluralin	7	1.0	0.71	0.71	0.4
Insecticides:					
Acephate	20	1.2	0.49	0.62	0.9
Carbaryl	7	1.7	0.74	1.29	0.6
Endosulfan	*	2.4	0.81	1.99	**
Esfenvalerate	71	1.7	0.04	0.06	0.3
Methomyl	12	1.2	0.35	0.44	0.4
Fungicides:					
Chlorothalonil	8	2.2	0.90	1.98	1.1

* Area applied is less than 1 percent.

** Total applied is less than 50 pounds.

1/ Planted acres in 1998 for North Carolina were 7,000 acres.

Beans, Snap, Proc.: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	1/	86		50		50	
IL	14,700	97	3,212	69	461	61	887
MI	24,000	99	1,245	85	908	79	1,597
NJ	1,500	100	52	100	45	100	56
NY	21,200	100	528	100	1,239	100	798
NC	1/	100		100		100	
OR	23,300	99	2,024	99	3,098	94	1,761
WI	66,900	100	3,998	97	3,076	99	4,800
Total	156,300	99	11,405	92	8,930	90	10,053

1/ Planted acreage and total applied are not published to avoid disclosure.

Beans, Snap, Proc.: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	: Planted : : Acreage :	Area : : Applied :	Appli- : : cations :	Rate per : : Application :	Rate per : : Crop Year :	Total : : Applied
	: Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	: 1/					
Nitrogen	:	86	2.0	47	94	
Phosphate	:	50	1.0	25	25	
Potash	:	50	1.0	25	25	
Illinois:	: 14,700					
Nitrogen	:	97	3.2	70	225	3,212
Phosphate	:	69	1.2	37	45	461
Potash	:	61	1.4	67	99	887
Michigan:	: 24,000					
Nitrogen	:	99	1.9	26	52	1,245
Phosphate	:	85	1.1	40	45	908
Potash	:	79	1.0	78	84	1,597
New Jersey:	: 1,500					
Nitrogen	:	100	1.0	35	35	52
Phosphate	:	100	1.0	30	30	45
Potash	:	100	1.0	38	38	56
New York:	: 21,200					
Nitrogen	:	100	1.0	23	25	528
Phosphate	:	100	1.0	57	58	1,239
Potash	:	100	1.0	35	38	798
North Carolina:	: 1/					
Nitrogen	:	100	1.3	33	44	
Phosphate	:	100	1.0	47	52	
Potash	:	100	1.0	105	105	
Oregon:	: 23,300					
Nitrogen	:	99	1.5	56	88	2,024
Phosphate	:	99	1.1	122	135	3,098
Potash	:	94	1.1	71	81	1,761
Wisconsin:	: 66,900					
Nitrogen	:	100	1.8	32	60	3,998
Phosphate	:	97	1.1	43	47	3,076
Potash	:	99	1.2	57	73	4,800
Total:	: 156,300					
Nitrogen	:	99	1.8	40	74	11,405
Phosphate	:	92	1.1	56	62	8,930
Potash	:	90	1.2	59	71	10,053

1/ Planted acreage and total applied are not published to avoid disclosure.

Beans, Snap, Proc.: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed									
	ALL	CA	IL	MI	NJ	NY	NC	OR	WI	
Herbicides:										
2,4-D	*								*	
Bentazon	P		P	P		P		P	P	
DCPA	*	*								
EPTC	P		*	*		P		P	P	
Ethalfluralin	*		*	*						
Fluazifop-P-butyl	*			*						
Fomesafen	*		*			*				
Glyphosate	P			P				P	P	
Imazethapyr	*					*			*	
Lactofen	P							P		
MCPB	*								*	
Metolachlor	P	*	P	P	*	P		P	P	
Oxyfluorfen	*							*		
Paraquat	*	*								
Pendimethalin	P		*			P	*		P	
Pyridate	*								*	
Quizalofop-ethyl	P		*						*	
Sethoxydim	P		P	*				*	P	
Trifluralin	P		*	P		P	*	P	P	
Insecticides:										
Acephate	P	*	P	P		P	*		P	
Bt (Bacillus thur.)	*	*								
Carbaryl	P	*	P			*	*	P	P	
Chlorpyrifos	*							*		
Cyromazine	*					*				
Diazinon	P							*	*	
Dicofol	*	*								
Dimethoate	P	*	P	P		*	*	*	P	
Disulfoton	P			P		*		*		
Esfenvalerate	P	*	P	P			*	P	*	
Ethoprop	P							P		
Fonofos	*							*		
Malathion	*							*		
Methomyl	P	*		*	*		*			
Methyl parathion	P		P	P					P	
Permethrin	*			*						
Petroleum distillate	*			*		*				
Phorate	*			*		*				
Potassium salts	*	*								
Fungicides:										
Benomyl	P		P	*		*		*	P	
Chlorothalonil	*						*			
Copper ammonium	P		P							
Copper hydroxide	P		*	*					P	
Iprodione	*			*				*		
Mefenoxam	P			*				*		
Metalaxyl	P				*			P		
PCNB	*				*			*		
Thiophanate-methyl	P		P	*				*	*	
Vinclozolin	P			*		P		P	*	
Other Chemicals:										
Cytokinins	*							*		

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

Beans, Snap, Proc.: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

		Area Receiving and Total Applied							
State:	Planted	-----							
	Acreage	Herbicide	Insecticide 1/	Fungicide	Other Chemical				
	Acres	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs				
CA 2/:	3/								
IL	14,700	76	23.4	76	41.1	68	8.3		
MI	24,000	93	71.7	88	36.6	25	4.1		
NJ 2/:	1,500	87	2.1						
NY	21,200	98	103.9	40	13.4	36	3.8		
NC 2/:	3/	56		100					
OR 2/:	23,300	98	114.2	95	46.1	92	12.7		
WI	66,900	96	174.2	87	76.1	39	24.9		
	:								
Total:	156,300	92	492.1	80	219.2	46	55.2	1	*

* Total applied is less than 50 pounds.

1/ Total applied excludes Bt's (*Bacillus thuringiensis*). Quantities are not available because amounts of active ingredient are not comparable between products.

2/ Insufficient reports to publish data for one or more of the pesticide classes.

3/ Planted acreage and total applied are not published to avoid disclosure.

Beans, Snap, Proc.: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	34	1.0	0.64	0.66	35.1
EPTC	53	1.2	2.39	2.95	245.5
Glyphosate	7	1.0	0.77	0.79	8.5
Lactofen	4	1.0	0.12	0.12	0.7
Metolachlor	53	1.3	1.22	1.65	136.1
Pendimethalin	7	1.0	1.01	1.01	10.8
Quizalofop-ethyl	1	1.0	0.06	0.06	0.1
Sethoxydim	6	1.0	0.16	0.16	1.5
Trifluralin	56	1.1	0.52	0.58	50.6
Insecticides:					
Acephate	51	1.3	0.78	1.08	86.4
Carbaryl	12	1.1	0.95	1.07	20.0
Diazinon	5	1.0	0.62	0.64	4.9
Dimethoate	24	1.2	0.41	0.52	19.1
Disulfoton	8	1.3	0.97	1.35	16.9
Esfenvalerate	11	1.8	0.05	0.08	1.4
Ethoprop	9	1.0	2.14	2.14	29.7
Methomyl	3	1.4	0.69	1.00	4.9
Methyl parathion	22	1.8	0.49	0.91	31.7
Fungicides:					
Benomyl	7	1.0	0.76	0.80	8.5
Copper ammonium	2	1.0	0.15	0.15	0.4
Copper hydroxide	15	1.3	0.64	0.89	20.8
Mefenoxam	2	1.1	0.13	0.14	0.4
Metalaxyl	4	1.0	0.17	0.17	1.0
Thiophanate-methyl	2	1.6	0.82	1.32	3.9
Vinclozolin	22	1.1	0.49	0.55	18.8

1/ Planted acres in 1998 for the 8 states surveyed were 156,300 acres.
States included are CA, IL, MI, NJ, NY, NC, OR, and WI.

Beans, Snap, Proc.: Agricultural Chemical Applications,
Illinois, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	49	1.0	0.61	0.61	4.4
Metolachlor	48	1.0	1.55	1.68	11.9
Sethoxydim	30	1.0	0.15	0.15	0.7
Insecticides:					
Acephate	74	2.3	0.76	1.79	19.6
Carbaryl	15	1.0	0.88	0.88	1.9
Dimethoate	41	1.9	0.40	0.79	4.7
Esfenvalerate	55	2.6	0.05	0.13	1.0
Methyl parathion	65	3.0	0.48	1.47	13.9
Fungicides:					
Benomyl	23	1.0	0.75	0.75	2.6
Copper ammonium	19	1.0	0.15	0.15	0.4
Thiophanate-methyl	13	1.7	0.88	1.57	3.1

1/ Planted acres in 1998 for Illinois were 14,700 acres.

Beans, Snap, Proc.: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	45	1.1	0.70	0.77	8.4
Glyphosate	10	1.0	0.64	0.68	1.7
Metolachlor	70	1.0	1.36	1.36	22.8
Trifluralin	26	1.2	0.56	0.72	4.5
Insecticides:					
Acephate	67	1.4	0.75	1.06	17.0
Dimethoate	33	1.2	0.42	0.52	4.1
Disulfoton	33	1.0	0.93	0.99	7.7
Esfenvalerate	16	1.1	0.04	0.05	0.2
Methyl parathion	34	1.3	0.48	0.64	5.2

1/ Planted acres in 1998 for Michigan were 24,000 acres.

Beans, Snap, Proc.: Agricultural Chemical Applications,
New York, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	62	1.0	0.22	0.23	3.0
EPTC	92	1.8	1.45	2.64	51.7
Metolachlor	83	2.5	0.89	2.21	38.8
Pendimethalin	11	1.0	1.02	1.02	2.3
Trifluralin	93	1.2	0.33	0.41	8.1
Insecticides:					
Acephate	15	1.2	0.63	0.77	2.5
Fungicides:					
Vinclozolin	36	1.0	0.45	0.49	3.8

1/ Planted acres in 1998 for New York were 21,200 acres.

Beans, Snap, Proc.: Agricultural Chemical Applications,
Oregon, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	32	1.0	0.88	0.89	6.7
EPTC	95	1.0	3.51	3.51	77.5
Glyphosate	19	1.0	0.68	0.70	3.0
Lactofen	24	1.0	0.12	0.12	0.7
Metolachlor	58	1.1	1.32	1.48	20.1
Trifluralin	49	1.0	0.52	0.52	6.0
Insecticides:					
Carbaryl	56	1.0	0.79	0.86	11.2
Esfenvalerate	8	1.1	0.04	0.05	0.1
Ethoprop	59	1.0	2.14	2.14	29.7
Fungicides:					
Metalaxyl	20	1.0	0.19	0.19	0.9
Vinclozolin	91	1.0	0.50	0.54	11.5

1/ Planted acres in 1998 for Oregon were 23,300 acres.

Beans, Snap, Proc.: Agricultural Chemical Applications,
Wisconsin, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	1,000 lbs	:	
Herbicides:	:		:		:		:		:	
Bentazon	:	21	:	1.0	:	0.86	:	0.89	:	12.7
EPTC	:	43	:	1.0	:	2.65	:	2.82	:	80.2
Glyphosate	:	6	:	1.0	:	0.96	:	0.96	:	3.8
Metolachlor	:	39	:	1.0	:	1.51	:	1.55	:	40.3
Pendimethalin	:	11	:	1.0	:	1.08	:	1.08	:	7.9
Sethoxydim	:	5	:	1.0	:	0.15	:	0.15	:	0.5
Trifluralin	:	67	:	1.0	:	0.59	:	0.63	:	28.4
Insecticides:	:		:		:		:		:	
Acephate	:	74	:	1.1	:	0.80	:	0.95	:	47.0
Carbaryl	:	5	:	1.4	:	1.48	:	2.07	:	6.3
Dimethoate	:	33	:	1.0	:	0.42	:	0.45	:	10.0
Methyl parathion	:	26	:	1.4	:	0.51	:	0.73	:	12.5
Fungicides:	:		:		:		:		:	
Benomyl	:	10	:	1.0	:	0.79	:	0.85	:	5.6
Copper hydroxide	:	31	:	1.3	:	0.66	:	0.90	:	18.4

1/ Planted acres in 1998 for Wisconsin were 66,900 acres.

Broccoli: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
AZ	11,500	100	3,150	89	2,436	12	30
CA	121,000	87	19,852	53	5,546	67	4,954
TX	1,000	100	83	98	145	8	1
Total	133,500	88	23,085	56	8,127	61	4,985

Broccoli: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
Arizona:	11,500					
Nitrogen		100	4.2	64	274	3,150
Phosphate		89	1.6	143	239	2,436
Potash		12	1.0	22	22	30
California:	121,000					
Nitrogen		87	2.5	76	190	19,852
Phosphate		53	1.3	63	86	5,546
Potash		67	1.3	45	61	4,954
Texas:	1,000					
Nitrogen		100	1.9	42	84	83
Phosphate		98	1.0	148	148	145
Potash		8	1.0	16	17	1
Total:	133,500					
Nitrogen		88	2.6	74	197	23,085
Phosphate		56	1.4	76	108	8,127
Potash		61	1.3	45	61	4,985

Broccoli: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed			
	ALL	AZ	CA	TX
Herbicides:				
Bensulide	P	*	P	*
DCPA	P	*	P	*
Diclofop-methyl	*		*	
Glyphosate	P		P	
Metolachlor	*			*
Napropamide	P		P	
Oxyfluorfen	P	*	P	
Paraquat	*	*	*	
Pendimethalin	*			*
Pronamide	*	*	*	
Sethoxydim	P	P	P	
Trifluralin	P	P	*	*
Insecticides:				
Acephate	*		*	
Azadirachtin	*		*	
Azinphos-methyl	*		*	
Bifenthrin	*		*	
Bt (Bacillus thur.)	P	*	P	*
Carbaryl	P	*	*	
Chlorpyrifos	P	P	P	
Cryolite	*		*	
Cypermethrin	P	P	P	
Diazinon	P	P	P	
Dimethoate	P		*	*
Disulfoton	P		P	
Endosulfan	P	P	P	
Esfenvalerate	P	*	P	*
Fonofos	P		P	
Imidacloprid	P	*	P	*
Lambda-cyhalothrin	P	*	*	*
Malathion	P	*	*	
Methamidophos	P	*	*	
Methomyl	P	*	P	*
Methyl parathion	*	*	*	
Myrothecium verruc.	*		*	
Naled	P		P	
Neem oil	*		*	
Oxydemeton-methyl	P		P	
Permethrin	P	*	P	*
Piperonyl butoxide	*		*	
Potassium salts	*		*	
Pyrethrins	P	*	*	
Rotenone	P		P	
Soybean oil	*		*	
Spinosad	P	P	P	
Tebufozide	P	P	P	
Thiodicarb	P	P	P	
Toxaphene	*	*	*	
Tralomethrin	P	*	*	
Xylene	*	*	*	

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Broccoli: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed			
	ALL	AZ	CA	TX
Fungicides:				
Basic copper sulfate	*		*	
Benomyl	*		*	
Chlorothalonil	P		P	
Copper ammonium	*		*	
Copper hydroxide	P		P	
Copper oxide	*	*	*	
Fosetyl-al	P	*	*	
Iprodione	*	*	*	
Maneb	P	P	P	
Mefenoxam	P	P	P	
Metalaxyl	P		P	
Propiconazole	*		*	
Sulfur	P		P	
Other Chemicals:				
Brodifacoum	*		*	
Chloropicrin	*		*	
Dichloropropene	*		*	
Metam-sodium	*		*	
Methyl bromide	*		*	
Strychnine	*		*	

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

Broccoli: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

State	Planted Acreage	Area Receiving and Total Applied							
		Herbicide		Insecticide 1/		Fungicide		Other Chemical	
	Acres	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs
AZ	11,500	80	26.7	70	9.8	41	8.0		
CA	121,000	40	150.5	78	166.8	22	28.7	1	71.8
TX	1,000	10	0.2	100	0.2				
Total:	133,500	44	177.4	77	176.8	23	36.7	1	71.8

1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.

Broccoli: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	9	1.0	3.41	3.45	42.5
DCPA	18	1.3	3.81	5.27	123.5
Glyphosate	1	1.1	0.79	0.89	1.3
Napropamide	1	1.1	0.44	0.50	0.3
Oxyfluorfen	15	1.1	0.18	0.21	4.0
Sethoxydim	1	1.2	0.24	0.31	0.4
Trifluralin	5	1.2	0.55	0.70	4.5
Insecticides:					
Bt (Bacillus thur.)2/	14	1.6			
Carbaryl	1	1.1	1.06	1.18	0.8
Chlorpyrifos	28	1.8	1.00	1.81	66.8
Cypermethrin	3	1.1	0.08	0.09	0.4
Diazinon	9	1.1	0.62	0.69	8.2
Dimethoate	24	1.1	0.37	0.44	13.7
Disulfoton	4	1.0	1.05	1.09	5.5
Endosulfan	3	1.1	0.75	0.85	3.5
Esfenvalerate	40	1.2	0.03	0.04	2.4
Fonofos	1	1.1	1.63	1.84	1.7
Imidacloprid	12	1.1	0.08	0.10	1.6
Lambda-cyhalothrin	4	1.1	0.03	0.03	0.1
Malathion	*	1.6	1.04	1.68	0.6
Methamidophos	3	1.4	0.79	1.15	4.6
Methomyl	14	1.6	0.56	0.94	17.3
Naled	6	1.1	1.16	1.28	9.4
Oxydemeton-methyl	35	1.2	0.42	0.50	23.6
Permethrin	7	1.1	0.09	0.10	0.9
Pyrethrins	1	2.0	0.007	0.010	**
Rotenone	*	1.0	0.005	0.005	**
Spinosad	17	1.0	0.06	0.06	1.4
Tebufenozide	6	1.0	0.11	0.12	1.0
Thiodicarb	5	1.1	0.69	0.77	5.0
Tralomethrin	1	1.0	0.02	0.02	**
Fungicides:					
Chlorothalonil	9	1.0	1.12	1.20	14.0
Copper hydroxide	3	1.1	0.47	0.52	2.1
Fosetyl-al	1	1.2	1.82	2.26	3.6
Maneb	7	1.2	1.12	1.42	13.1
Mefenoxam	4	1.1	0.14	0.16	0.8
Metalaxyl	1	1.3	0.11	0.14	0.2
Sulfur	*	1.0	2.57	2.62	1.5

* Area applied is less than 1 percent.

** Total applied is less than 50 pounds.

1/ Planted acres in 1998 for the 3 states surveyed were 133,500 acres.

States included are AZ, CA, and TX.

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

Broccoli: Agricultural Chemical Applications,
Arizona, 1998 1/

Agricultural Chemical	:	Area	:	Appli-	:	Rate per	:	Rate per	:	Total
	:	Applied	:	cations	:	Application	:	Crop Year	:	Applied
	:	Percent	:	Number	:	Pounds per Acre	:	1,000 lbs	:	
Herbicides:	:		:		:		:		:	
Sethoxydim	:	2	:	1.2	:	0.27	:	0.34	:	0.1
Trifluralin	:	36	:	1.4	:	0.54	:	0.78	:	3.2
Insecticides:	:		:		:		:		:	
Chlorpyrifos	:	32	:	1.3	:	0.78	:	1.00	:	3.7
Cypermethrin	:	28	:	1.1	:	0.08	:	0.10	:	0.3
Diazinon	:	13	:	1.0	:	0.50	:	0.51	:	0.8
Endosulfan	:	12	:	1.0	:	0.71	:	0.73	:	1.0
Spinosad	:	25	:	1.2	:	0.09	:	0.10	:	0.3
Tebufenozide	:	16	:	1.1	:	0.12	:	0.13	:	0.2
Thiodicarb	:	9	:	1.0	:	0.76	:	0.80	:	0.9
Fungicides:	:		:		:		:		:	
Maneb	:	37	:	1.1	:	1.19	:	1.31	:	5.7
Mefenoxam	:	5	:	1.1	:	0.12	:	0.15	:	0.1

1/ Planted acres in 1998 for Arizona were 11,500 acres.

Broccoli: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	6	1.0	3.07	3.13	24.3
DCPA	18	1.3	3.83	5.32	118.2
Glyphosate	1	1.1	0.79	0.89	1.3
Napropamide	1	1.1	0.44	0.50	0.3
Oxyfluorfen	16	1.1	0.18	0.21	4.0
Sethoxydim	1	1.2	0.23	0.30	0.3
Insecticides:					
Bt (Bacillus thur.)2/	13	1.6			
Chlorpyrifos	28	1.8	1.01	1.89	63.2
Cypermethrin	1	1.0	0.08	0.09	0.1
Diazinon	9	1.1	0.64	0.72	7.4
Disulfoton	4	1.0	1.05	1.09	5.5
Endosulfan	2	1.1	0.77	0.92	2.5
Esfenvalerate	40	1.2	0.03	0.04	2.1
Fonofos	1	1.1	1.63	1.84	1.7
Imidacloprid	12	1.1	0.08	0.09	1.3
Methomyl	13	1.7	0.56	0.98	16.0
Naled	6	1.1	1.16	1.28	9.4
Oxydemeton-methyl	39	1.2	0.42	0.50	23.6
Permethrin	6	1.2	0.08	0.10	0.7
Rotenone	*	1.0	0.005	0.005	**
Spinosad	16	1.0	0.05	0.05	1.1
Tebufenozide	5	1.0	0.11	0.11	0.7
Thiodicarb	4	1.1	0.68	0.76	4.1
Fungicides:					
Chlorothalonil	10	1.0	1.12	1.20	14.0
Copper hydroxide	3	1.1	0.47	0.52	2.1
Maneb	4	1.4	1.08	1.52	7.5
Mefenoxam	4	1.1	0.15	0.16	0.7
Metalaxyl	1	1.3	0.11	0.14	0.2
Sulfur	*	1.0	2.57	2.62	1.5

* Area applied is less than 1 percent.

** Total applied is less than 50 pounds.

1/ Planted acres in 1998 for California were 121,000 acres.

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

Cabbage, Fresh: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	14,000	96	2,451	77	1,853	84	825
FL	7,600	100	1,481	100	592	100	1,561
GA	8,500	100	1,375	72	1,360	100	1,190
MI	2,100	78	171	76	147	97	310
NJ	2,100	100	403	100	251	100	346
NY	12,600	99	1,411	97	1,495	100	2,068
NC	9,100	97	1,257	98	1,157	97	1,309
TX	9,000	98	1,153	92	939	63	254
WI	4,800	100	659	100	611	99	618
Total	69,800	98	10,361	89	8,405	91	8,481

Cabbage, Fresh: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	: Planted : : Acreage :	Area : : Applied :	Appli- : : cations :	Rate per : : Application :	Rate per : : Crop Year :	Total : : Applied :
	: Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	: 14,000					
Nitrogen	: :	96	2.7	66	183	2,451
Phosphate	: :	77	2.0	84	173	1,853
Potash	: :	84	1.0	69	70	825
Florida:	: 7,600					
Nitrogen	: :	100	3.7	52	195	1,481
Phosphate	: :	100	2.5	30	78	592
Potash	: :	100	2.8	73	205	1,561
Georgia:	: 8,500					
Nitrogen	: :	100	11.7	14	162	1,375
Phosphate	: :	72	3.9	56	221	1,360
Potash	: :	100	9.8	14	140	1,190
Michigan:	: 2,100					
Nitrogen	: :	78	1.9	52	104	171
Phosphate	: :	76	1.3	68	92	147
Potash	: :	97	1.5	96	152	310
New Jersey:	: 2,100					
Nitrogen	: :	100	2.4	80	193	403
Phosphate	: :	100	2.3	51	120	251
Potash	: :	100	2.3	71	166	346
New York:	: 12,600					
Nitrogen	: :	99	1.3	81	113	1,411
Phosphate	: :	97	1.0	112	122	1,495
Potash	: :	100	1.1	142	165	2,068
North Carolina:	: 9,100					
Nitrogen	: :	97	1.8	78	142	1,257
Phosphate	: :	98	1.2	101	130	1,157
Potash	: :	97	1.3	110	149	1,309
Texas:	: 9,000					
Nitrogen	: :	98	2.1	61	130	1,153
Phosphate	: :	92	1.3	83	114	939
Potash	: :	63	1.2	36	45	254
Wisconsin:	: 4,800					
Nitrogen	: :	100	1.2	111	138	659
Phosphate	: :	100	1.0	121	128	611
Potash	: :	99	1.0	123	130	618
Total:	: 69,800					
Nitrogen	: :	98	3.4	45	152	10,361
Phosphate	: :	89	1.8	73	135	8,405
Potash	: :	91	2.5	52	133	8,481

Cabbage, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed									
	ALL	CA	FL	GA	MI	NJ	NY	NC	TX	WI
Herbicides:										
Alachlor	*						*			
Atrazine	*						*			
Bensulide	P	P	*				*	*	*	P
Clomazone	*				*					
DCPA	P	P			*	P		*	P	*
Dicamba	*								*	
Glyphosate	P	*	*		*			*		*
Imazethapyr	*					*				
Metolachlor	P		*	*	P	P	P		*	*
Metribuzin	*						*			
Napropamide	P				*	*	P	*		*
Oxyfluorfen	P	P		*	*	*	P	P		*
Paraquat	*			*		*				
Pendimethalin	*								*	
Prometryn	*						*			
Propachlor	*					*				
Pyridate	*				*		*			
Sethoxydim	P	*			*			*	*	*
Terbacil	*						*			
Trifluralin	P	*	P	P	P	*	P	P	P	P

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Cabbage, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed									
	ALL	CA	FL	GA	MI	NJ	NY	NC	TX	WI
Insecticides:										
Acephate	P			*		*		P		
Azadirachtin	*	*								
Azinphos-methyl	P			*	P	*	P	*		
Bt (Bacillus thur.)	P	P	P	P	P	P	P	P	P	P
Carbaryl	P	*		*	P	*	P	P	*	*
Chlorpyrifos	P	P	*	*	P	*	P	*	*	*
Cyfluthrin	*					*				
Cypermethrin	P	P			*				*	*
Diazinon	P	P	*	*	P	P	P	*	P	
Dicofol	*				*					
Dimethoate	P	P			*		P	*	*	*
Disulfoton	P	P							P	
Endosulfan	P	*	*	P	*	*	P	*	P	*
Esfenvalerate	P	P	*	P	P	P	P	P	P	*
Ethion	*								*	
Fenamiphos	P	*	*	*						
Fonofos	*	*					*			
Imidacloprid	P	P		*		*	*	*	P	
Lambda-cyhalothrin	P	*	P	*	P	P	P	P	P	P
Malathion	P	*	*					*	*	
Methamidophos	P	*	*	*	*	*	P	P	P	*
Methomyl	P	P	P	*	P	P	*	P	P	*
Methyl parathion	P						*		*	
Naled	*	*			*					
Oxamyl	*	*				*				
Oxydemeton-methyl	P	P			*		*		*	
Permethrin	P	P	*	*	P	P	P	P	P	P
Piperonyl butoxide	*	*								*
Potassium salts	*							*		
Pyrethrins	P	P					*			*
Rotenone	P	*			*	*	*			
Spinosad	P	P	*	*		P	P	P	P	
Tebufenozide	P	*							*	
Thiodicarb	P	P				*	*	*	*	*
Zeta-cypermethrin	P	*					*			

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Cabbage, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed										
	ALL	CA	FL	GA	MI	NJ	NY	NC	TX	WI	
Fungicides:											
Basic copper sulfate	*				*						
Benomyl	P			*	*	*		*			
Captan	*						*	*			
Chlorothalonil	P	P	P	P	*	P	P	P	P	*	
Copper hydroxide	P	P	*		P	*	*			*	
Copper oxychlo. sul.	*				*		*				
Copper resinate	*				*		*				
Copper sulfate	*		*				*				
Dinocap	*			*							
Fosetyl-al	*	*			*	*			*		
Iprodione	*	*									
Mancozeb	P		*	*	*	*	*	*	*		
Maneb	P	P	P	P	*	*	*	*	P		
Mefenoxam	*	*									
Metalaxyl	P	*	*	*	*	*	*		P		
PCNB	*	*			*		*				
Sulfur	*	*					*	*			
Other Chemicals:											
Cytokinins	*									*	
Dichloropropene	*		*	*				*			
Farnesol	*	*									
Metam-sodium	*	*	*		*						
Neem Oil, Hydrophob.	*			*							
Nerolidol	*	*									

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

Cabbage, Fresh: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

State:	Area Receiving and Total Applied							
	Planted Acreage	Herbicide	Insecticide 1/	Fungicide	Other Chemical			
	Acres	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs			
CA 2/	14,000	63 16.8	89 37.1					
FL 2/	7,600	74 8.7	99 15.8	90 39.5				
GA 2/	8,500	45 2.9	91 3.8	81 41.1				
MI	2,100	85 2.3	97 3.8	48 1.8				
NJ	2,100	47 5.0	99 3.9	44 2.7				
NY	12,600	91 11.9	98 27.6	21 12.6				
NC	9,100	63 7.1	97 11.1	26 7.1				
TX	9,000	83 11.8	99 13.2	70 16.0				
WI 2/	4,800	98 3.8	99 2.4					
Total:	69,800	72 70.3	96 118.7	43 124.1	2 89.3			

1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.
2/ Insufficient reports to publish data for one or more of the pesticide classes.

Cabbage, Fresh: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	10	1.0	2.87	3.04	20.1
DCPA	7	1.0	3.40	3.50	16.6
Glyphosate	1	1.1	0.79	0.89	0.8
Metolachlor	6	1.0	1.05	1.14	5.1
Napropamide	2	1.0	1.44	1.44	1.8
Oxyfluorfen	13	1.0	0.23	0.25	2.3
Sethoxydim	1	1.1	0.23	0.26	0.1
Trifluralin	42	1.0	0.75	0.76	22.1
Insecticides:					
Acephate	1	2.0	0.81	1.68	0.9
Azinphos-methyl	4	1.4	0.53	0.75	1.9
Bt (Bacillus thur.)2/	69	3.4			
Carbaryl	2	2.4	0.80	1.93	2.9
Chlorpyrifos	17	1.6	0.88	1.45	17.1
Cypermethrin	4	1.5	0.09	0.14	0.4
Diazinon	9	1.1	0.99	1.11	7.0
Dimethoate	24	2.2	0.49	1.09	18.4
Disulfoton	3	1.2	1.61	1.96	4.2
Endosulfan	10	1.6	0.67	1.09	7.8
Esfenvalerate	29	2.3	0.03	0.08	1.6
Fenamiphos	1	1.0	1.46	1.52	0.9
Imidacloprid	11	2.0	0.07	0.14	1.1
Lambda-cyhalothrin	37	2.3	0.03	0.07	1.7
Malathion	*	1.3	1.23	1.66	0.2
Methamidophos	10	1.2	0.69	0.86	5.9
Methomyl	24	2.6	0.51	1.37	23.1
Methyl parathion	1	1.0	0.39	0.39	0.3
Oxydemeton-methyl	10	1.8	0.52	0.94	6.4
Permethrin	28	2.2	0.17	0.38	7.4
Pyrethrins	1	1.0	0.007	0.007	**
Rotenone	1	1.0	0.006	0.007	**
Spinosad	16	1.7	0.05	0.09	1.0
Tebufenozide	3	2.5	0.12	0.31	0.7
Thiodicarb	13	1.1	0.73	0.81	7.1
Zeta-cypermethrin	2	1.1	0.05	0.05	0.1
Fungicides:					
Benomyl	1	1.0	0.41	0.42	0.3
Chlorothalonil	35	3.1	0.94	2.95	72.8
Copper hydroxide	3	3.7	0.51	1.90	3.5
Mancozeb	4	2.5	1.06	2.68	7.4
Maneb	10	5.0	1.03	5.17	35.1
Metalaxyl	5	1.6	0.12	0.20	0.7

* Area applied is less than 1 percent.

** Total applied is less than 50 pounds.

1/ Planted acres in 1998 for the 9 states surveyed were 69,800 acres.
States included are CA, FL, GA, MI, NJ, NY, NC, TX, and WI.

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

Cabbage, Fresh: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	23	1.1	2.27	2.48	8.0
DCPA	14	1.0	3.60	3.83	7.5
Oxyfluorfen	34	1.1	0.18	0.20	1.0
Insecticides:					
Bt (Bacillus thur.)2/	52	1.8			
Chlorpyrifos	50	1.6	0.96	1.55	10.8
Cypermethrin	17	1.4	0.09	0.13	0.3
Diazinon	9	1.0	0.48	0.49	0.6
Dimethoate	33	1.8	0.36	0.66	3.1
Disulfoton	9	1.3	1.61	2.20	2.7
Esfenvalerate	60	2.1	0.04	0.08	0.7
Imidacloprid	41	2.1	0.06	0.13	0.7
Methomyl	41	1.4	0.74	1.08	6.1
Oxydemeton-methyl	45	1.8	0.53	0.98	6.2
Permethrin	16	1.3	0.13	0.17	0.4
Pyrethrins	4	1.0	0.007	0.007	*
Spinosad	29	1.3	0.06	0.08	0.3
Thiodicarb	37	1.0	0.82	0.87	4.5
Fungicides:					
Chlorothalonil	12	1.2	1.18	1.42	2.3
Copper hydroxide	3	1.1	0.45	0.53	0.2
Maneb	3	1.0	1.06	1.14	0.4

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for California were 14,000 acres.

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

Cabbage, Fresh: Agricultural Chemical Applications,
Florida, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	: Number	: Pounds per Acre		: 1,000 lbs
Herbicides:					
Trifluralin	37	1.0	0.53	0.53	1.5
Insecticides:					
Bt (Bacillus thur.)2/	92	4.9			
Lambda-cyhalothrin	36	2.7	0.03	0.08	0.2
Methomyl	59	4.5	0.40	1.83	8.2
Fungicides:					
Chlorothalonil	94	4.9	0.80	3.99	28.4
Maneb	17	3.3	0.68	2.26	2.9

1/ Planted acres in 1998 for Florida were 7,600 acres.

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

Cabbage, Fresh: Agricultural Chemical Applications,
Georgia, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	: Number	: Pounds per Acre		: 1,000 lbs
Herbicides:					
Trifluralin	19	1.0	0.72	0.72	1.2
Insecticides:					
Bt (Bacillus thur.)2/	75	4.1			
Endosulfan	19	1.6	0.63	1.03	1.7
Esfenvalerate	27	2.8	0.03	0.08	0.2
Fungicides:					
Chlorothalonil	56	2.4	0.96	2.38	11.4
Maneb	49	6.3	1.08	6.88	28.5

1/ Planted acres in 1998 for Georgia were 8,500 acres.

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

Cabbage, Fresh: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Metolachlor	40	1.0	1.05	1.05	0.9
Trifluralin	59	1.0	0.61	0.62	0.8
Insecticides:					
Azinphos-methyl	17	1.0	0.26	0.26	0.1
Bt (Bacillus thur.)2/	12	2.5			
Carbaryl	17	2.8	0.64	1.85	0.6
Chlorpyrifos	20	1.6	0.89	1.50	0.6
Diazinon	3	1.2	0.52	0.66	*
Esfenvalerate	12	2.1	0.04	0.08	*
Lambda-cyhalothrin	34	3.3	0.02	0.08	0.1
Methomyl	11	2.7	0.48	1.31	0.3
Permethrin	25	3.6	0.11	0.41	0.2
Fungicides:					
Copper hydroxide	9	1.2	0.60	0.74	0.1

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Michigan were 2,100 acres.

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

Cabbage, Fresh: Agricultural Chemical Applications,
New Jersey, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
DCPA	29	1.0	6.06	6.06	3.7
Metolachlor	5	1.0	0.94	0.94	0.1
Insecticides:					
Bt (Bacillus thur.)2/	66	4.9			
Diazinon	12	1.2	0.61	0.76	0.2
Esfenvalerate	4	2.5	0.02	0.04	*
Lambda-cyhalothrin	51	2.9	0.03	0.07	0.1
Methomyl	52	4.3	0.49	2.16	2.3
Permethrin	25	4.2	0.18	0.75	0.4
Spinosad	32	1.7	0.08	0.14	0.1
Fungicides:					
Chlorothalonil	42	2.6	1.16	3.08	2.7

* Total Applied is less than 50 pounds.

1/ Planted acres in 1998 for New Jersey were 2,100 acres.

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

Cabbage, Fresh: Agricultural Chemical Applications,
New York, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Metolachlor	12	1.0	1.10	1.10	1.7
Napropamide	2	1.0	1.16	1.16	0.4
Oxyfluorfen	3	1.2	0.34	0.41	0.1
Trifluralin	89	1.0	0.83	0.83	9.3
Insecticides:					
Azinphos-methyl	16	1.4	0.57	0.82	1.7
Bt (Bacillus thur.)2/	60	2.0			
Carbaryl	2	2.0	1.10	2.27	0.6
Chlorpyrifos	22	1.0	0.98	1.02	2.8
Diazinon	2	2.3	0.68	1.57	0.3
Dimethoate	82	2.6	0.54	1.40	14.4
Endosulfan	9	1.3	0.77	1.01	1.2
Esfenvalerate	26	2.2	0.04	0.09	0.3
Lambda-cyhalothrin	90	2.2	0.03	0.07	0.8
Methamidophos	4	1.2	0.98	1.19	0.7
Permethrin	51	2.0	0.28	0.59	3.8
Spinosad	3	1.3	0.06	0.08	*
Fungicides:					
Chlorothalonil	18	2.5	1.51	3.80	8.5

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for New York were 12,600 acres.

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

Cabbage, Fresh: Agricultural Chemical Applications,
North Carolina, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Oxyfluorfen	35	1.0	0.29	0.30	1.0
Trifluralin	17	1.0	0.70	0.72	1.1
Insecticides:					
Acephate	1	2.4	0.35	0.86	0.1
Bt (Bacillus thur.)2/	77	4.6			
Carbaryl	8	2.2	0.83	1.90	1.3
Esfenvalerate	42	2.3	0.03	0.07	0.3
Lambda-cyhalothrin	25	3.1	0.02	0.07	0.2
Methamidophos	18	1.2	0.66	0.85	1.4
Methomyl	48	1.8	0.62	1.12	4.9
Permethrin	20	2.6	0.06	0.17	0.3
Spinosad	14	1.6	0.03	0.04	0.1
Fungicides:					
Chlorothalonil	23	2.9	1.00	2.90	6.2

1/ Planted acres in 1998 for North Carolina were 9,100 acres.

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

Cabbage, Fresh: Agricultural Chemical Applications,
Texas, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	: Number	: Pounds per Acre		: 1,000 lbs
Herbicides:					
Bensulide	18	1.0	2.83	3.00	4.8
DCPA	11	1.0	1.75	1.75	1.8
Trifluralin	63	1.0	0.79	0.80	4.6
Insecticides:					
Bt (Bacillus thur.)2/	94	3.8			
Diazinon	28	1.0	1.42	1.53	3.9
Disulfoton	10	1.0	1.63	1.63	1.4
Endosulfan	30	1.7	0.46	0.81	2.2
Esfenvalerate	20	3.0	0.03	0.10	0.2
Imidacloprid	15	1.3	0.16	0.22	0.3
Lambda-cyhalothrin	28	1.8	0.03	0.05	0.1
Methamidophos	22	1.0	0.61	0.66	1.3
Methomyl	5	2.6	0.39	1.03	0.5
Permethrin	39	3.3	0.12	0.40	1.4
Spinosad	14	1.9	0.03	0.06	0.1
Fungicides:					
Chlorothalonil	62	2.3	0.96	2.24	12.5
Maneb	9	2.5	1.11	2.88	2.3
Metalaxyl	30	1.6	0.12	0.20	0.5

1/ Planted acres in 1998 for Texas were 9,000 acres.

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

Cabbage, Fresh: Agricultural Chemical Applications,
Wisconsin, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	: Number	: Pounds per Acre		: 1,000 lbs
Herbicides:					
Trifluralin	97	1.0	0.75	0.75	3.5
Insecticides:					
Bt (Bacillus thur.)2/	66	1.0			
Lambda-cyhalothrin	97	2.0	0.02	0.05	0.2
Permethrin	68	1.2	0.15	0.18	0.6

1/ Planted acres in 1998 for Wisconsin were 4,800 acres.

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

Cabbage, Kraut: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
NY	3,000	100	394	85	309	100	577
WI	2,600	100	378	98	193	96	571
Total	5,600	100	772	91	502	98	1,148

Cabbage, Kraut: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per		Total Applied
				Application	Crop Year	
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
New York:	3,000					
Nitrogen		100	1.4	90	132	394
Phosphate		85	1.1	107	121	309
Potash		100	1.1	162	193	577
Wisconsin:	2,600					
Nitrogen		100	2.5	58	146	378
Phosphate		98	1.0	76	76	193
Potash		96	1.0	229	229	571
Total:	5,600					
Nitrogen		100	1.9	71	138	772
Phosphate		91	1.0	92	99	502
Potash		98	1.1	189	209	1,148

Cabbage, Kraut: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed		
	ALL	NY	WI
Herbicides:			
Clomazone	P		P
Glyphosate	*	*	
Metolachlor	P	*	*
Oxyfluorfen	*	*	
Trifluralin	P	P	P
Insecticides:			
Azinphos-methyl	*	*	
Bt (Bacillus thur.)	P	P	
Carbaryl	*	*	*
Chlorpyrifos	*	*	
Cypermethrin	*	*	
Dimethoate	P	*	*
Disulfoton	*	*	
Endosulfan	P	P	
Esfenvalerate	*	*	*
Ethyl parathion	*	*	*
Lambda-cyhalothrin	P	P	P
Methamidophos	*	*	
Methomyl	*	*	
Oxydemeton-methyl	P	P	
Permethrin	P	*	*
Spinosad	*	*	
Thiodicarb	*		*
Zeta-cypermethrin	P	P	
Fungicides:			
Chlorothalonil	P	P	
Copper hydroxide	*	*	
Copper oxychlo. sul.	*	*	
Mefenoxam	*	*	
Metalaxyl	*	*	
Sulfur	*	*	

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Cabbage, Kraut: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

		Area Receiving and Total Applied					
State:	Planted Acreage	Herbicide	Insecticide 1/	Fungicide	Other Chemical		
	Acres	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs		
NY	3,000	90	3.7	99	3.9	34	2.9
WI	2,600	100	6.0	100	0.8		
Total:	5,600	95	9.7	100	4.7	17	2.9

1/ Total applied excludes Bt's (*Bacillus thuringiensis*). Quantities are not available because amounts of active ingredient are not comparable between products.

Cabbage, Kraut: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Clomazone	39	1.0	0.15	0.15	0.4
Metolachlor	54	1.0	1.54	1.54	4.9
Trifluralin	86	1.0	0.83	0.83	4.2
Insecticides:					
Bt (<i>Bacillus thur.</i>)2/	14	1.0			
Dimethoate	36	1.3	0.43	0.59	1.3
Endosulfan	13	1.2	0.71	0.89	0.7
Lambda-cyhalothrin	80	2.4	0.02	0.06	0.3
Oxydemeton-methyl	7	1.7	0.48	0.83	0.3
Permethrin	21	1.6	0.10	0.17	0.2
Zeta-cypermethrin	11	2.6	0.03	0.09	0.1
Fungicides:					
Chlorothalonil	18	2.4	0.78	1.91	2.0

1/ Planted acres in 1998 for the 2 states surveyed were 5,600 acres. States included are NY and WI.

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

Cabbage, Kraut: Agricultural Chemical Applications,
New York, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	Pounds per Acre	:	1,000 lbs
Herbicides:	:		:		:		:		:	
Trifluralin	:	79	:	1.0	:	0.94	:	0.94	:	2.2
Insecticides:	:		:		:		:		:	
Bt (Bacillus thur.)2/	:	27	:	1.0	:		:		:	
Endosulfan	:	24	:	1.2	:	0.75	:	0.94	:	0.7
Lambda-cyhalothrin	:	82	:	2.4	:	0.03	:	0.06	:	0.2
Oxydemeton-methyl	:	13	:	1.7	:	0.51	:	0.88	:	0.3
Zeta-cypermethrin	:	21	:	2.6	:	0.04	:	0.09	:	0.1
Fungicides:	:		:		:		:		:	
Chlorothalonil	:	34	:	2.4	:	0.82	:	2.02	:	2.0

1/ Planted acres in 1998 for New York were 3,000 acres.

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

Cabbage, Kraut: Agricultural Chemical Applications,
Wisconsin, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	Pounds per Acre	:	1,000 lbs
Herbicides:	:		:		:		:		:	
Clomazone	:	83	:	1.0	:	0.16	:	0.16	:	0.4
Trifluralin	:	93	:	1.0	:	0.82	:	0.82	:	2.0
Insecticides:	:		:		:		:		:	
Lambda-cyhalothrin	:	77	:	2.5	:	0.02	:	0.05	:	0.1

1/ Planted acres in 1998 for Wisconsin were 2,600 acres.

Carrots, Fresh: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
AZ	2,500	100	740	100	770	89	54
CA	86,500	96	17,304	61	8,703	21	2,102
FL	6,800	100	11	100	24	100	110
MI	5,100	92	516	83	412	92	843
NY	500	87	51	87	33	87	71
TX	4,200	100	347	100	434	75	266
WA	3,100	98	566	97	271	97	161
Total	108,700	96	19,535	68	10,647	35	3,607

Carrots, Fresh: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	: Planted : : Acreage :	Area : : Applied :	Appli- : : cations :	Rate per : : Application :	Rate per : : Crop Year :	Total : : Applied :
	: Acres	Percent	Number	Pounds per Acre		1,000 Lbs
Arizona:	: 2,500					
Nitrogen	: :	100	5.6	53	296	740
Phosphate	: :	100	3.8	80	308	770
Potash	: :	89	2.0	12	24	54
California:	: 86,500					
Nitrogen	: :	96	3.7	56	209	17,304
Phosphate	: :	61	1.3	125	164	8,703
Potash	: :	21	1.8	62	116	2,102
Florida:	: 6,800					
Nitrogen	: :	100	1.3	1	2	11
Phosphate	: :	100	1.1	3	4	24
Potash	: :	100	1.3	12	16	110
Michigan:	: 5,100					
Nitrogen	: :	92	1.5	71	110	516
Phosphate	: :	83	1.0	96	98	412
Potash	: :	92	1.1	159	180	843
New York:	: 500					
Nitrogen	: :	87	2.7	42	118	51
Phosphate	: :	87	1.0	72	76	33
Potash	: :	87	1.9	85	163	71
Texas:	: 4,200					
Nitrogen	: :	100	1.9	41	83	347
Phosphate	: :	100	1.7	59	103	434
Potash	: :	75	1.9	42	84	266
Washington:	: 3,100					
Nitrogen	: :	98	1.3	138	187	566
Phosphate	: :	97	1.3	66	90	271
Potash	: :	97	1.3	39	53	161
Total:	: 108,700					
Nitrogen	: :	96	3.3	55	187	19,535
Phosphate	: :	68	1.3	103	143	10,647
Potash	: :	35	1.6	56	94	3,607

Carrots, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed							
	ALL	AZ	CA	FL	MI	NY	TX	WA
Herbicides:								
EPTC	*		*					
Fluazifop-P-butyl	P		P	*	P		*	*
Glyphosate	P		*				*	*
Linuron	P	*	P	*	P	P	*	*
Metribuzin	*				*		*	
Pronamide	*				*			
Quizalofop-ethyl	*				*			
Sethoxydim	P		*					*
Trifluralin	P	*	P		*	*	*	*
Insecticides:								
Azadirachtin	*		*					
Bifenthrin	*		*					
Bt (Bacillus thur.)	*		*					
Carbaryl	P		*		P	*		
Chlorpyrifos	*						*	
Cyfluthrin	*		*					
Diazinon	P		P	*	*			
Endosulfan	*		*				*	*
Esfenvalerate	P		P	*	P		*	
Ethyl parathion	*				*			
Malathion	P		P		P			
Methomyl	P	*	P	*				
Methyl parathion	*				*			*
Oxamyl	*				*		*	
Permethrin	*				*			
Petroleum distillate	*				*			
Fungicides:								
Basic copper sulfate	*		*					
Benomyl	*		*		*			
Chlorothalonil	P	*	P	*	P	*	*	*
Copper hydroxide	P		P		*			*
Iprodione	P		P	*	*			
Mefenoxam	P		*					*
Metalaxyl	P	*	P					*
Metiram	*				*			
Sulfur	P	*	P					*
Other Chemicals:								
Chloropicrin	*	*						
Dichloropropene	P	*	P					*
Metam-sodium	P		*					*

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Carrots, Fresh: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

Area Receiving and Total Applied								

State:	Planted							

Acres	Percent	Herbicide	Insecticide 1/	Fungicide	Other Chemical			

Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs

AZ 2/:	2,500							
CA :	86,500	90	129.2	38	28.1	63	460.8	25 3,500.9
FL 2/:	6,800							
MI :	5,100	94	7.0	48	9.1	63	10.9	
NY 2/:	500	83	0.5					
TX 2/:	4,200	97	4.9					
WA 2/:	3,100							

Total:	108,700	92	154.3	42	60.4	64	508.3	23 4,229.6

- 1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Carrots, Fresh: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied	

	Percent	Number	Pounds per Acre		1,000 lbs	

Herbicides:						
Fluazifop-P-butyl	15	1.5	0.15	0.23	3.8	
Glyphosate	1	1.1	0.60	0.68	0.8	
Linuron	90	1.6	0.58	0.94	92.0	
Sethoxydim	3	1.0	0.15	0.16	0.5	
Trifluralin	54	1.2	0.75	0.95	55.8	

Insecticides:						
Carbaryl	1	1.7	0.90	1.58	1.7	
Diazinon	17	1.3	1.61	2.16	40.2	
Esfenvalerate	14	1.3	0.04	0.05	0.8	
Malathion	3	1.8	1.27	2.39	8.6	
Methomyl	6	1.2	0.55	0.67	4.4	

Fungicides:						
Chlorothalonil	18	1.5	1.19	1.88	36.0	
Copper hydroxide	4	2.9	0.64	1.88	8.9	
Iprodione	16	1.7	0.86	1.52	26.5	
Mefenoxam	36	1.8	0.16	0.29	11.3	
Metalaxyl	4	2.4	0.21	0.52	2.3	
Sulfur	19	1.4	13.77	20.23	421.3	

Other Chemicals:						
Dichloropropene	13	1.2	88.37	110.50	1,611.2	
Metam-sodium	12	1.0	178.05	194.36	2,615.0	

- 1/ Planted acres in 1998 for the 7 states surveyed were 108,700 acres. States included are AZ, CA, FL, MI, NY, TX, and WA.

Carrots, Fresh: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Fluazifop-P-butyl	6	1.0	0.31	0.31	1.5
Linuron	89	1.5	0.60	0.96	73.8
Trifluralin	60	1.3	0.77	1.01	51.8
Insecticides:					
Diazinon	13	1.3	1.20	1.68	18.3
Esfenvalerate	14	1.2	0.04	0.05	0.6
Malathion	3	1.2	1.35	1.66	4.5
Methomyl	6	1.2	0.59	0.74	4.0
Fungicides:					
Chlorothalonil	8	1.2	1.18	1.44	10.5
Copper hydroxide	4	2.9	0.68	2.00	7.2
Iprodione	12	1.6	0.75	1.21	12.9
Metalaxyl	5	2.6	0.21	0.56	2.2
Sulfur	23	1.4	14.13	21.00	415.7
Other Chemicals:					
Dichloropropene	13	1.3	82.65	108.68	1,224.4

1/ Planted acres in 1998 for California were 86,500 acres.

Carrots, Fresh: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Fluazifop-P-butyl	67	1.4	0.14	0.20	0.7
Linuron	83	2.1	0.69	1.45	6.2
Insecticides:					
Carbaryl	17	1.9	0.78	1.52	1.3
Esfenvalerate	12	3.0	0.02	0.07	*
Malathion	17	3.9	1.18	4.69	4.1
Fungicides:					
Chlorothalonil	57	3.4	0.90	3.13	9.1

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Michigan were 5,100 acres.

Carrots, Fresh: Agricultural Chemical Applications,
New York, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Linuron	83	2.7	0.46	1.28	0.5

1/ Planted acres in 1998 for New York were 500 acres.

Carrots, Proc.: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	4,600	100	613	88	419	57	471
MI	1,700	81	99	81	87	83	206
NY	1,200	100	138	100	163	100	286
TX	2,900	100	255	24	120	11	9
WA	6,700	95	1,278	89	684	91	654
WI	4,200	86	283	85	261	100	798
Total	21,300	94	2,666	79	1,734	74	2,424

Carrots, Proc.: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	4,600					
Nitrogen		100	3.5	38	133	613
Phosphate		88	3.2	32	104	419
Potash		57	4.3	41	179	471
Michigan:	1,700					
Nitrogen		81	1.5	47	73	99
Phosphate		81	1.0	63	64	87
Potash		83	1.1	126	146	206
New York:	1,200					
Nitrogen		100	1.1	97	116	138
Phosphate		100	1.0	136	136	163
Potash		100	1.1	200	238	286
Texas:	2,900					
Nitrogen		100	1.2	71	88	255
Phosphate		24	1.2	142	175	120
Potash		11	1.4	20	30	9
Washington:	6,700					
Nitrogen		95	1.6	121	201	1,278
Phosphate		89	1.7	67	114	684
Potash		91	1.7	62	108	654
Wisconsin:	4,200					
Nitrogen		86	1.3	56	78	283
Phosphate		85	1.0	73	73	261
Potash		100	1.0	180	191	798
Total:	21,300					
Nitrogen		94	1.9	68	133	2,666
Phosphate		79	1.7	57	103	1,734
Potash		74	1.8	81	153	2,424

Carrots, Proc.: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed						
	ALL	CA	MI	NY	TX	WA	WI
Herbicides:							
Clethodim	*					*	
Fluazifop-P-butyl	P	*	P	*		*	P
Glyphosate	*					*	
Linuron	P	*	P	*	P	P	P
Metribuzin	P		*	*			P
Sethoxydim	P					*	*
Trifluralin	P	*		*	*	P	
Insecticides:							
Bifenthrin	*					*	
Carbaryl	*		*	*			*
Diazinon	*	*					*
Dimethoate	*		*				
Endosulfan	P	*		*		*	*
Esfenvalerate	P	*	P	*		*	P
Malathion	*	*	*				
Methomyl	*	*				*	
Methyl parathion	*					*	
Oxamyl	*			*		*	
Permethrin	*				*		
Tebufenozide	*				*		
Fungicides:							
Chlorothalonil	P	*	P	*		*	P
Copper hydroxide	P	*	*			*	*
Iprodione	*	*		*			
Mefenoxam	*	*				*	
Metalaxyl	*					*	
Sulfur	*	*				*	
Other Chemicals:							
Dichloropropene	*					*	
Gibberellic acid	*				*		
Metam-sodium	*	*				*	

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Carrots, Proc.: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

		Area Receiving and Total Applied							
State:	Planted	Herbicide		Insecticide		Fungicide		Other Chemical	
: Acreage :		: Percent 1,000 Lbs		: Percent 1,000 Lbs		: Percent 1,000 Lbs		: Percent 1,000 Lbs	
CA 1/:	4,600	58	4.1	21	1.2				
MI :	1,700	77	2.4	60	1.9	60	5.1		
NY 1/:	1,200								
TX 1/:	2,900								
WA 1/:	6,700	100	9.6	30	1.4	58	6.6		
WI :	4,200	100	7.2	100	2.1	100	25.3		
Total:	21,300	88	26.7	45	9.4	60	49.3	19	666.6

1/ Insufficient reports to publish data for one or more of the pesticide classes.

Carrots, Proc.: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
:	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Fluazifop-P-butyl	24	1.1	0.18	0.20	1.0
Linuron	86	1.9	0.59	1.13	20.6
Metribuzin	17	1.3	0.16	0.21	0.8
Sethoxydim	11	1.6	0.28	0.46	1.1
Trifluralin	21	1.1	0.64	0.72	3.3
Insecticides:					
Endosulfan	9	1.0	0.79	0.84	1.7
Esfenvalerate	31	3.6	0.03	0.12	0.8
Fungicides:					
Chlorothalonil	43	3.2	1.19	3.92	35.5
Copper hydroxide	9	1.9	0.68	1.34	2.6

1/ Planted acres in 1998 for the 6 states surveyed were 21,300 acres. States included are CA, MI, NY, TX, WA, and WI.

Carrots, Proc.: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Fluazifop-P-butyl	58	1.3	0.18	0.24	0.2
Linuron	93	1.9	0.70	1.37	2.2
Insecticides:					
Esfenvalerate	46	3.5	0.02	0.09	0.1
Fungicides:					
Chlorothalonil	65	3.3	1.23	4.12	4.6

1/ Planted acres in 1998 for Michigan were 1,700 acres.

Carrots, Proc.: Agricultural Chemical Applications,
Texas, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Linuron	89	1.8	0.26	0.49	1.3

1/ Planted acres in 1998 for Texas were 2,900 acres.

Carrots, Proc.: Agricultural Chemical Applications,
Washington, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Linuron	100	1.4	0.76	1.12	7.5
Trifluralin	40	1.1	0.50	0.56	1.5

1/ Planted acres in 1998 for Washington were 6,700 acres.

Carrots, Proc.: Agricultural Chemical Applications,
Wisconsin, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Fluazifop-P-butyl	62	1.1	0.17	0.19	0.5
Linuron	99	2.9	0.46	1.33	5.5
Metribuzin	70	1.2	0.14	0.18	0.5
Insecticides:					
Esfenvalerate	91	4.8	0.03	0.16	0.6
Fungicides:					
Chlorothalonil	100	4.8	1.23	6.00	25.2

1/ Planted acres in 1998 for Wisconsin were 4,200 acres.

Cauliflower: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
AZ	3,900	100	1,278	95	1,849	33	15
CA	40,000	100	9,148	79	2,195	97	3,022
MI	500	98	50	87	40	96	51
NY	1,400	99	207	99	132	99	155
TX	1/	100		100		80	
Total	1/	100		82		92	

1/ Planted acreage and total applied are not published to avoid disclosure.

Cauliflower: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
Arizona:	3,900					
Nitrogen		100	4.8	67	328	1,278
Phosphate		95	1.3	366	500	1,849
Potash		33	1.0	12	12	15
California:	40,000					
Nitrogen		100	3.1	74	230	9,148
Phosphate		79	1.7	40	69	2,195
Potash		97	1.9	40	78	3,022
Michigan:	500					
Nitrogen		98	1.9	52	102	50
Phosphate		87	1.2	72	93	40
Potash		96	1.2	86	107	51
New York:	1,400					
Nitrogen		99	1.7	86	149	207
Phosphate		99	1.0	92	96	132
Potash		99	1.0	107	112	155
Texas:	1/					
Nitrogen		100	1.9	53	105	
Phosphate		100	1.0	47	47	
Potash		80	1.0	45	45	
Total:	1/					
Nitrogen		100	3.2	73	232	
Phosphate		82	1.6	68	112	
Potash		92	1.8	41	77	

1/ Planted acreage and total applied are not published to avoid disclosure.

Cauliflower: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed					
	ALL	AZ	CA	MI	NY	TX
Herbicides:						
Bensulide	*	*	*			
DCPA	P	*	P			
Glyphosate	*		*	*	*	
Metolachlor	*				*	*
Napropamide	*			*	*	
Oxyfluorfen	P		P			
Paraquat	*		*			
Sethoxydim	*	*	*			
Trifluralin	P	*	*	P	P	*
Insecticides:						
Acephate	P	*	P		*	
Azadirachtin	*		*			
Azinphos-methyl	P		P			
Bt (Bacillus thur.)	P	P	P	*	P	*
Carbaryl	P			*	*	
Chlorpyrifos	P	*	P	*		
Cryolite	*		*			
Cypermethrin	P	*	*			
Diazinon	P	*	P	*		
Dicofol	*			*		
Dimethoate	P	*	P		*	
Disulfoton	P		*	*		
Endosulfan	P	*	*	*	*	
Esfenvalerate	P	P	P	*		*
Ethyl parathion	*	*				
Fonofos	P		P			
Imidacloprid	P	*	*			
Lambda-cyhalothrin	P	*	P	*	P	*
Malathion	*		*			
Methamidophos	*	*	*			
Methomyl	P	*	P	*		
Methyl parathion	*				*	
Naled	P		P			
Neem oil	*		*			
Oxamyl	*		*			
Oxydemeton-methyl	P		P			
Permethrin	P	*	P	*	P	
Piperonyl butoxide	*		*			
Potassium salts	*		*			
Pyrethrins	P	*	*			
Rotenone	*		*			
Soybean oil	*		*			
Spinosad	P	*	P		*	
Tebufenozide	P	*	*			
Thiodicarb	P	*	P	*		
Zeta-cypermethrin	*		*			

-- continued

Cauliflower: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed					
	ALL	AZ	CA	MI	NY	TX
Fungicides:						
Benomyl	P		P			
Chlorothalonil	P	*	P	*	P	
Copper hydroxide	P		P	*	*	
Copper oxide	*	*				
Copper oxychlor. sul.	*			*		
Copper sulfate	*					*
Fosetyl-al	*	*	*	*		
Iprodione	P	*	*			
Mancozeb	*					*
Maneb	P	P	P	*	*	
Mefenoxam	P	P	P			
Metalaxyl	P		*	*		
PCNB	*			*		
Sulfur	*			*	*	
Other Chemicals:						
Chloropicrin	*		*			
Garlic oil	*		*			
Metam-sodium	*		*	*		
Methyl bromide	*		*			

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

Cauliflower: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

State:	Area Receiving and Total Applied								
	Planted Acreage	Herbicide		Insecticide 1/		Fungicide		Other Chemical	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
AZ 2/:	3,900			96	5.0	60	5.3		
CA :	40,000	56	31.9	96	104.6	16	5.7		
MI 2/:	500	13	0.1			20	0.4		
NY :	1,400	56	0.9	82	0.8	61	7.0		
TX :	3/								
Total:	3/	56		95		21		1	

- 1/ Total applied excludes Bt's (*Bacillus thuringiensis*). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.
- 3/ Planted acreage and total applied are not published to avoid disclosure.

Cauliflower: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
DCPA	22	1.1	2.37	2.76	27.9
Oxyfluorfen	34	1.0	0.13	0.13	2.2
Trifluralin	9	1.4	0.57	0.80	3.4
Insecticides:					
Acephate	9	1.0	0.90	0.95	3.8
Azinphos-methyl	3	1.2	0.73	0.93	1.5
Bt (Bacillus thur.)2/	23	1.6			
Carbaryl	*	2.2	0.96	2.16	0.2
Chlorpyrifos	61	1.2	0.88	1.09	31.1
Cypermethrin	15	1.2	0.09	0.12	0.8
Diazinon	13	1.0	0.64	0.67	3.9
Dimethoate	40	1.1	0.39	0.46	8.5
Disulfoton	4	1.4	0.87	1.25	2.6
Endosulfan	1	1.2	0.56	0.69	0.5
Esfenvalerate	41	1.4	0.04	0.05	1.0
Fonofos	1	1.1	1.36	1.59	1.1
Imidacloprid	53	1.6	0.08	0.13	3.3
Lambda-cyhalothrin	3	1.1	0.03	0.03	**
Methomyl	10	1.9	0.67	1.32	6.3
Naled	15	1.1	1.12	1.26	8.6
Oxydemeton-methyl	56	1.2	0.42	0.51	13.2
Permethrin	38	1.2	0.09	0.11	2.0
Pyrethrins	6	2.0	0.007	0.010	**
Spinosad	40	1.1	0.08	0.08	1.6
Tebufenozide	4	1.3	0.10	0.14	0.2
Thiodicarb	8	1.4	0.61	0.87	3.2
Fungicides:					
Benomyl	*	1.3	0.69	0.90	0.1
Chlorothalonil	9	1.5	1.51	2.39	9.9
Copper hydroxide	3	1.0	0.49	0.53	0.8
Iprodione	1	1.1	0.90	1.05	0.3
Maneb	6	1.4	1.18	1.68	4.5
Mefenoxam	4	1.0	0.11	0.12	0.2
Metalaxyl	2	1.1	0.12	0.14	0.1

* Area applied is less than 1 percent.

** Total applied is less than 50 pounds.

1/ Planted acres in 1998 for the 5 states surveyed are not published to avoid disclosure. States included are AZ, CA, MI, NY, and TX.

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

Cauliflower: Agricultural Chemical Applications,
Arizona, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides:					
Bt (Bacillus thur.)2/	43	1.0			
Esfenvalerate	66	1.7	0.05	0.08	0.2
Fungicides:					
Maneb	45	1.5	1.14	1.78	3.1
Mefenoxam	22	1.0	0.11	0.12	0.1

1/ Planted acres in 1998 for Arizona were 3,900 acres.

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

Cauliflower: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
DCPA	24	1.1	2.30	2.70	26.3
Oxyfluorfen	40	1.0	0.13	0.13	2.2
Insecticides:					
Acephate	8	1.0	0.89	0.89	2.7
Azinphos-methyl	4	1.2	0.73	0.93	1.5
Bt (Bacillus thur.)2/	21	1.2			
Chlorpyrifos	66	1.2	0.89	1.10	29.2
Diazinon	14	1.0	0.65	0.67	3.8
Dimethoate	46	1.1	0.40	0.46	8.4
Esfenvalerate	39	1.1	0.04	0.04	0.7
Fonofos	2	1.1	1.36	1.59	1.1
Lambda-cyhalothrin	2	1.0	0.03	0.03	*
Methomyl	11	2.0	0.66	1.36	5.9
Naled	17	1.1	1.12	1.26	8.6
Oxydemeton-methyl	65	1.2	0.42	0.51	13.2
Permethrin	40	1.0	0.09	0.09	1.5
Spinosad	41	1.0	0.07	0.08	1.3
Thiodicarb	9	1.4	0.61	0.87	3.1
Fungicides:					
Benomyl	**	1.3	0.69	0.90	0.1
Chlorothalonil	8	1.0	1.08	1.10	3.5
Copper hydroxide	4	1.0	0.49	0.53	0.8
Maneb	1	1.3	1.11	1.47	0.7
Mefenoxam	3	1.0	0.12	0.13	0.1

* Total applied is less than 50 pounds.

** Area applied is less than 1 percent.

1/ Planted acres in 1998 for California were 40,000 acres.

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

Cauliflower: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent		Number		Pounds per Acre		1,000 lbs		
Herbicides:	:									
Trifluralin	:	13		1.1		0.80		0.89		0.1

1/ Planted acres in 1998 for Michigan were 500 acres.

Cauliflower: Agricultural Chemical Applications,
New York, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent		Number		Pounds per Acre		1,000 lbs		
Herbicides:	:									
Trifluralin	:	55		1.1		0.77		0.85		0.7
Insecticides:	:									
Bt (Bacillus thur.)2/	:	18		3.4						
Lambda-cyhalothrin	:	16		1.6		0.03		0.04		*
Permethrin	:	55		5.1		0.08		0.44		0.3
Fungicides:	:									
Chlorothalonil	:	59		3.6		2.01		7.25		6.0

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for New York were 1,400 acres.

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

Celery: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	24,500	99	7,024	95	4,422	98	4,528
MI	2,300	100	407	94	241	100	862
TX	500	100	169	100	49	100	56
Total	27,300	99	7,600	95	4,712	98	5,446

Celery: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	24,500					
Nitrogen		99	3.6	78	289	7,024
Phosphate		95	2.0	94	190	4,422
Potash		98	1.8	99	188	4,528
Michigan:	2,300					
Nitrogen		100	2.9	59	177	407
Phosphate		94	1.4	77	112	241
Potash		100	2.0	180	375	862
Texas:	500					
Nitrogen		100	14.6	23	338	169
Phosphate		100	3.6	27	98	49
Potash		100	5.2	22	113	56
Total:	27,300					
Nitrogen		99	3.8	73	280	7,600
Phosphate		95	1.9	91	181	4,712
Potash		98	1.9	103	203	5,446

Celery: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed			
	ALL	CA	MI	TX
Herbicides:				
Bensulide	*			*
Bromacil	*	*		
DCPA	*	*		
DSMA	*	*		
Diuron	*	*		
Glyphosate	P	*		*
Linuron	P	P	P	
Metolachlor	P		P	
Oxyfluorfen	*	*		*
Prometryn	P	P	*	*
Pronamide	*	*		
Sethoxydim	P	P	P	
Trifluralin	*			*
Insecticides:				
Abamectin	P	*	*	
Acephate	P	P	P	
Azadirachtin	P	P		
Azinphos-methyl	P	*	*	
Bt (Bacillus thur.)	P	P	*	*
Carbaryl	P	*	*	
Cyromazine	P	*		*
Diazinon	*	*	*	*
Dimethoate	*	*		
Endosulfan	P	*	P	*
Esfenvalerate	*	*		
Ethyl parathion	*	*		
Imidacloprid	*	*		
Malathion	P	*	*	
Methamidophos	*	*		
Methomyl	P	P	*	*
Naled	*		*	
Oxamyl	P	P	*	*
Oxydemeton-methyl	*	*		
Permethrin	P	P	P	*
Petroleum distillate	*	*		
Piperonyl butoxide	P	*	*	
Pyrethrins	P	*	*	
Rotenone	P	P		
Silicon dioxide	*		*	
Soybean oil	*	*		
Spinosad	P	P		
Tebufenozide	P	*		*
Thiodicarb	P	P		

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Celery: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed			
	ALL	CA	MI	TX
Fungicides:				
Anilazine	*	*		
Benomyl	P	P	*	*
Chlorothalonil	P	P	*	*
Copper ammonium	P	*	*	
Copper hydroxide	P	P	*	*
Copper oxychlo. sul.	*	*		
Copper resinate	*	*		
Dicloran	P	P		
Iprodione	*	*		
Mancozeb	*			*
Maneb	P	*		*
Mefenoxam	*			*
Metalaxyl	*			*
Propiconazole	P	P	*	*
Sulfur	*		*	
Thiophanate-methyl	*	*		
Other Chemicals:				
Ethephon	*	*		
Garlic oil	*	*		
Metam-sodium	*	*		

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

Celery: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

State:	Area Receiving and Total Applied								
	Planted Acreage	Herbicide	Insecticide 1/	Fungicide	Other Chemical				
	Acres	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs				
CA	24,500	83	38.6	97	147.9	97	354.8	2	46.8
MI 2/	2,300								
TX 2/	500								
Total:	27,300	85	44.9	97	155.6	98	371.2	2	46.8

- 1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Celery: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Glyphosate	2	1.0	0.80	0.86	0.5
Linuron	39	1.5	0.57	0.89	9.4
Metolachlor	2	1.0	2.09	2.10	1.0
Prometryn	80	1.2	1.19	1.52	33.2
Sethoxydim	3	1.2	0.19	0.24	0.2
Insecticides:					
Abamectin	55	1.7	0.008	0.010	0.2
Acephate	70	2.6	0.88	2.37	45.1
Azadirachtin	6	1.7	0.005	0.009	*
Azinphos-methyl	4	1.9	0.47	0.90	1.1
Bt (Bacillus thur.)2/	50	1.9			
Carbaryl	2	1.9	1.53	2.92	1.5
Cyromazine	23	1.6	0.10	0.16	1.0
Endosulfan	3	1.3	0.60	0.79	0.6
Malathion	5	1.3	1.01	1.33	2.0
Methomyl	65	2.3	0.78	1.82	32.0
Oxamyl	82	2.5	0.67	1.68	37.8
Permethrin	90	3.4	0.15	0.50	12.4
Piperonyl butoxide	2	1.1	0.26	0.29	0.2
Pyrethrins	10	1.2	0.009	0.010	*
Rotenone	9	1.2	0.005	0.007	*
Spinosad	28	2.1	0.08	0.18	1.4
Tebufenozide	15	1.2	0.11	0.14	0.6
Thiodicarb	56	2.0	0.59	1.23	18.8
Fungicides:					
Benomyl	73	2.9	0.22	0.67	13.3
Chlorothalonil	93	5.2	1.79	9.34	235.9
Copper ammonium	6	1.9	0.39	0.74	1.2
Copper hydroxide	45	2.3	0.51	1.18	14.3
Dicloran	62	2.3	2.42	5.77	98.3
Maneb	1	1.0	1.23	1.23	0.2
Propiconazole	86	2.3	0.10	0.24	5.6

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for the 3 states surveyed were 27,300 acres.
States included are CA, MI, and TX.

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

Celery: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Appl- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Linuron	38	1.5	0.57	0.90	8.5
Prometryn	79	1.2	1.21	1.52	29.4
Sethoxydim	1	1.0	0.21	0.22	0.1
Insecticides:					
Acephate	73	2.7	0.89	2.42	43.6
Azadirachtin	7	1.7	0.005	0.009	*
Bt (Bacillus thur.)2/	53	1.5			
Methomyl	66	2.3	0.80	1.87	30.0
Oxamyl	89	2.5	0.67	1.71	37.2
Permethrin	92	3.4	0.15	0.51	11.5
Rotenone	10	1.2	0.005	0.007	0.0
Spinosad	31	2.1	0.08	0.18	1.4
Thiodicarb	63	2.0	0.59	1.23	18.8
Fungicides:					
Benomyl	78	3.0	0.22	0.68	13.0
Chlorothalonil	92	5.2	1.89	9.91	223.9
Copper hydroxide	42	1.8	0.54	1.03	10.4
Dicloran	69	2.3	2.42	5.77	98.3
Propiconazole	90	2.4	0.10	0.24	5.4

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for California were 24,500 acres.

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

Celery: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	Area Applied	Appl- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Linuron	51	1.4	0.56	0.82	1.0
Metolachlor	22	1.0	2.09	2.10	1.0
Sethoxydim	22	1.3	0.18	0.25	0.1
Insecticides:					
Acephate	44	1.7	0.80	1.41	1.4
Endosulfan	20	1.0	0.58	0.62	0.3
Permethrin	75	2.8	0.13	0.36	0.6

1/ Planted acres in 1998 for Michigan were 2,300 acres.

Corn, Sweet, Fresh: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	28,800	98	7,736	85	2,617	38	1,946
FL	41,600	100	4,037	98	3,284	98	6,614
GA	19,000	99	3,628	98	1,230	98	2,884
IL	7,000	98	811	84	352	80	559
MI	13,000	96	1,316	89	670	93	1,107
NJ	11,300	95	2,409	94	1,450	94	1,455
NY	30,700	100	3,472	98	2,074	98	2,311
NC	7,100	96	760	93	398	94	719
OR	3,780	98	566	97	368	96	254
TX	5,900	41	332	38	114	34	83
WA	2,300	96	271	84	157	60	112
WI	8,700	98	834	82	347	96	844
Total	179,180	97	26,172	91	13,061	84	18,888

Corn, Sweet, Fresh: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	28,800					
Nitrogen		98	3.2	85	273	7,736
Phosphate		85	2.4	44	107	2,617
Potash		38	4.4	40	178	1,946
Florida:	41,600					
Nitrogen		100	2.0	48	97	4,037
Phosphate		98	1.2	63	81	3,284
Potash		98	1.8	88	163	6,614
Georgia:	19,000					
Nitrogen		99	5.6	34	193	3,628
Phosphate		98	1.5	43	66	1,230
Potash		98	3.4	44	155	2,884
Illinois:	7,000					
Nitrogen		98	1.6	70	118	811
Phosphate		84	1.0	56	60	352
Potash		80	1.1	87	100	559
Michigan:	13,000					
Nitrogen		96	1.8	59	106	1,316
Phosphate		89	1.0	56	58	670
Potash		93	1.2	73	91	1,107

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Corn, Sweet, Fresh: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998 (continued)

Primary Nutrient	: Planted : : Acreage :	Area : : Applied :	Appli- : : cations :	Rate per : : Application :	Rate per : : Crop Year :	Total : : Applied
	: Acres	Percent	Number	Pounds per Acre		1,000 Lbs
New Jersey:	: 11,300					
Nitrogen	:	95	2.7	82	224	2,409
Phosphate	:	94	2.1	63	136	1,450
Potash	:	94	2.1	64	137	1,455
New York:	: 30,700					
Nitrogen	:	100	1.8	60	113	3,472
Phosphate	:	98	1.0	64	69	2,074
Potash	:	98	1.0	70	77	2,311
North Carolina:	: 7,100					
Nitrogen	:	96	2.0	56	112	760
Phosphate	:	93	1.0	56	60	398
Potash	:	94	1.0	104	108	719
Oregon:	: 3,780					
Nitrogen	:	98	2.4	63	153	566
Phosphate	:	97	1.1	85	101	368
Potash	:	96	1.2	58	70	254
Texas:	: 5,900					
Nitrogen	:	41	1.5	89	137	332
Phosphate	:	38	1.0	46	51	114
Potash	:	34	1.1	37	41	83
Washington:	: 2,300					
Nitrogen	:	96	2.2	54	122	271
Phosphate	:	84	1.1	71	82	157
Potash	:	60	1.2	68	82	112
Wisconsin:	: 8,700					
Nitrogen	:	98	1.7	55	98	834
Phosphate	:	82	1.2	39	48	347
Potash	:	96	1.2	78	101	844
Total:	: 179,180					
Nitrogen	:	97	2.5	58	151	26,172
Phosphate	:	91	1.4	55	80	13,061
Potash	:	84	1.9	65	125	18,888

Corn, Sweet, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed						
	ALL	CA	FL	GA	IL	MI	NJ
Herbicides	:	:	:	:	:	:	:
2,4-D	:	P	:	P	*	P	*
Acetochlor	:	*	:	:	:	*	:
Alachlor	:	P	:	*	*	P	P
Atrazine	:	P	:	*	P	P	P
Bensulide	:	*	:	:	:	:	:
Bentazon	:	P	:	:	P	P	*
Bromoxynil	:	*	:	:	:	*	:
Butylate	:	P	:	P	*	:	*
Clomazone	:	*	:	:	:	:	*
Clopyralid	:	*	:	:	*	:	:
Cyanazine	:	P	:	:	P	P	P
Dicamba	:	P	:	*	*	*	:
Dicamba, Pot. salt	:	*	:	:	:	*	:
Diclofop-methyl	:	*	:	:	:	:	*
Dimethenamid	:	P	:	:	*	*	:
EPTC	:	P	:	*	*	*	*
Ethalfluralin	:	*	:	*	*	*	:
Flumetsulam	:	*	:	:	*	:	:
Glyphosate	:	P	:	*	*	*	P
Linuron	:	*	:	*	:	:	*
Metolachlor	:	P	:	*	P	P	P
Metribuzin	:	*	:	:	:	:	:
Nicosulfuron	:	*	:	:	:	:	:
Oxyfluorfen	:	*	:	*	:	:	:
Paraquat	:	P	:	*	*	*	*
Pendimethalin	:	P	:	P	*	P	:
Pronamide	:	*	:	*	:	:	:
Propachlor	:	*	:	:	*	:	:
Quizalofop-ethyl	:	*	:	:	:	*	:
Sethoxydim	:	*	:	:	:	:	:
Simazine	:	P	:	*	*	*	:
Sulfosate	:	*	:	*	:	:	:
Trifluralin	:	P	:	*	*	*	:

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Corn, Sweet, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed						
	ALL	CA	FL	GA	IL	MI	NJ
Insecticides:							
Acephate	*	*					
Azinphos-methyl	*					*	
Bt (Bacillus thur.)	P	P	*		*		*
Carbaryl	P	P	P	P	P	P	P
Carbofuran	P		*			*	
Chlorpyrifos	P	P	P	*	P	P	*
Cyfluthrin	P	P			*	*	*
Cypermethrin	*	*				*	
Diazinon	P	P	*			*	*
Disulfoton	*	*					
Endosulfan	P	*	*			*	*
Esfenvalerate	P	P	P	*	*	P	P
Ethoprop	*		*				
Fonofos	*					*	
Imidacloprid	*	*					
Lambda-cyhalothrin	P		P		P	P	P
Malathion	P		*	*	*	*	
Methomyl	P	P	P	P		P	P
Methyl parathion	P	*	*	*		P	
Oxydemeton-methyl	P	*					
Permethrin	P	P	P	P	P	P	*
Petroleum distillate	P						
Phorate	P		*		*		
Piperonyl butoxide	*						
Propargite	P	P					
Pyrethrins	*						
Rotenone	*						*
Spinosad	*	*					
Tebupirimphos	*				*	*	
Tefluthrin	P		*		*		
Terbufos	P		*	*	*	*	*
Thiodicarb	P	*	P			P	P
Tralomethrin	*		*				
Fungicides:							
Chlorothalonil	P		*			*	*
Copper hydroxide	*					*	
Mancozeb	P		P		*		
Maneb	*	*	*				*
Metalaxyl	*			*			
Propiconazole	P		P	*	P		*
Sulfur	*	*	*		*		
Other Chemicals:							
Chloropicrin	*			*			
Dichloropropene	*			*			

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Corn, Sweet, Fresh: Active Ingredient Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed					
	NY	NC	OR	TX	WA	WI
Herbicides:						
2,4-D	*	*	*		*	*
Acetochlor						*
Alachlor	P	P	P	*	P	P
Atrazine	P	P	P	*	P	P
Bensulide					*	
Bentazon	P		*		P	P
Bromoxynil					*	*
Butylate	*	*				
Clomazone	*					
Clopyralid	*					
Cyanazine	P	*	*		*	P
Dicamba				*	*	*
Dicamba, Pot. salt						*
Diclofop-methyl						
Dimethenamid	*		*		*	P
EPTC	*		P		*	*
Ethalfluralin		*				
Flumetsulam	*					
Glyphosate	P		*	*	P	P
Linuron						
Metolachlor	P	P	P	*	P	P
Metribuzin	*					
Nicosulfuron			*		*	*
Oxyfluorfen					*	*
Paraquat		*	*			
Pendimethalin	P		*	*	*	P
Pronamide						
Propachlor						
Quizalofop-ethyl						
Sethoxydim	*				*	
Simazine	*	P				*
Sulfosate						
Trifluralin				*	*	*

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Corn, Sweet, Fresh: Active Ingredient Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed					
	NY	NC	OR	TX	WA	WI

Insecticides:						
Acephate		*				
Azinphos-methyl						
Bt (Bacillus thur.)	*	*			*	*
Carbaryl	P	P	*	*	*	P
Carbofuran	P					
Chlorpyrifos		*	P		*	P
Cyfluthrin		*				
Cypermethrin						
Diazinon	*	*	*			*
Disulfoton						
Endosulfan	*	*		*		*
Esfenvalerate	P	P	P	*	P	P
Ethoprop			*			
Fonofos	*					
Imidacloprid					*	
Lambda-cyhalothrin	P	*	*		*	P
Malathion		*		*		
Methomyl	P	P	*	*	P	
Methyl parathion	P					*
Oxydemeton-methyl	*				*	
Permethrin	P	P	*	*		P
Petroleum distillate	*		*			
Phorate						
Piperonyl butoxide						*
Propargite						
Pyrethrins					*	*
Rotenone					*	
Spinosad						
Tebupirimphos						
Tefluthrin						
Terbufos		P				*
Thiodicarb	P	P				
Tralomethrin						

Fungicides:						
Chlorothalonil	*	*		*		
Copper hydroxide	*					
Mancozeb	*					*
Maneb	*					
Metalaxyl						
Propiconazole	*					*
Sulfur						

Other Chemicals:						
Chloropicrin						
Dichloropropene						

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Corn, Sweet, Fresh: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

		Area Receiving and Total Applied							
State: Planted		-----							
: Acreage		: Herbicide		: Insecticide 1/:		: Fungicide		: Other Chemical	
: Acres		Percent 1,000		Percent 1,000		Percent 1,000		Percent 1,000	
: Acres		Lbs		Lbs		Lbs		Lbs	
CA 2/:	28,800	65	51.6	95	153.0				
FL :	41,600	79	73.3	98	181.1	76	105.3		
GA 2/:	19,000	84	84.2	90	75.3				
IL :	7,000	88	14.4	89	4.8	5	0.3		
MI 2/:	13,000	78	31.8	76	14.7				
NJ :	11,300	89	51.5	91	10.8	29	4.5		
NY :	30,700	95	102.2	85	21.1	3	0.4		
NC 2/:	7,100	81	13.2	75	12.1				
OR :	3,780	96	10.4	38	4.5				
TX 2/:	5,900	60	3.4	32	0.5				
WA :	2,300	88	9.3	65	1.0				
WI 2/:	8,700	87	17.6	77	3.3				
Total:		179,180	81	462.9	86	482.2	21	113.3	

- 1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Corn, Sweet, Fresh: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
2,4-D	1	1.0	0.45	0.46	0.9
Alachlor	15	1.2	2.14	2.58	69.5
Atrazine	57	1.0	1.04	1.11	113.2
Bentazon	5	1.0	0.58	0.59	5.4
Butylate	10	1.0	4.23	4.45	78.3
Cyanazine	6	1.6	1.90	3.19	35.0
Dicamba	*	1.0	0.32	0.34	0.1
Dimethenamid	2	1.0	1.11	1.11	3.9
EPTC	5	1.0	2.28	2.33	21.5
Glyphosate	7	1.1	1.00	1.13	13.3
Metolachlor	31	1.0	1.74	1.85	104.3
Paraquat	1	1.0	0.57	0.59	1.2
Pendimethalin	4	1.4	1.02	1.43	9.8
Simazine	*	1.0	1.31	1.32	0.7
Trifluralin	*	1.0	0.78	0.78	0.4
Insecticides:					
Bt (Bacillus thur.)2/	5	1.3			
Carbaryl	2	2.8	1.08	3.07	11.5
Carbofuran	1	1.3	0.73	1.02	2.4
Chlorpyrifos	32	1.9	0.76	1.49	86.0
Cyfluthrin	12	4.0	0.03	0.14	2.8
Diazinon	3	1.3	0.77	1.05	5.7
Endosulfan	1	1.4	0.71	1.05	1.7
Esfenvalerate	28	3.0	0.04	0.12	6.0
Lambda-cyhalothrin	35	2.9	0.02	0.06	3.8
Malathion	*	1.4	0.96	1.37	0.6
Methomyl	48	6.6	0.34	2.27	193.9
Methyl parathion	15	1.2	0.61	0.78	21.6
Oxydemeton-methyl	5	1.0	0.39	0.39	3.6
Permethrin	12	2.2	0.14	0.30	6.2
Petroleum distillate	1	1.0	1.79	1.79	3.0
Phorate	12	1.8	0.52	0.95	20.9
Propargite	6	1.2	1.56	1.98	23.1
Tefluthrin	5	1.2	0.09	0.11	1.0
Terbufos	7	1.0	1.08	1.11	14.0
Thiodicarb	23	2.1	0.51	1.07	45.0
Fungicides:					
Chlorothalonil	*	2.6	1.00	2.69	0.7
Mancozeb	15	3.1	0.94	2.98	78.5
Propiconazole	12	1.8	0.15	0.29	5.9

* Area applied is less than 1 percent.

1/ Planted acres in 1998 for the 12 states surveyed were 179,180 acres.
States included are CA, FL, GA, IL, MI, NJ, NY, NC, OR, TX, WA, and WI.

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

Corn, Sweet, Fresh: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Pendimethalin	12	1.8	0.92	1.67	5.6
Insecticides:					
Bt (Bacillus thur.)2/	5	1.7			
Carbaryl	*	1.1	1.23	1.37	0.1
Chlorpyrifos	51	1.4	1.11	1.61	23.6
Cyfluthrin	70	4.0	0.03	0.14	2.7
Diazinon	15	1.1	0.87	1.02	4.5
Esfenvalerate	75	4.4	0.04	0.18	3.9
Methomyl	79	6.6	0.44	2.91	65.8
Permethrin	7	2.3	0.18	0.43	0.9
Propargite	40	1.2	1.56	1.98	23.1

* Area applied is less than 1 percent.

1/ Planted acres in 1998 for California were 28,800 acres.

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

Corn, Sweet, Fresh: Agricultural Chemical Applications,
Florida, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Atrazine	78	1.0	1.19	1.26	40.9
Metolachlor	20	1.0	1.19	1.19	9.7
Insecticides:					
Carbaryl	1	3.6	1.02	3.68	0.8
Chlorpyrifos	59	1.5	0.71	1.10	27.0
Esfenvalerate	16	1.0	0.05	0.05	0.3
Lambda-cyhalothrin	74	2.9	0.02	0.07	2.1
Methomyl	79	8.6	0.29	2.54	83.4
Permethrin	8	1.0	0.16	0.16	0.5
Thiodicarb	55	2.6	0.48	1.24	28.3
Fungicides:					
Mancozeb	61	3.2	0.94	3.04	76.8
Propiconazole	43	1.8	0.13	0.24	4.4

1/ Planted acres in 1998 for Florida were 41,600 acres.

Corn, Sweet, Fresh: Agricultural Chemical Applications,
Georgia, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent		Number		Pounds per Acre		1,000 lbs		
Herbicides:	:									
2,4-D	:	1		1.1		1.36		1.52		0.3
Atrazine	:	52		1.0		0.98		0.99		9.8
Butylate	:	79		1.0		4.06		4.31		64.6
Insecticides:	:									
Carbaryl	:	1		2.1		0.82		1.77		0.2
Methomyl	:	88		5.3		0.33		1.76		29.5
Permethrin	:	1		1.5		0.07		0.11		*

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Georgia were 19,000 acres.

Corn, Sweet, Fresh: Agricultural Chemical Applications,
Illinois, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent		Number		Pounds per Acre		1,000 lbs		
Herbicides:	:									
Alachlor	:	25		1.0		2.06		2.06		3.7
Atrazine	:	50		1.0		0.65		0.67		2.3
Bentazon	:	41		1.0		0.55		0.55		1.6
Cyanazine	:	8		1.0		1.88		1.88		1.1
Metolachlor	:	32		1.0		2.00		2.01		4.4
Insecticides:	:									
Carbaryl	:	4		2.4		1.48		3.55		1.1
Chlorpyrifos	:	16		1.0		0.94		0.94		1.0
Lambda-cyhalothrin	:	35		3.5		0.02		0.07		0.2
Permethrin	:	23		4.6		0.12		0.57		0.9
Fungicides:	:									
Propiconazole	:	3		1.2		0.10		0.12		*

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Illinois were 7,000 acres.

Corn, Sweet, Fresh: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
2,4-D	5	1.0	0.32	0.32	0.2
Alachlor	26	1.2	1.91	2.34	7.8
Atrazine	63	1.1	1.19	1.34	11.0
Bentazon	9	1.0	0.62	0.64	0.7
Cyanazine	15	1.1	1.22	1.38	2.7
Glyphosate	3	1.2	1.60	1.97	0.8
Metolachlor	30	1.1	1.73	2.02	7.8
Pendimethalin	3	1.0	1.15	1.15	0.4
Insecticides:					
Carbaryl	8	2.3	1.47	3.45	3.6
Chlorpyrifos	6	1.1	0.96	1.09	0.9
Esfenvalerate	26	1.6	0.05	0.07	0.3
Lambda-cyhalothrin	13	2.9	0.02	0.07	0.1
Methomyl	9	1.6	0.43	0.69	0.8
Methyl parathion	11	2.4	0.83	2.07	2.9
Permethrin	16	2.3	0.13	0.30	0.6
Thiodicarb	10	2.6	0.73	1.92	2.5

1/ Planted acres in 1998 for Michigan were 13,000 acres.

Corn, Sweet, Fresh: Agricultural Chemical Applications,
New Jersey, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Alachlor	19	1.0	1.85	1.85	4.1
Atrazine	56	1.0	1.00	1.07	6.8
Cyanazine	29	2.3	2.49	5.90	19.3
Metolachlor	38	1.0	1.29	1.41	6.1
Insecticides:					
Carbaryl	2	2.5	1.32	3.34	0.6
Esfenvalerate	3	2.9	0.04	0.12	*
Lambda-cyhalothrin	57	7.0	0.010	0.07	0.4
Methomyl	39	4.6	0.39	1.78	7.8
Thiodicarb	2	1.1	0.68	0.80	0.2

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for New Jersey were 11,300 acres.

Corn, Sweet, Fresh: Agricultural Chemical Applications,
New York, 1998 1/

Agricultural Chemical	Area Applied	Appl- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Alachlor	16	1.0	1.31	1.31	6.5
Atrazine	85	1.0	1.03	1.09	28.7
Bentazon	8	1.0	0.55	0.55	1.4
Cyanazine	6	2.3	1.13	2.62	4.5
Glyphosate	6	1.0	1.48	1.48	2.8
Metolachlor	71	1.1	2.28	2.52	55.0
Pendimethalin	6	1.0	1.41	1.43	2.5
Insecticides:					
Carbaryl	1	1.8	1.21	2.19	0.6
Carbofuran	5	1.0	0.86	0.86	1.3
Esfenvalerate	3	3.2	0.02	0.07	0.1
Lambda-cyhalothrin	60	1.4	0.03	0.04	0.7
Methomyl	13	2.4	0.36	0.88	3.4
Methyl parathion	6	1.1	0.37	0.42	0.8
Permethrin	15	2.2	0.15	0.33	1.5
Thiodicarb	51	1.0	0.55	0.60	9.4

1/ Planted acres in 1998 for New York were 30,700 acres.

Corn, Sweet, Fresh: Agricultural Chemical Applications,
North Carolina, 1998 1/

Agricultural Chemical	Area Applied	Appl- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Alachlor	17	1.0	2.32	2.32	2.9
Atrazine	30	1.0	1.39	1.48	3.1
Metolachlor	35	1.0	1.76	1.85	4.6
Simazine	2	1.0	1.47	1.47	0.2
Insecticides:					
Carbaryl	6	5.5	0.48	2.70	1.2
Esfenvalerate	23	3.0	0.03	0.08	0.1
Methomyl	30	2.2	0.49	1.10	2.3
Permethrin	27	1.9	0.11	0.22	0.4
Terbufos	42	1.0	1.04	1.04	3.1
Thiodicarb	30	4.1	0.51	2.14	4.6

1/ Planted acres in 1998 for North Carolina were 7,100 acres.

Corn, Sweet, Fresh: Agricultural Chemical Applications,
Oregon, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	Pounds per Acre	:	1,000 lbs
Herbicides:	:		:		:		:		:	
Alachlor	:	5	:	1.0	:	1.81	:	1.81	:	0.3
Atrazine	:	46	:	1.4	:	0.91	:	1.28	:	2.2
EPTC	:	22	:	1.0	:	3.43	:	3.43	:	2.8
Metolachlor	:	43	:	1.0	:	1.53	:	1.59	:	2.6
Insecticides:	:		:		:		:		:	
Chlorpyrifos	:	18	:	1.0	:	1.01	:	1.01	:	0.7
Esfenvalerate	:	12	:	2.0	:	0.04	:	0.07	:	*

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Oregon were 3,780 acres.

Corn, Sweet, Fresh: Agricultural Chemical Applications,
Washington, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	Pounds per Acre	:	1,000 lbs
Herbicides:	:		:		:		:		:	
Alachlor	:	36	:	2.6	:	1.20	:	3.20	:	2.6
Atrazine	:	36	:	1.2	:	2.11	:	2.54	:	2.1
Bentazon	:	5	:	1.1	:	0.89	:	1.01	:	0.1
Glyphosate	:	42	:	1.3	:	1.34	:	1.79	:	1.7
Metolachlor	:	19	:	1.0	:	1.88	:	1.88	:	0.8
Insecticides:	:		:		:		:		:	
Esfenvalerate	:	60	:	2.9	:	0.04	:	0.11	:	0.2
Methomyl	:	38	:	1.4	:	0.44	:	0.65	:	0.6

1/ Planted acres in 1998 for Washington were 2,300 acres.

Corn, Sweet, Fresh: Agricultural Chemical Applications,
Wisconsin, 1998 1/

Agricultural Chemical	:	Area	:	Appli-	:	Rate per	:	Rate per	:	Total
	:	Applied	:	cations	:	Application	:	Crop Year	:	Applied
	:	Percent	:	Number	:	Pounds per Acre	:	1,000 lbs	:	
Herbicides:	:		:		:		:		:	
Alachlor	:	18	:	1.1	:	1.88	:	2.11	:	3.3
Atrazine	:	45	:	1.0	:	0.70	:	0.70	:	2.7
Bentazon	:	16	:	1.0	:	0.70	:	0.70	:	1.0
Cyanazine	:	18	:	1.1	:	1.53	:	1.72	:	2.6
Dimethenamid	:	37	:	1.0	:	1.07	:	1.07	:	3.4
Glyphosate	:	3	:	1.0	:	1.13	:	1.13	:	0.3
Metolachlor	:	18	:	1.0	:	1.88	:	1.88	:	2.9
Pendimethalin	:	10	:	1.0	:	1.13	:	1.13	:	0.9
Insecticides:	:		:		:		:		:	
Carbaryl	:	3	:	1.4	:	1.18	:	1.71	:	0.5
Chlorpyrifos	:	9	:	1.0	:	1.12	:	1.12	:	0.9
Esfenvalerate	:	9	:	1.9	:	0.04	:	0.07	:	0.1
Lambda-cyhalothrin	:	32	:	3.0	:	0.02	:	0.07	:	0.2
Permethrin	:	53	:	1.9	:	0.13	:	0.25	:	1.1

1/ Planted acres in 1998 for Wisconsin were 8,700 acres.

Corn, Sweet, Proc.: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
IL	14,600	100	2,123	64	615	57	801
MN	131,900	94	13,097	80	5,095	76	6,793
NY	42,000	100	3,905	99	2,669	92	3,430
OR	37,400	99	6,948	86	4,649	91	2,895
WA	101,500	98	19,020	86	7,876	58	4,916
WI	111,600	99	14,429	94	5,253	91	8,595
Total	439,000	98	59,523	87	26,159	78	27,432

Corn, Sweet, Proc.: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
Illinois:	14,600					
Nitrogen		100	1.7	84	145	2,123
Phosphate		64	1.1	60	66	615
Potash		57	1.0	90	97	801
Minnesota:	131,900					
Nitrogen		94	1.4	74	105	13,097
Phosphate		80	1.0	44	48	5,095
Potash		76	1.0	64	68	6,793
New York:	42,000					
Nitrogen		100	1.8	52	93	3,905
Phosphate		99	1.1	54	64	2,669
Potash		92	1.3	66	89	3,430
Oregon:	37,400					
Nitrogen		99	2.0	90	188	6,948
Phosphate		86	1.0	132	144	4,649
Potash		91	1.2	68	85	2,895
Washington:	101,500					
Nitrogen		98	2.3	82	191	19,020
Phosphate		86	1.6	56	91	7,876
Potash		58	1.6	52	84	4,916
Wisconsin:	111,600					
Nitrogen		99	2.2	57	130	14,429
Phosphate		94	1.0	48	50	5,253
Potash		91	1.2	69	84	8,595
Total:	439,000					
Nitrogen		98	1.9	71	139	59,523
Phosphate		87	1.2	57	69	26,159
Potash		78	1.2	64	80	27,432

Corn, Sweet, Proc.: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed						
	ALL	IL	MN	NY	OR	WA	WI
Herbicides:							
2,4-D	P		P	P	*	P	*
Acetochlor	*				*		
Alachlor	P	*	*	P	P	P	P
Ametryn	*				*		
Atrazine	P	P	P	P	P	P	P
Bentazon	P	P	P	P	P	P	P
Bromoxynil	*					*	
Butylate	*					*	
Clopyralid	*		*				
Cyanazine	P	P	P	P	*	*	P
Dicamba, Pot. salt	*	*					
Dimethenamid	P	*	P	*	P	P	P
EPTC	P		P		P	*	*
Glyphosate	P		*	*	P	P	P
Linuron	*		*				
MCPA	*				*		
Metolachlor	P	P	P	P	P	P	P
Nicosulfuron	P		P		*	*	P
Paraquat	P	*		*	*		*
Pendimethalin	P		*	P	*	P	*
Sethoxydim	*	*	*				
Simazine	*						*
Trifluralin	*					*	
Insecticides:							
Bt (Bacillus thur.)	*					*	
Carbaryl	P	P					
Carbofuran	P	*	*	*			*
Chlorpyrifos	P	P	*	*	P	P	P
Cyfluthrin	P	*	P	P			*
Cypermethrin	*				*		
Esfenvalerate	P		*		*	*	P
Ethoprop	P				*	*	
Fonofos	P	*		*	*		
Lambda-cyhalothrin	P	*	P	P	*	P	P
Malathion	*				*		
Methomyl	*		*	*			
Methyl parathion	P	P	P				P
Mevinphos	*						*
Oxydemeton-methyl	*				*		
Permethrin	P	P	P	*	*	P	P
Phorate	*	*					*
Tebupirimphos	P	*	*				*
Tefluthrin	P	P	*	P	*	*	*
Terbufos	P	*	*	P			*
Fungicides:							
Propiconazole	P	P	P	P			
Other Chemicals:							
Aminopyridine	P		P				P
Metaldehyde	*				*		

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Corn, Sweet, Proc.: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

State:	Planted	Area Receiving and Total Applied											
:	Acreage	:	Herbicide	:	Insecticide 1/:	:	Fungicide	:	Other Chemical				
:	Acres	:	Percent	:	Percent	:	Percent	:	Percent				
:	:	:	1,000	:	1,000	:	1,000	:	1,000				
:	:	:	Lbs	:	Lbs	:	Lbs	:	Lbs				
IL	: 14,600	:	98	:	40.0	:	98	:	17.8	:	48	:	1.3
MN 2/	: 131,900	:	95	:	315.1	:	85	:	51.3	:	24	:	4.5
NY	: 42,000	:	82	:	134.6	:	81	:	13.3	:	17	:	1.5
OR 2/	: 37,400	:	97	:	139.1	:	60	:	33.1	:		:	
WA	: 101,500	:	92	:	303.8	:	55	:	28.5	:		:	
WI 2/	: 111,600	:	97	:	308.1	:	76	:	29.8	:		:	
	:	:		:		:		:		:		:	
Total:	439,000	:	94	:	1,240.7	:	74	:	173.8	:	10	:	7.3
		:		:		:		:		:	4	:	*

* Total applied is less than 50 pounds.

1/ Total applied excludes Bt's (*Bacillus thuringiensis*). Quantities are not available because amounts of active ingredient are not comparable between products.

2/ Insufficient reports to publish data for one or more of the pesticide classes.

Corn, Sweet, Proc.: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	: Area : Applied	: Appli- : cations	: Rate per : Application	: Rate per : Crop Year	: Total : Applied
	: Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:	:	:	:	:	:
2,4-D	7	1.0	0.39	0.41	11.8
Alachlor	19	1.0	2.14	2.27	189.3
Atrazine	51	1.1	0.78	0.89	199.7
Bentazon	24	1.1	0.60	0.66	69.5
Cyanazine	15	1.0	1.56	1.67	110.1
Dimethenamid	17	1.0	1.19	1.21	92.1
EPTC	7	1.0	3.73	3.80	111.3
Glyphosate	8	1.1	0.66	0.74	26.9
Metolachlor	37	1.0	1.96	2.08	338.5
Nicosulfuron	9	1.0	0.03	0.03	1.3
Paraquat	1	1.1	0.32	0.36	1.3
Pendimethalin	12	1.0	0.82	0.85	46.4
Insecticides:	:	:	:	:	:
Carbaryl	1	1.4	1.02	1.52	4.4
Carbofuran	2	1.0	0.86	0.86	6.2
Chlorpyrifos	6	1.0	1.22	1.33	35.2
Cyfluthrin	4	1.6	0.03	0.04	0.7
Esfenvalerate	2	1.0	0.04	0.04	0.3
Ethoprop	2	1.0	1.94	1.94	16.8
Fonofos	*	1.0	1.03	1.03	1.3
Lambda-cyhalothrin	32	2.0	0.02	0.05	6.8
Methyl parathion	6	1.6	0.33	0.54	14.2
Permethrin	43	2.4	0.15	0.38	71.7
Tebupirimphos	1	1.0	0.14	0.14	0.4
Tefluthrin	4	1.0	0.08	0.08	1.4
Terbufos	1	1.0	1.18	1.18	5.7
Fungicides:	:	:	:	:	:
Propiconazole	10	1.6	0.10	0.16	7.4
Other Chemicals:	:	:	:	:	:
Aminopyridine	4	1.2	0.000	0.000	**

* Area applied is less than 1 percent.

** Total applied is less than 50 pounds.

1/ Planted acres in 1998 for the 6 states surveyed were 439,000 acres.
States included are IL, MN, NY, OR, WA, and WI.

Corn, Sweet, Proc.: Agricultural Chemical Applications,
Illinois, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Atrazine	71	1.0	0.88	0.95	9.8
Bentazon	50	1.0	0.55	0.55	4.0
Cyanazine	17	1.0	2.57	2.65	6.6
Metolachlor	55	1.0	1.75	1.75	14.0
Insecticides:					
Carbaryl	20	1.4	1.02	1.52	4.4
Chlorpyrifos	9	1.0	1.32	1.34	1.9
Methyl parathion	44	2.1	0.41	0.87	5.6
Permethrin	88	2.5	0.13	0.33	4.3
Tefluthrin	6	1.2	0.12	0.15	0.1
Fungicides:					
Propiconazole	48	2.1	0.09	0.19	1.3

1/ Planted acres in 1998 for Illinois were 14,600 acres.

Corn, Sweet, Proc.: Agricultural Chemical Applications,
Minnesota, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
2,4-D	12	1.0	0.40	0.40	6.5
Atrazine	52	1.0	0.58	0.59	40.5
Bentazon	39	1.0	0.45	0.46	23.7
Cyanazine	11	1.0	1.33	1.35	19.1
Dimethenamid	25	1.0	1.32	1.34	43.9
EPTC	8	1.0	3.61	3.61	37.6
Metolachlor	43	1.0	2.10	2.13	121.8
Nicosulfuron	9	1.0	0.03	0.03	0.3
Insecticides:					
Cyfluthrin	7	1.9	0.03	0.06	0.6
Lambda-cyhalothrin	35	1.9	0.02	0.04	1.9
Methyl parathion	10	1.3	0.27	0.38	4.9
Permethrin	78	2.5	0.15	0.39	40.5
Fungicides:					
Propiconazole	24	1.5	0.09	0.14	4.5
Other Chemicals:					
Aminopyridine	4	1.1	*	*	**

* Rate is less than .0005 pounds per acre.

** Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Minnesota were 131,900 acres.

Corn, Sweet, Proc.: Agricultural Chemical Applications,
New York, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
2,4-D	5	1.1	0.26	0.28	0.6
Alachlor	16	1.0	2.08	2.24	15.2
Atrazine	69	1.5	0.84	1.31	38.2
Bentazon	25	1.9	0.67	1.31	13.7
Cyanazine	5	1.2	1.45	1.76	3.4
Metolachlor	52	1.1	1.92	2.18	47.9
Pendimethalin	24	1.0	1.16	1.26	12.9
Insecticides:					
Cyfluthrin	10	1.1	0.03	0.04	0.1
Lambda-cyhalothrin	68	1.7	0.02	0.04	1.2
Tefluthrin	11	1.0	0.12	0.12	0.5
Terbufos	4	1.0	1.03	1.03	1.7
Fungicides:					
Propiconazole	17	1.9	0.11	0.22	1.5

1/ Planted acres in 1998 for New York were 42,000 acres.

Corn, Sweet, Proc.: Agricultural Chemical Applications,
Oregon, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Alachlor	10	1.0	2.68	2.68	10.1
Atrazine	85	1.1	0.97	1.09	34.6
Bentazon	33	1.0	0.52	0.52	6.4
Dimethenamid	18	1.0	0.97	0.97	6.7
EPTC	29	1.0	3.82	3.84	41.1
Glyphosate	13	1.0	0.61	0.64	3.1
Metolachlor	42	1.1	1.74	1.98	31.1
Insecticides:					
Chlorpyrifos	33	1.0	1.27	1.28	15.9

1/ Planted acres in 1998 for Oregon were 37,400 acres.

Corn, Sweet, Proc.: Agricultural Chemical Applications,
Washington, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
2,4-D	2	1.0	0.58	0.62	1.5
Alachlor	28	1.0	2.60	2.75	78.4
Atrazine	28	1.2	1.00	1.24	35.0
Bentazon	10	1.0	0.84	0.84	8.8
Dimethenamid	15	1.0	0.79	0.79	12.3
Glyphosate	14	1.1	0.73	0.81	12.0
Metolachlor	29	1.0	2.10	2.12	61.7
Pendimethalin	38	1.0	0.65	0.67	25.9
Insecticides:					
Chlorpyrifos	9	1.2	1.20	1.50	13.9
Lambda-cyhalothrin	23	1.9	0.03	0.05	1.2
Permethrin	19	3.5	0.17	0.62	11.6

1/ Planted acres in 1998 for Washington were 101,500 acres.

Corn, Sweet, Proc.: Agricultural Chemical Applications,
Wisconsin, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Alachlor	31	1.0	1.85	1.95	67.5
Atrazine	50	1.0	0.70	0.75	41.6
Bentazon	12	1.0	0.96	0.96	12.8
Cyanazine	41	1.0	1.60	1.73	78.8
Dimethenamid	15	1.0	1.37	1.39	23.3
Glyphosate	12	1.1	0.61	0.73	9.8
Metolachlor	27	1.1	1.78	2.03	62.1
Nicosulfuron	24	1.1	0.03	0.03	0.9
Insecticides:					
Chlorpyrifos	2	1.0	0.98	0.98	2.6
Esfenvalerate	5	1.0	0.04	0.04	0.2
Lambda-cyhalothrin	35	2.4	0.03	0.06	2.4
Methyl parathion	6	1.7	0.31	0.52	3.8
Permethrin	46	1.9	0.15	0.29	15.1
Other Chemicals:					
Aminopyridine	13	1.2	*	*	**

* Rate is less than .0005 pounds per acre.

** Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Wisconsin were 111,600 acres.

Cucumbers, Fresh: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	6,300	90	723	81	541	76	485
FL	9,400	100	816	12	120	100	979
GA	14,000	99	2,303	52	870	99	2,092
MI	7,000	97	669	95	464	96	1,036
NJ	3,100	97	439	100	335	100	381
NY	3,800	98	321	98	281	98	537
NC	6,300	99	563	98	434	93	738
TX	1,700	99	328	90	126	95	79
Total	51,600	98	6,162	67	3,171	95	6,327

Cucumbers, Fresh: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	6,300					
Nitrogen		90	2.1	60	128	723
Phosphate		81	1.4	74	106	541
Potash		76	1.0	97	102	485
Florida:	9,400					
Nitrogen		100	1.7	51	87	816
Phosphate		12	4.7	23	108	120
Potash		100	1.7	61	104	979
Georgia:	14,000					
Nitrogen		99	35.6	5	166	2,303
Phosphate		52	2.3	52	120	870
Potash		99	34.7	4	151	2,092
Michigan:	7,000					
Nitrogen		97	1.6	59	99	669
Phosphate		95	1.0	66	70	464
Potash		96	1.1	137	154	1,036
New Jersey:	3,100					
Nitrogen		97	3.4	42	147	439
Phosphate		100	3.3	32	109	335
Potash		100	3.3	37	123	381
New York:	3,800					
Nitrogen		98	1.4	60	86	321
Phosphate		98	1.0	72	76	281
Potash		98	1.3	105	144	537

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Cucumbers, Fresh: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998 (continued)

Primary Nutrient	Planted Acreage	Area Applied	Applcations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
North Carolina:	6,300					
Nitrogen		99	1.8	48	90	563
Phosphate		98	1.1	60	71	434
Potash		93	1.5	81	127	738
Texas:	1,700					
Nitrogen		99	1.8	106	195	328
Phosphate		90	1.0	75	82	126
Potash		95	1.0	48	49	79
Total:	51,600					
Nitrogen		98	11.2	11	122	6,162
Phosphate		67	1.7	53	92	3,171
Potash		95	10.9	12	129	6,327

Cucumbers, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed									
	ALL	CA	FL	GA	MI	NJ	NY	NC	TX	
Herbicides:										
Atrazine	*			*		*				
Benefin	*								*	
Bensulide	P	*			P	P	*	*	*	
Bentazon	*							*		
Clomazone	P				*	P	*			
Cycloate	*				*					
Diquat	*				*					
Ethalfluralin	P	*	*	*	P		*	P	*	
Glyphosate	P	*	*		*	*	*	*	*	
Metolachlor	*						*	*	*	
Metribuzin	*						*			
Napropamide	*						*	*		
Naptalam	P		*		P	P	*	*	*	
Paraquat	P	*	*		*	*				
Pendimethalin	*					*			*	
Pronamide	*		*					*		
Sethoxydim	P	*				*		*	*	
Trifluralin	P			*	*	*	*	*	*	

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Cucumbers, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed									
	ALL	CA	FL	GA	MI	NJ	NY	NC	TX	
Insecticides:										
Acephate	P		*	*	*				*	
Azinphos-methyl	P				*	*	*			
Bt (Bacillus thur.)	P	*	P	*		*		*	*	
Carbaryl	P	*	*	*	P	P	P	P	*	
Carbofuran	P				*	*				
Chlorpyrifos	*							*		
Diazinon	P	P	*		*	*	*	*	*	
Dicofol	*	*				*				
Dimethoate	*				*	*				
Endosulfan	P		P	P	P	P	*	P	*	
Esfenvalerate	P	*		*	P	*	*	P	*	
Imidacloprid	P	*					*		*	
Lambda-cyhalothrin	*		*		*	*	*			
Malathion	P	*	*					*	*	
Methomyl	P	P	P		*	P	*	*	*	
Methoxychlor	*							*		
Naled	*		*							
Oxamyl	P	*	*			*				
Permethrin	P	*	*	*	P	*	P	*	*	
Petroleum distillate	*	*								
Potassium salts	*	*						*		
Pyrethrins	*	*								
Rotenone	*	*	*			*				
Sabadilla	*						*			
Spinosad	*		*	*						
Fungicides:										
Azoxystrobin	*			*						
Basic copper sulfate	*				*					
Benomyl	P	*	*	P	*	P	*	*		
Captan	*		*				*			
Chlorothalonil	P	*	P	P	P	P	P	P	*	
Copper ammonium	*					*				
Copper chloride hyd.	*							*		
Copper hydroxide	P	*	P	*	P	P	*	*		
Copper resinate	P	*			*	P	*	*		
Copper sulfate	P		*		*	*				
Fosetyl-al	P		*		*	*				
Mancozeb	P		P	*	P	*	*	*	*	
Maneb	P	*	P	P	*	*	*	*		
Mefenoxam	*		*							
Metalaxyl	P		P	*	P	P	*	*	*	
Myclobutanil	*	*								
Sulfur	*	*						*		
Thiophanate-methyl	*					*		*		
Triadimefon	P	*			*				*	
Other Chemicals:										
Dichloropropene	*							*		
Diphacinone	*	*								
Metam-sodium	*	*			*	*				
Methyl bromide	P		*					*		

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Cucumbers, Fresh: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

: : Area Receiving and Total Applied										

State: Planted :-----										
: Acreage : Herbicide : Insecticide 1/: Fungicide : Other Chemical										

	Acres	Percent	1,000	Percent	1,000	Percent	1,000	Percent	1,000	
			Lbs		Lbs		Lbs		Lbs	

CA 2/:	6,300	15	2.6	84	3.3	66	5.0			
FL 2/:	9,400	7	0.7	97	9.8	94	53.4			
GA :	14,000	11	0.9	42	4.9	99	59.8			
MI 2/:	7,000	74	15.2	67	6.9	77	27.5			
NJ 2/:	3,100	52	7.4	88	3.5	82	10.3			
NY 2/:	3,800	73	4.5	28	0.7					
NC :	6,300	40	2.3	51	3.9	51	10.2	5	14.9	
TX 2/:	1,700	73	1.7	62	0.9					

Total:	51,600	32	35.3	64	33.9	75	168.7	1	61.8	

- 1/ Total applied excludes Bt's (*Bacillus thuringiensis*). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Cucumbers, Fresh: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	6	1.0	4.68	4.97	15.2
Clomazone	3	1.0	0.38	0.38	0.6
Ethalfuralin	21	1.4	0.85	1.22	13.1
Glyphosate	1	1.2	0.96	1.16	0.7
Naptalam	4	1.0	1.44	1.44	2.9
Paraquat	4	1.0	0.63	0.67	1.3
Sethoxydim	1	1.0	0.19	0.19	0.1
Trifluralin	2	1.0	0.66	0.67	0.8
Insecticides:					
Acephate	5	2.0	0.68	1.38	3.2
Azinphos-methyl	1	2.2	0.50	1.13	0.8
Bt (Bacillus thur.)2/	11	2.5			
Carbaryl	8	1.9	0.88	1.75	6.9
Carbofuran	3	1.0	0.48	0.51	0.8
Diazinon	3	1.4	1.00	1.47	2.1
Endosulfan	20	1.7	0.62	1.06	11.1
Esfenvalerate	14	2.2	0.04	0.09	0.7
Imidacloprid	1	1.7	0.19	0.32	0.1
Malathion	1	1.4	0.73	1.05	0.7
Methomyl	7	2.2	0.42	0.97	3.4
Oxamyl	2	1.8	0.69	1.24	1.2
Permethrin	14	2.7	0.11	0.29	2.0
Fungicides:					
Benomyl	12	1.7	0.18	0.32	2.0
Chlorothalonil	59	2.7	1.33	3.71	112.1
Copper hydroxide	12	2.3	0.63	1.51	9.0
Copper resinate	2	1.6	0.09	0.15	0.2
Copper sulfate	1	1.9	0.57	1.13	0.8
Fosetyl-al	11	1.0	1.65	1.68	9.4
Mancozeb	7	2.3	1.31	3.10	10.8
Maneb	15	1.9	0.99	1.92	14.8
Metalaxyl	6	1.6	0.19	0.31	1.0
Triadimefon	1	1.7	0.07	0.13	0.1
Other Chemicals:					
Methyl bromide	*	1.0	181.14	181.14	39.4

* Area applied is less than 1 percent.

1/ Planted acres in 1998 for the 8 states surveyed were 51,600 acres.
States included are CA, FL, GA, MI, NJ, NY, NC, and TX.

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

Cucumbers, Fresh: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides:					
Diazinon	13	1.7	0.86	1.52	1.2
Methomyl	23	2.6	0.17	0.44	0.6

1/ Planted acres in 1998 for California were 6,300 acres.

Cucumbers, Fresh: Agricultural Chemical Applications,
Florida, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides:					
Bt (Bacillus thur.)2/	15	5.3			
Endosulfan	15	1.9	0.74	1.47	2.1
Methomyl	9	3.2	0.72	2.37	2.0
Fungicides:					
Chlorothalonil	83	3.5	1.16	4.09	31.9
Copper hydroxide	8	3.0	0.98	3.00	2.2
Mancozeb	13	3.7	1.52	5.72	6.8
Maneb	9	3.4	0.84	2.87	2.5
Metalaxyl	14	1.9	0.17	0.33	0.4

1/ Planted acres in 1998 for Florida were 9,400 acres.

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

Cucumbers, Fresh: Agricultural Chemical Applications,
Georgia, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides:					
Endosulfan	29	1.3	0.50	0.67	2.7
Fungicides:					
Benomyl	16	1.8	0.20	0.37	0.8
Chlorothalonil	92	2.4	1.45	3.57	46.0
Maneb	38	1.8	0.94	1.68	8.9

1/ Planted acres in 1998 for Georgia were 14,000 acres.

Cucumbers, Fresh: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	22	1.0	4.10	4.10	6.4
Ethalfluralin	61	2.0	0.79	1.59	6.8
Naptalam	9	1.0	1.00	1.00	0.6
Insecticides:					
Carbaryl	10	2.7	0.83	2.26	1.6
Endosulfan	42	1.8	0.59	1.08	3.1
Esfenvalerate	24	2.4	0.03	0.06	0.1
Permethrin	8	1.5	0.14	0.21	0.1
Fungicides:					
Chlorothalonil	66	2.7	1.40	3.86	17.7
Copper hydroxide	55	2.4	0.52	1.30	5.0
Mancozeb	3	1.8	1.18	2.12	0.5
Metalaxyl	16	1.2	0.19	0.24	0.3

1/ Planted acres in 1998 for Michigan were 7,000 acres.

Cucumbers, Fresh: Agricultural Chemical Applications,
New Jersey, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	36	1.0	5.77	5.77	6.5
Clomazone	16	1.0	0.16	0.16	0.1
Naptalam	17	1.0	1.54	1.54	0.8
Insecticides:					
Carbaryl	10	2.5	0.75	1.92	0.6
Endosulfan	39	2.0	0.70	1.45	1.7
Methomyl	22	1.2	0.66	0.82	0.6
Fungicides:					
Benomyl	21	2.8	0.25	0.70	0.5
Chlorothalonil	68	2.7	1.21	3.31	6.9
Copper hydroxide	4	2.0	0.33	0.68	0.1
Copper resinate	11	2.0	0.06	0.12	0.0
Metalaxyl	14	1.3	0.29	0.38	0.2

1/ Planted acres in 1998 for New Jersey were 3,100 acres.

Cucumbers, Fresh: Agricultural Chemical Applications,
New York, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	1,000 lbs	:	
Insecticides:	:		:		:		:		:	
Carbaryl	:	5	:	3.0	:	0.89	:	2.68	:	0.5
Permethrin	:	1	:	2.6	:	0.15	:	0.39	:	0.0
Fungicides:	:		:		:		:		:	
Chlorothalonil	:	15	:	1.7	:	1.31	:	2.35	:	1.4

1/ Planted acres in 1998 for New York were 3,800 acres.

Cucumbers, Fresh: Agricultural Chemical Applications,
North Carolina, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	1,000 lbs	:	
Herbicides:	:		:		:		:		:	
Ethalfluralin	:	35	:	1.0	:	0.67	:	0.67	:	1.5
Insecticides:	:		:		:		:		:	
Carbaryl	:	25	:	1.6	:	0.89	:	1.44	:	2.3
Endosulfan	:	13	:	2.0	:	0.79	:	1.58	:	1.3
Esfenvalerate	:	9	:	1.5	:	0.03	:	0.05	:	*
Fungicides:	:		:		:		:		:	
Chlorothalonil	:	32	:	2.5	:	1.47	:	3.73	:	7.6

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for North Carolina were 6,300 acres.

Cucumbers, Pickles: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	4,400	100	471	27	68	27	68
FL	6,700	100	379	81	277	100	930
GA	3,000	100	248	95	201	95	342
MI	27,000	99	2,237	88	1,271	95	2,851
NC	18,200	99	1,944	72	558	98	1,837
OR	1/	91		91		94	
TX	9,900	96	1,012	92	935	80	390
WA	1/	75		70		61	
WI	4,300	100	372	100	145	100	315
Total	79,100	98	7,191	81	4,046	90	7,139

1/ Planted acreage and total applied are not published to avoid disclosure.

Cucumbers, Pickles: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	: Planted : : Acreage :	Area : : Applied :	Appli- : : cations :	Rate per : : Application :	Rate per : : Crop Year :	Total : : Applied :
	: Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	: 4,400					
Nitrogen	:	100	1.8	59	107	471
Phosphate	:	27	1.0	58	58	68
Potash	:	27	1.0	58	58	68
Florida:	: 6,700					
Nitrogen	:	100	2.9	19	57	379
Phosphate	:	81	1.0	51	51	277
Potash	:	100	2.1	64	139	930
Georgia:	: 3,000					
Nitrogen	:	100	1.7	48	83	248
Phosphate	:	95	1.3	54	71	201
Potash	:	95	1.4	83	120	342
Michigan:	: 27,000					
Nitrogen	:	99	2.0	40	84	2,237
Phosphate	:	88	1.2	43	54	1,271
Potash	:	95	1.2	87	111	2,851
North Carolina:	: 18,200					
Nitrogen	:	99	1.9	55	107	1,944
Phosphate	:	72	1.0	41	43	558
Potash	:	98	1.1	92	102	1,837
Oregon:	: 1/					
Nitrogen	:	91	1.3	92	128	
Phosphate	:	91	1.1	97	107	
Potash	:	94	1.2	77	97	
Texas:	: 9,900					
Nitrogen	:	96	1.6	63	106	1,012
Phosphate	:	92	1.1	88	103	935
Potash	:	80	1.0	45	49	390
Washington:	: 1/					
Nitrogen	:	75	2.0	49	100	
Phosphate	:	70	1.6	95	159	
Potash	:	61	1.5	61	91	
Wisconsin:	: 4,300					
Nitrogen	:	100	3.0	28	87	372
Phosphate	:	100	1.0	34	34	145
Potash	:	100	1.2	61	73	315
Total:	: 79,100					
Nitrogen	:	98	2.0	45	93	7,191
Phosphate	:	81	1.1	54	63	4,046
Potash	:	90	1.2	78	101	7,139

1/ Total acreage and total applied are not published to avoid disclosure.

Cucumbers, Pickles: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed					
	ALL	CA	FL	GA	MI	NC
Herbicides:						
Bensulide	P	*			*	*
Bentazon	*					*
Clomazone	P				P	
DCPA	*	*				
Ethalfluralin	P		*	*	P	P
Fluazifop-P-butyl	*					*
Glyphosate	P	*			P	*
Metolachlor	*					
Metribuzin	*					
Napropamide	*					
Naptalam	P			*	P	P
Oxyfluorfen	*	*			*	
Paraquat	*					
Pendimethalin	*			*		*
Pronamide	*					*
Sethoxydim	P				*	P
Trifluralin	*			*		
Insecticides:						
Acephate	*		*			
Azinphos-methyl	*				*	
Bt (Bacillus thur.)	*		*			
Carbaryl	P			*	P	P
Carbofuran	P				P	
Diazinon	P	*	*			
Dimethoate	*				*	*
Disulfoton	*					
Endosulfan	P		*	P	P	
Esfenvalerate	P			*	P	P
Ethoprop	P					*
Fenamiphos	*			*		*
Imidacloprid	*			*		
Lindane	*					*
Methomyl	P	*	*	*		*
Oxamyl	*		*			
Oxydemeton-methyl	*	*				
Permethrin	P	*		*	*	*

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Cucumbers, Pickles: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed					
	ALL	CA	FL	GA	MI	NC
Fungicides:						
Basic copper sulfate	*				*	
Benomyl	*		*			*
Chlorothalonil	P		*	P	P	P
Copper ammonium	*					
Copper hydroxide	P	*			P	
Copper resinate	P				*	*
Copper sulfate	*				*	
Mancozeb	P		*	*	*	*
Mefenoxam	P				*	
Metalaxyl	P				P	*
Thiophanate-methyl	*				*	
Triadimefon	*	*				
Other Chemicals:						
Cytokinins	*					
Dichloropropene	P					P
Methyl bromide	*					*

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Cucumbers, Pickles: Active Ingredient Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed			
	OR	TX	WA	WI
Herbicides:				
Bensulide				*
Bentazon				
Clomazone			*	*
DCPA				
Ethalfluralin	*	P	*	*
Fluazifop-P-butyl				
Glyphosate	*		*	
Metolachlor	*	*		
Metribuzin		*		
Napropamide	*			
Naptalam		P	*	P
Oxyfluorfen				
Paraquat	*		*	
Pendimethalin				
Pronamide				
Sethoxydim	*	*		
Trifluralin				
Insecticides:				
Acephate				
Azinphos-methyl				
Bt (Bacillus thur.)				
Carbaryl	*	*		*
Carbofuran				
Diazinon	*			*
Dimethoate		*		
Disulfoton		*		
Endosulfan	*			
Esfenvalerate		*		
Ethoprop	*			
Fenamiphos				
Imidacloprid				
Lindane				
Methomyl		P		
Oxamyl		*		
Oxydemeton-methyl				
Permethrin				

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Cucumbers, Pickles: Active Ingredient Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed			
	OR	TX	WA	WI
Fungicides:				
Basic copper sulfate				
Benomyl				
Chlorothalonil		*	*	*
Copper ammonium	*			
Copper hydroxide			*	
Copper resinate				
Copper sulfate				
Mancozeb			*	
Mefenoxam			*	*
Metalaxyl			*	*
Thiophanate-methyl				
Triadimefon				
Other Chemicals:				
Cytokinins	*		*	
Dichloropropene				
Methyl bromide				

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Cucumbers, Pickles: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

State:	Planted Acreage	Area Receiving and Total Applied							
		Herbicide	Insecticide 1/	Fungicide	Other Chemical				
	Acres	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs				
CA 2/:	4,400								
FL 2/:	6,700		98	4.2					
GA :	3,000	50	1.1	94	3.1	84	12.3		
MI :	27,000	78	39.5	22	4.9	42	13.9		
NC :	18,200	78	18.3	31	8.4	26	25.8	21	260.7
OR 2/:	3/	66							
TX 2/:	9,900	93	8.2	63	4.3				
WA 2/:	3/	66				33			
WI 2/:	4,300	100	9.9						
Total:	79,100	77	85.7	38	27.8	36	88.3	6	260.7

- 1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.
- 3/ Planted acreage and total applied are not published to avoid disclosure.

Cucumbers, Pickles: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	1	1.0	3.48	3.48	2.6
Clomazone	12	2.0	0.21	0.44	4.0
Ethalfluralin	63	1.3	0.70	0.93	46.4
Glyphosate	5	1.0	0.66	0.69	2.8
Naptalam	22	1.3	1.10	1.51	26.3
Sethoxydim	2	1.5	0.22	0.35	0.5
Insecticides:					
Carbaryl	2	1.5	0.94	1.44	2.2
Carbofuran	4	1.0	0.96	0.99	3.4
Diazinon	3	1.0	0.81	0.81	2.0
Endosulfan	4	1.6	0.62	1.04	3.6
Esfenvalerate	9	5.0	0.03	0.17	1.2
Ethoprop	2	1.0	1.35	1.35	1.7
Methomyl	16	1.4	0.72	1.02	12.6
Permethrin	1	2.3	0.07	0.17	0.2
Fungicides:					
Chlorothalonil	26	2.3	1.61	3.71	74.9
Copper hydroxide	4	3.0	0.30	0.91	2.9
Copper resinate	1	4.7	0.13	0.62	0.6
Mancozeb	2	2.5	1.27	3.21	6.3
Mefenoxam	4	1.0	0.09	0.09	0.3
Metalaxyl	9	1.5	0.09	0.14	1.0
Other Chemicals:					
Dichloropropene	5	1.1	61.43	67.76	260.4

1/ Planted acres in 1998 for the 9 states surveyed were 79,100 acres.
States included are CA, FL, GA, MI, NC, OR, TX, WA, and WI.

Cucumbers, Pickles: Agricultural Chemical Applications,
Georgia, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	1,000 lbs	:	
Insecticides:	:		:		:		:		:	
Endosulfan	:	57	:	1.8	:	0.65	:	1.24	:	2.1
Fungicides:	:		:		:		:		:	
Chlorothalonil	:	84	:	1.7	:	2.75	:	4.79	:	12.1

1/ Planted acres in 1998 for Georgia were 3,000 acres.

Cucumbers, Pickles: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	1,000 lbs	:	
Herbicides:	:		:		:		:		:	
Clomazone	:	27	:	2.3	:	0.22	:	0.50	:	3.7
Ethalfuralin	:	62	:	1.9	:	0.72	:	1.42	:	23.7
Glyphosate	:	7	:	1.0	:	0.57	:	0.59	:	1.1
Naptalam	:	33	:	1.6	:	0.67	:	1.13	:	10.1
Insecticides:	:		:		:		:		:	
Carbaryl	:	1	:	1.0	:	0.90	:	0.90	:	0.2
Carbofuran	:	13	:	1.0	:	0.96	:	0.99	:	3.4
Endosulfan	:	4	:	1.5	:	0.44	:	0.66	:	0.6
Esfenvalerate	:	1	:	1.1	:	0.04	:	0.05	:	*
Fungicides:	:		:		:		:		:	
Chlorothalonil	:	16	:	2.4	:	0.94	:	2.33	:	9.8
Copper hydroxide	:	11	:	3.1	:	0.29	:	0.92	:	2.8
Metalaxyl	:	21	:	1.5	:	0.07	:	0.11	:	0.6

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Michigan were 27,000 acres.

Cucumbers, Pickles: Agricultural Chemical Applications,
North Carolina, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Ethalfluralin	73	1.0	0.80	0.83	11.1
Naptalam	15	1.0	2.27	2.27	6.4
Sethoxydim	5	1.0	0.16	0.16	0.1
Insecticides:					
Carbaryl	4	1.6	0.94	1.57	1.1
Esfenvalerate	26	6.0	0.03	0.20	1.0
Fungicides:					
Chlorothalonil	24	3.4	1.45	5.08	22.5
Other Chemicals:					
Dichloropropene	21	1.1	61.43	67.76	260.4

1/ Planted acres in 1998 for North Carolina were 18,200 acres.

Cucumbers, Pickles: Agricultural Chemical Applications,
Texas, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Ethalfluralin	91	1.0	0.49	0.49	4.4
Naptalam	22	1.1	1.24	1.42	3.2
Insecticides:					
Methomyl	52	1.0	0.77	0.81	4.1

1/ Planted acres in 1998 for Texas were 9,900 acres.

Cucumbers, Pickles: Agricultural Chemical Applications,
Wisconsin, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Naptalam	69	1.0	2.09	2.09	6.2

1/ Planted acres in 1998 for Wisconsin were 4,300 acres.

Eggplant: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
FL	2,200	100	535	28	43	100	965
NJ	1,000	81	113	81	86	81	105
Total	3,200	94	648	45	129	94	1,070

Eggplant: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
Florida:	2,200					
Nitrogen		100	1.8	130	244	535
Phosphate		28	1.2	54	70	43
Potash		100	1.8	234	440	965
New Jersey:	1,000					
Nitrogen		81	4.1	34	139	113
Phosphate		81	4.0	26	106	86
Potash		81	4.0	32	130	105
Total:	3,200					
Nitrogen		94	2.4	87	216	648
Phosphate		45	2.8	31	90	129
Potash		94	2.4	144	356	1,070

Eggplant: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed		
	ALL	FL	NJ
Herbicides:	:	:	:
Alachlor	*	:	*
Atrazine	*	:	*
Bensulide	*	:	*
Clomazone	*	:	*
DCPA	*	:	*
Glyphosate	*	:	*
Linuron	*	:	*
Napropamide	P	:	P
Paraquat	P	:	*
Pendimethalin	*	:	*
Trifluralin	*	:	*
Insecticides:	:	:	:
Abamectin	*	:	*
Acephate	*	:	*
Azinphos-methyl	*	:	*
Bt (Bacillus thur.)	*	:	*
Carbaryl	P	:	*
Dicofol	*	:	*
Dimethoate	*	:	*
Endosulfan	P	:	*
Esfenvalerate	*	:	*
Fenbutatin-oxide	P	:	*
Imidacloprid	P	:	*
Lambda-cyhalothrin	*	:	*
Methamidophos	*	:	*
Methomyl	P	:	*
Naled	P	:	P
Oxamyl	P	:	*
Permethrin	*	:	*
Phosmet	*	:	*
Piperonyl butoxide	*	:	*
Potassium salts	*	:	*
Pyrethrins	*	:	*
Rotenone	*	:	*

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Eggplant: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed		
	ALL	FL	NJ
Fungicides:			
Benomyl	*	*	*
Captan	*	*	
Chlorothalonil	P	*	*
Copper hydroxide	P	P	P
Copper oxychlo. sul.	*		*
Copper resinate	*		*
Copper sulfate	*		*
Fosetyl-al	*		*
Mancozeb	P	*	*
Maneb	P	P	P
Metalaxyl	P	*	*
Sulfur	*	*	
Other Chemicals:			
Ammonium soap	*		*
Chloropicrin	*	*	
Metam-sodium	P		P
Methyl bromide	P	P	

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Eggplant: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

		Area Receiving and Total Applied								
State:	Planted	-----								
:	Acreage	Herbicide	Insecticide 1/	Fungicide	Other Chemical					
:	Acres	Percent	1,000	Percent	1,000	Percent	1,000	Percent	1,000	
:			Lbs		Lbs		Lbs		Lbs	
FL	2,200	91	1.1	96	1.1	98	21.1	64	259.9	
NJ	1,000	33	0.7	62	0.9	45	2.6	4	5.7	
Total:	3,200	73	1.8	85	2.0	82	23.7	46	265.6	

1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.

Eggplant: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Napropamide	7	1.0	1.10	1.10	0.3
Paraquat	60	1.0	0.56	0.56	1.1
Insecticides:					
Carbaryl	2	2.0	0.43	0.89	0.1
Endosulfan	3	2.4	0.54	1.33	0.1
Fenbutatin-oxide	20	1.8	0.39	0.72	0.5
Imidacloprid	13	1.2	0.10	0.12	0.1
Methomyl	4	3.2	0.27	0.85	0.1
Naled	6	1.8	0.81	1.51	0.3
Oxamyl	21	4.2	0.24	1.02	0.7
Fungicides:					
Chlorothalonil	2	1.9	1.35	2.66	0.2
Copper hydroxide	59	3.3	0.75	2.49	4.7
Mancozeb	16	15.4	0.79	12.21	6.2
Maneb	65	3.3	1.26	4.20	8.7
Metalaxyl	8	1.7	0.25	0.44	0.1
Other Chemicals:					
Metam-sodium	1	1.0	168.99	168.99	5.7
Methyl bromide	44	1.0	169.89	169.89	241.0

1/ Planted acres in 1998 for the 2 states surveyed were 3,200 acres. States included are FL and NJ.

Eggplant: Agricultural Chemical Applications,
Florida, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Fungicides:					
Copper hydroxide	73	3.2	0.75	2.45	3.9
Maneb	77	3.3	1.29	4.33	7.4
Other Chemicals:					
Methyl bromide	64	1.0	169.89	169.89	241.0

1/ Planted acres in 1998 for Florida were 2,200 acres.

Eggplant: Agricultural Chemical Applications,
New Jersey, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Napropamide	24	1.0	1.10	1.10	0.3
Insecticides:					
Naled	18	1.8	0.81	1.51	0.3
Fungicides:					
Copper hydroxide	29	3.4	0.79	2.71	0.8
Maneb	37	3.1	1.14	3.61	1.3
Other Chemicals:					
Metam-sodium	3	1.0	168.99	168.99	5.7

1/ Planted acres in 1998 for New Jersey were 1,000 acres.

Lettuce, Head: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
AZ	54,600	99	19,581	94	13,327	10	249
CA	142,000	93	25,696	75	15,953	80	11,325
NJ	1,300	71	182	71	107	71	168
NY	700	98	55	98	107	98	107
Total	198,600	94	45,514	80	29,494	61	11,849

Lettuce, Head: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
Arizona:	54,600					
Nitrogen		99	4.1	88	361	19,581
Phosphate		94	1.2	208	259	13,327
Potash		10	1.0	45	45	249
California:	142,000					
Nitrogen		93	2.8	67	195	25,696
Phosphate		75	2.0	72	151	15,953
Potash		80	1.6	59	99	11,325
New Jersey:	1,300					
Nitrogen		71	2.1	91	198	182
Phosphate		71	2.1	54	116	107
Potash		71	2.1	84	183	168
New York:	700					
Nitrogen		98	1.0	78	80	55
Phosphate		98	1.0	153	157	107
Potash		98	1.0	154	157	107
Total:	198,600					
Nitrogen		94	3.2	75	243	45,514
Phosphate		80	1.8	102	186	29,494
Potash		61	1.6	59	98	11,849

Lettuce, Head: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed				
	ALL	AZ	CA	NJ	NY
Herbicides:					
Benefin	P	P	P		
Bensulide	P	P	P	*	*
DCPA	*	*			
Diethatyl-ethyl	*	*			
Glyphosate	P	*	*		
Oxyfluorfen	*		*		
Paraquat	P	*	*		
Pronamide	P	P	P	*	*
Sethoxydim	P	P	P		
Trifluralin	*	*	*		
Insecticides:					
Abamectin	P		P		
Acephate	P	*	P	*	
Azadirachtin	P	*	*		
Bt (Bacillus thur.)	P	P	P	*	*
Carbaryl	P		P		
Cypermethrin	P	P	P		
Cyromazine	P	*	*	*	
Diazinon	P	*	P	*	
Dimethoate	P	*	P		*
Disulfoton	P	*	*		
Endosulfan	P	P	P		
Esfenvalerate	P	*	*		
Imidacloprid	P	P	P	*	*
Lambda-cyhalothrin	P	P	*	*	
Malathion	P	*	*		
Methamidophos	*		*		
Methiocarb	*		*		
Methomyl	P	P	P	P	
Methyl parathion	*		*		
Neem oil	*	*	*		
Oxamyl	P	P			
Oxydemeton-methyl	P		P		
Permethrin	P	P	P	*	*
Piperonyl butoxide	P		P		
Pyrethrins	P	*	*		
Rotenone	P		*	*	
Spinosad	P	P	P		
Tebufenozide	P	P	P		
Thiodicarb	P	P	P		
Tralomethrin	P	*	*		
Zeta-cypermethrin	P	P	P		

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Lettuce, Head: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed				
	ALL	AZ	CA	NJ	NY
Fungicides:					
Benomyl	*			*	
Chlorothalonil	*	*		*	*
Copper hydroxide	P		P		
Copper resinate	*		*		
Dicloran	P		P		
Fosetyl-al	P	*	P	*	
Iprodione	P	P	P	*	*
Maneb	P	*	P	*	
Mefenoxam	P	P	P		
Metalaxyl	P	P	P		
Sulfur	*	*	*		
Vinclozolin	P	P	P	*	*
Other Chemicals:					
Chloropicrin	*		*		
Mepiquat chloride	*	*			
Metam-sodium	*		*	*	
Methyl bromide	*		*		
Neem Oil, Hydrophob.	*	*			

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Lettuce, Head: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

		Area Receiving and Total Applied							
State:	Planted	-----							
:	Acreage	Herbicide	Insecticide 1/	Fungicide	Other Chemical				
:	Acres	Percent 1,000	Percent 1,000	Percent 1,000	Percent 1,000				
:		Lbs	Lbs	Lbs	Lbs				
AZ 2/:	54,600	51	55.3	91	111.6	77	142.3		
CA :	142,000	53	107.9	97	309.3	88	659.2		
NJ 2/:	1,300			68	1.0				
NY 2/:	700			97	0.6				
:									
Total:	198,600	52	168.2	95	422.5	85	803.9	*	84.2

* Area applied is less than one percent.

- 1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Lettuce, Head: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Benefin	10	1.1	1.09	1.24	24.3
Bensulide	11	1.0	3.43	3.68	78.7
Glyphosate	4	1.0	0.83	0.84	6.3
Paraquat	2	1.0	0.73	0.74	3.3
Pronamide	35	1.1	0.71	0.79	54.8
Sethoxydim	1	1.2	0.23	0.27	0.6
Insecticides:					
Abamectin	16	1.1	0.007	0.008	0.2
Acephate	55	1.3	0.81	1.11	120.3
Azadirachtin	3	1.0	0.008	0.008	*
Bt (Bacillus thur.)2/	31	1.3			
Carbaryl	1	1.0	1.38	1.39	1.8
Cypermethrin	55	1.4	0.08	0.11	12.3
Cyromazine	1	1.0	0.09	0.10	0.1
Diazinon	16	1.2	0.63	0.80	26.1
Dimethoate	21	1.2	0.22	0.28	11.9
Disulfoton	7	1.0	1.42	1.52	21.5
Endosulfan	7	1.1	0.78	0.90	12.3
Esfenvalerate	3	1.1	0.04	0.04	0.3
Imidacloprid	45	1.2	0.08	0.10	9.3
Lambda-cyhalothrin	8	1.4	0.03	0.04	0.6
Malathion	2	1.1	1.69	1.92	7.6
Methomyl	55	1.6	0.68	1.11	121.9
Oxamyl	0	1.0	0.89	0.89	0.2
Oxydemeton-methyl	4	1.0	0.44	0.46	3.9
Permethrin	77	1.9	0.15	0.29	43.8
Piperonyl butoxide	2	1.0	0.44	0.47	2.0
Pyrethrins	4	1.2	0.008	0.010	0.1
Rotenone	4	1.2	0.005	0.007	*
Spinosad	30	1.2	0.08	0.10	6.2
Tebufenozide	16	1.0	0.11	0.11	3.6
Thiodicarb	11	1.0	0.53	0.58	12.8
Tralomethrin	7	1.1	0.02	0.02	0.4
Zeta-cypermethrin	27	1.1	0.04	0.05	2.6
Fungicides:					
Copper hydroxide	**	1.1	0.25	0.28	0.2
Dicloran	6	1.0	1.38	1.41	17.3
Fosetyl-al	43	1.4	2.38	3.47	297.7
Iprodione	22	1.1	0.84	0.97	41.6
Maneb	76	1.9	1.35	2.69	408.0
Mefenoxam	6	1.0	0.21	0.22	2.6
Metalaxyl	2	1.0	0.30	0.32	1.1
Vinclozolin	19	1.0	0.84	0.88	34.1

* Total applied is less than 50 pounds.

** Area applied is less than 1 percent.

1/ Planted acres in 1998 for the 4 states surveyed were 198,600 acres.
States included are AZ, CA, NJ, and NY.

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

Lettuce, Head: Agricultural Chemical Applications,
Arizona, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Benefin	21	1.1	1.23	1.35	15.8
Bensulide	11	1.0	3.56	3.58	22.2
Pronamide	29	1.0	0.90	0.95	15.2
Sethoxydim	2	1.1	0.27	0.30	0.3
Insecticides:					
Bt (Bacillus thur.)2/	35	1.4			
Cypermethrin	70	1.5	0.08	0.12	4.7
Endosulfan	18	1.0	0.85	0.92	9.1
Imidacloprid	18	1.0	0.23	0.24	2.3
Lambda-cyhalothrin	24	1.5	0.03	0.04	0.5
Methomyl	80	2.0	0.67	1.33	57.9
Oxamyl	*	1.0	0.89	0.89	0.2
Permethrin	63	1.4	0.17	0.24	8.1
Spinosad	65	1.3	0.09	0.11	4.0
Tebufenozide	38	1.0	0.11	0.12	2.4
Thiodicarb	6	1.0	0.69	0.74	2.2
Zeta-cypermethrin	52	1.1	0.04	0.05	1.5
Fungicides:					
Iprodione	7	1.0	0.88	0.90	3.2
Mefenoxam	9	1.1	0.15	0.16	0.8
Metalaxyl	2	1.0	0.23	0.23	0.2
Vinclozolin	21	1.0	0.91	0.92	10.7

* Area applied is less than 1 percent.

1/ Planted acres in 1998 for Arizona were 54,600 acres.

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

Lettuce, Head: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Benefin	6	1.1	0.90	1.07	8.5
Bensulide	10	1.0	3.32	3.58	52.8
Pronamide	37	1.1	0.65	0.73	38.3
Sethoxydim	1	1.2	0.20	0.26	0.3
Insecticides:					
Abamectin	22	1.1	0.007	0.008	0.2
Acephate	69	1.4	0.81	1.14	112.2
Bt (Bacillus thur.)2/	30	1.3			
Carbaryl	1	1.0	1.38	1.39	1.8
Cypermethrin	50	1.3	0.08	0.11	7.5
Diazinon	17	1.3	0.58	0.76	18.9
Dimethoate	27	1.2	0.22	0.27	10.7
Endosulfan	3	1.3	0.64	0.85	3.2
Imidacloprid	56	1.2	0.07	0.09	6.9
Methomyl	47	1.3	0.69	0.96	63.5
Oxydemeton-methyl	6	1.0	0.44	0.46	3.9
Permethrin	83	2.0	0.14	0.30	35.0
Piperonyl butoxide	3	1.0	0.44	0.47	2.0
Spinosad	17	1.1	0.08	0.09	2.2
Tebufenozide	8	1.0	0.10	0.10	1.1
Thiodicarb	14	1.0	0.50	0.55	10.6
Zeta-cypermethrin	17	1.0	0.04	0.05	1.2
Fungicides:					
Copper hydroxide	*	1.1	0.25	0.28	0.2
Dicloran	9	1.0	1.38	1.41	17.3
Fosetyl-al	49	1.5	2.38	3.60	248.6
Iprodione	27	1.1	0.87	0.98	37.1
Maneb	80	2.1	1.36	2.89	329.7
Mefenoxam	5	1.0	0.25	0.25	1.8
Metalaxyl	2	1.0	0.33	0.34	0.9
Vinclozolin	18	1.0	0.85	0.87	22.6

* Area applied is less than 1 percent.

1/ Planted acres in 1998 for California were 142,000 acres.

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

Lettuce, Head: Agricultural Chemical Applications,
New Jersey, 1998 1/

Agricultural Chemical	Area Applied	Applcations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides:					
Methomyl	22	2.8	0.53	1.52	0.4

1/ Planted acres in 1998 for New Jersey were 1,300 acres.

Lettuce, Other: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
AZ	16,800	100	6,267	92	4,072	21	66
CA	71,000	97	13,650	81	5,208	80	4,648
FL	1,250	100	101	100	239	100	212
Total	89,050	97	20,018	83	9,519	69	4,926

Lettuce, Other: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Applcations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
Arizona:	16,800					
Nitrogen		100	4.3	86	373	6,267
Phosphate		92	1.2	212	265	4,072
Potash		21	1.0	19	19	66
California:	71,000					
Nitrogen		97	2.7	71	199	13,650
Phosphate		81	1.7	52	91	5,208
Potash		80	1.7	46	82	4,648
Florida:	1,250					
Nitrogen		100	1.9	42	82	101
Phosphate		100	1.0	187	193	239
Potash		100	1.0	166	171	212
Total:	89,050					
Nitrogen		97	3.0	75	231	20,018
Phosphate		83	1.6	79	129	9,519
Potash		69	1.7	47	81	4,926

Lettuce, Other: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed			
	ALL	AZ	CA	FL
Herbicides:				
Benefin	P	P	P	
Bensulide	P	P	P	
DCPA	*		*	
Diuron	*		*	
Glyphosate	P	*	*	
Imazethapyr	*			*
Paraquat	P	P	*	*
Pronamide	P	*	P	*
Sethoxydim	P	P	*	*
Trifluralin	*	*	*	
Insecticides:				
Abamectin	*		*	*
Acephate	P	P	P	
Azadirachtin	P	*	*	
Bt (Bacillus thur.)	P	P	P	P
Carbaryl	*		*	
Chlorpyrifos	*	*	*	
Cypermethrin	P	*	*	
Cyromazine	P	*	P	*
Diazinon	P	*	P	*
Dimethoate	P	P	P	
Disulfoton	P	*	*	
Endosulfan	P	P	*	*
Esfenvalerate	*	*	*	
Imidacloprid	P	*	P	*
Lambda-cyhalothrin	P	P	P	
Malathion	P		P	
Methomyl	P	*	P	*
Neem oil	P	*	*	
Oxydemeton-methyl	*		*	
Permethrin	P	*	P	*
Petroleum distillate	*			*
Piperonyl butoxide	P	*	*	
Potassium salts	P		P	
Pyrethrins	P	P	P	
Rotenone	P	*	*	
Spinosad	P	P	P	
Tebufenozide	P	P	P	
Thiodicarb	P	*	*	
Tralomethrin	P	*	*	
Zeta-cypermethrin	P	*	*	

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Lettuce, Other: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed			
	ALL	AZ	CA	FL
Fungicides:				
Chlorothalonil	*		*	
Copper hydroxide	P		*	*
Copper resinate	P		P	
Copper sulfate	*			*
Dicloran	P		P	
Fosetyl-al	P	P	P	
Iprodione	P	*	*	
Maneb	P	P	P	P
Mefenoxam	P	P	P	
Metalaxyl	P	*	P	*
Sulfur	*	*	*	
Vinclozolin	P	P	P	
Other Chemicals:				
Chloropicrin	*		*	
Cytokinins	*	*		
Garlic oil	*		*	
Maleic hydrazide	*		*	
Metam-sodium	*		*	
Methyl bromide	*		*	
Neem Oil, Hydrophob.	P	*	*	

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

Lettuce, Other: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

State:	Planted	Area Receiving and Total Applied							
		Herbicide		Insecticide 1/		Fungicide		Other Chemical	
	Acreage	Acres	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs
AZ	16,800	65	40.4	99	37.6	94	56.2	3	1.3
CA	71,000	51	53.8	94	120.2	87	357.2	4	436.5
FL	1,250	97	0.5	100	1.9	97	4.4		
Total:	89,050	54	94.7	95	159.7	88	417.8	4	437.8

1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.

Lettuce, Other: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appl- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Benefin	9	1.1	1.26	1.40	11.2
Bensulide	10	1.3	3.23	4.18	38.2
Glyphosate	1	1.0	0.80	0.83	1.0
Paraquat	2	1.0	0.53	0.54	0.8
Pronamide	39	1.6	0.75	1.24	43.1
Sethoxydim	1	1.4	0.25	0.37	0.2
Insecticides:					
Acephate	2	1.1	0.84	0.94	1.8
Azadirachtin	10	1.0	0.008	0.008	0.1
Bt (Bacillus thur.)2/	25	1.0			
Cypermethrin	5	1.4	0.07	0.11	0.5
Cyromazine	5	1.0	0.11	0.11	0.5
Diazinon	24	1.4	0.52	0.72	15.2
Dimethoate	28	1.2	0.23	0.29	7.2
Disulfoton	2	1.0	1.08	1.13	2.4
Endosulfan	6	1.1	0.74	0.87	4.9
Imidacloprid	61	2.5	0.06	0.14	7.8
Lambda-cyhalothrin	1	1.2	0.03	0.03	*
Malathion	1	1.0	0.91	0.96	0.8
Methomyl	46	2.1	0.64	1.36	56.4
Neem oil	1	1.1	2.07	2.29	2.9
Permethrin	72	3.5	0.14	0.49	31.5
Piperonyl butoxide	5	1.0	0.26	0.26	1.3
Potassium salts	3	1.0	7.06	7.06	18.6
Pyrethrins	19	1.0	0.010	0.010	0.2
Rotenone	14	1.0	0.005	0.006	0.1
Spinosad	26	1.2	0.08	0.11	2.4
Tebufenozide	11	1.0	0.11	0.12	1.2
Thiodicarb	5	1.0	0.54	0.57	2.6
Tralomethrin	14	1.0	0.02	0.02	0.3
Zeta-cypermethrin	3	2.1	0.04	0.09	0.3
Fungicides:					
Copper hydroxide	2	2.2	0.26	0.59	1.1
Copper resinate	5	1.0	0.09	0.09	0.4
Dicloran	4	1.0	1.41	1.48	5.8
Fosetyl-al	41	1.6	2.41	4.07	149.3
Iprodione	27	1.5	0.83	1.28	30.4
Maneb	74	2.3	1.40	3.33	220.7
Mefenoxam	8	1.0	0.16	0.17	1.3
Metalaxyl	2	1.1	0.22	0.25	0.4
Vinclozolin	8	1.1	0.88	0.97	7.2
Other Chemicals:					
Neem Oil, Hydrophob.	1	1.4	1.89	2.70	1.8

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for the 3 states surveyed were 89,050 acres. States included are AZ, CA, and FL.

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

Lettuce, Other: Agricultural Chemical Applications,
Arizona, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	Pounds per Acre	:	1,000 lbs
Herbicides:	:		:		:		:		:	
Benefin	:	29	:	1.1	:	1.33	:	1.55	:	7.6
Bensulide	:	15	:	1.9	:	4.31	:	8.44	:	21.6
Paraquat	:	2	:	1.0	:	0.70	:	0.71	:	0.3
Sethoxydim	:	2	:	1.7	:	0.26	:	0.45	:	0.2
Insecticides:	:		:		:		:		:	
Acephate	:	8	:	1.1	:	0.91	:	1.00	:	1.3
Bt (Bacillus thur.)2/	:	33	:	1.1	:		:		:	
Dimethoate	:	9	:	1.6	:	0.24	:	0.40	:	0.6
Endosulfan	:	21	:	1.1	:	0.78	:	0.92	:	3.2
Lambda-cyhalothrin	:	3	:	1.3	:	0.03	:	0.03	:	*
Pyrethrins	:	3	:	1.2	:	0.01	:	0.02	:	*
Spinosad	:	74	:	1.5	:	0.09	:	0.13	:	1.6
Tebufenozide	:	38	:	1.1	:	0.11	:	0.13	:	0.8
Fungicides:	:		:		:		:		:	
Fosetyl-al	:	44	:	1.2	:	2.45	:	2.95	:	21.9
Maneb	:	79	:	1.6	:	1.34	:	2.22	:	29.3
Mefenoxam	:	20	:	1.0	:	0.18	:	0.19	:	0.6
Vinclozolin	:	17	:	1.2	:	0.83	:	1.03	:	2.9

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Arizona were 16,800 acres.

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

Lettuce, Other: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Benefin	4	1.0	1.14	1.15	3.6
Bensulide	9	1.0	2.44	2.53	16.7
Pronamide	40	1.6	0.69	1.15	32.4
Insecticides:					
Acephate	1	1.1	0.71	0.82	0.5
Bt (Bacillus thur.)2/	23	1.0			
Cyromazine	5	1.0	0.11	0.11	0.4
Diazinon	26	1.4	0.50	0.71	13.1
Dimethoate	33	1.2	0.23	0.28	6.6
Imidacloprid	67	2.6	0.05	0.14	6.7
Lambda-cyhalothrin	1	1.0	0.03	0.03	*
Malathion	1	1.0	0.91	0.96	0.8
Methomyl	41	2.1	0.63	1.34	38.5
Permethrin	72	3.6	0.13	0.47	24.1
Potassium salts	4	1.0	7.06	7.06	18.6
Pyrethrins	23	1.0	0.01	0.01	0.2
Spinosad	14	1.0	0.08	0.08	0.8
Tebufozide	5	1.0	0.11	0.11	0.4
Fungicides:					
Copper resinate	7	1.0	0.09	0.09	0.4
Dicloran	6	1.0	1.41	1.48	5.8
Fosetyl-al	41	1.8	2.41	4.35	127.4
Maneb	73	2.5	1.42	3.63	187.9
Mefenoxam	6	1.0	0.15	0.15	0.6
Metalaxyl	2	1.1	0.20	0.22	0.3
Vinclozolin	6	1.0	0.91	0.93	4.2

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for California were 71,000 acres.

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

Lettuce, Other: Agricultural Chemical Applications,
Florida, 1998 1/

Agricultural Chemical	Area Applied	Applcations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides:					
Bt (Bacillus thur.)2/	2	1.8			
Fungicides:					
Maneb	97	2.9	1.00	2.89	3.5

1/ Planted acres in 1998 for Florida were 1,250 acres.

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

Melons, Cantaloupe: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
AZ	18,500	100	3,708	81	1,861	5	19
CA	63,000	94	9,766	53	6,858	8	361
DE	480	96	57	61	17	93	69
GA	5,500	85	553	66	328	84	572
IN	3,400	99	473	71	209	89	448
MI	1,000	87	86	76	64	87	109
TX	10,500	99	1,196	97	808	87	332
Total	102,380	95	15,839	64	10,145	23	1,910

Melons, Cantaloupe: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	: Planted : : Acreage :	Area : : Applied :	Appli- : : cations :	Rate per : : Application :	Rate per : : Crop Year :	Total : : Applied :
	: Acres	Percent	Number	Pounds per Acre		1,000 Lbs
Arizona:	: 18,500					
Nitrogen	:	100	2.7	73	200	3,708
Phosphate	:	81	1.0	114	125	1,861
Potash	:	5	1.9	11	23	19
California:	: 63,000					
Nitrogen	:	94	2.5	65	165	9,766
Phosphate	:	53	1.6	122	205	6,858
Potash	:	8	1.2	60	75	361
Delaware:	: 480					
Nitrogen	:	96	1.0	123	125	57
Phosphate	:	61	1.0	60	61	17
Potash	:	93	1.0	152	155	69
Georgia:	: 5,500					
Nitrogen	:	85	8.1	14	118	553
Phosphate	:	66	1.5	57	90	328
Potash	:	84	7.4	17	124	572
Indiana:	: 3,400					
Nitrogen	:	99	2.1	65	141	473
Phosphate	:	71	1.3	65	86	209
Potash	:	89	1.4	99	148	448
Michigan:	: 1,000					
Nitrogen	:	87	1.5	65	99	86
Phosphate	:	76	1.2	67	85	64
Potash	:	87	1.1	111	127	109
Texas:	: 10,500					
Nitrogen	:	99	3.4	34	115	1,196
Phosphate	:	97	2.5	32	79	808
Potash	:	87	2.6	14	36	332
Total:	: 102,380					
Nitrogen	:	95	2.9	56	163	15,839
Phosphate	:	64	1.6	94	155	10,145
Potash	:	23	3.0	26	79	1,910

Melons, Cantaloupe: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed								
	ALL	AZ	CA	DE	GA	IN	MI	TX	
Herbicides									
Atrazine	*				*				
Bensulide	P	P	P	*		P	P	*	
Chloramben	*					*	*		
Clomazone	P			*		*			
DCPA	P	*		*		*			
Diuron	*								*
Ethalfluralin	P		*	P	P	P	*	P	
Fluazifop-P-butyl	*								*
Glyphosate	P	*	*	*		*	*	*	
Metolachlor	*			*		*		*	
Napropamide	*					*			
Naptalam	P			*	*	P	P		
Oxyfluorfen	*		*						
Paraquat	P		*	*	*	P		*	
Pendimethalin	P							P	
Sethoxydim	P	*	P	*	P	P		*	
Terbacil	*			*					
Tribenuron-methyl	*		*						
Trifluralin	P	*	P	*	*	P	P	P	

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Melons, Cantaloupe: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed								
	ALL	AZ	CA	DE	GA	IN	MI	TX	
Insecticides									
Abamectin	P	*	*						
Azinphos-methyl	P	*					*		
Bifenthrin	P	*	*						
Bt (Bacillus thur.)	P	*	P		*			P	
Buprofezin	*	*							
Carbaryl	P	*	P	*	P	P	P	P	
Carbofuran	P			*		P	*	*	
Chlorpyrifos	*							*	
Cyfluthrin	*				*				
Cyromazine	*	*	*					*	
Diazinon	P	*	P	*	*	*	*	*	
Dicofol	P		P	*		*			
Dimethoate	P	*	*	*		*		*	
Endosulfan	P	P	P	*	P	P	P	*	
Esfenvalerate	P	P	P	*	P	*	P	*	
Ethyl parathion	*							*	
Fenamiphos	*				*				
Fenbutatin-oxide	*					*			
Imidacloprid	P	P	P		*			*	
Lambda-cyhalothrin	*			*		*	*		
Malathion	P	*	*		*	*		*	
Methamidophos	*							*	
Methomyl	P	*	P	*	P	*	*	*	
Neem oil	*	*							
Oxamyl	P	*	*			P			
Oxydemeton-methyl	*	*	*						
Permethrin	P	*	*		P	P	*	*	
Phorate	*						*		
Piperonyl butoxide	*				*				
Pseudomonas cepacia	*							*	
Pyrethrins	*				*				
Rotenone	*					*			
Soybean oil	*		*						
Spinosad	*				*				
Trichlorfon	*				*				

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Melons, Cantaloupe: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed								
	ALL	AZ	CA	DE	GA	IN	MI	TX	
Fungicides:									
Azoxystrobin	P	P		*	*				P
Basic copper sulfate	*								*
Benomyl	P	*	*	*	P	P	P		*
Captan	*					*			
Chlorothalonil	P	*	*	P	P	P	P		P
Copper chloride hyd.	*				*				
Copper hydroxide	P					P	P		*
Copper resinate	P					P			*
Copper sulfate	*					*		*	
Fosetyl-al	*				*			*	
Mancozeb	P	*			P	P	*		P
Maneb	P				P	*	*		*
Mefenoxam	P	*	*	*	*		*		*
Metalaxyl	P	*			*	P	P		P
Metiram	*					*			
Myclobutanil	P		P						
PCNB	*				*				
Sulfur	P	*	P		*	*	*		*
Thiophanate-methyl	P	*	*		*	P			*
Triadimefon	P	*	*	*		P	*		*
Ziram	*					*			
Other Chemicals:									
Chloropicrin	P					*	*		
Cytokinins	*	*				*			*
Dichloropropene	P	*			*				*
Gibberellic acid	*					*			*
IBA	*								*
Maleic hydrazide	*					*			
Metam-sodium	P	*	*			*	*		
Methyl bromide	P				*	P	*		
Neem Oil, Hydrophob.	*		*						

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Melons, Cantaloupe: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

Area Receiving and Total Applied									
State:	Planted	:-----							
:	Acreage	Herbicide	Insecticide 1/	Fungicide	Other Chemical				
:	Acres	Percent	1,000	Percent	1,000	Percent	1,000	Percent	1,000
:			Lbs		Lbs		Lbs		Lbs
AZ 2/:	18,500	74	38.0	59	13.3	55	48.1		
CA 2/:	63,000	31	29.4	70	48.7	47	423.2		
DE :	480	65	0.7	85	1.3	85	2.7		
GA 2/:	5,500	37	2.2	66	6.0	63	14.0		
IN :	3,400	94	8.3	97	8.0	96	29.5	15	58.8
MI 2/:	1,000	22	0.8	65	0.6	81	5.6		
TX :	10,500	57	29.4	44	4.0	63	15.9	14	73.5
:									
Total:	102,380	44	108.8	66	81.9	53	539.0	8	726.6

- 1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Melons, Cantaloupe: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
:	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	18	1.1	3.50	4.19	77.6
Clomazone	*	1.0	0.77	0.77	**
DCPA	*	1.0	2.02	2.02	0.1
Ethalfluralin	4	1.0	0.89	0.95	3.9
Glyphosate	5	1.4	0.70	1.04	5.0
Naptalam	2	1.0	2.11	2.23	4.6
Paraquat	4	1.1	0.59	0.70	3.0
Pendimethalin	*	1.0	0.71	0.71	0.1
Sethoxydim	3	1.1	0.15	0.18	0.5
Trifluralin	17	1.1	0.69	0.81	13.9
Insecticides:					
Abamectin	6	1.1	0.005	0.006	**
Azinphos-methyl	1	1.0	0.35	0.36	0.2
Bifenthrin	11	1.2	0.08	0.10	1.0
Bt (Bacillus thur.)2/	16	1.2			
Carbaryl	11	1.6	0.82	1.37	15.5
Carbofuran	3	1.0	0.56	0.59	1.8
Diazinon	8	1.2	0.58	0.72	5.6
Dicofol	9	1.2	0.53	0.67	6.5
Dimethoate	3	1.2	0.36	0.44	1.3
Endosulfan	14	1.5	0.74	1.15	16.8
Esfenvalerate	15	1.3	0.04	0.05	0.8
Imidacloprid	27	1.1	0.23	0.27	7.2

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Melons, Cantaloupe: Agricultural Chemical Applications,
States Surveyed, 1998 1/ (continued)

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides: (cont.)					
Malathion	2	1.0	0.55	0.57	1.2
Methomyl	16	1.2	0.54	0.66	10.7
Oxamyl	8	1.3	0.82	1.06	8.9
Permethrin	7	1.9	0.15	0.30	2.1
Fungicides:					
Azoxystrobin	8	1.5	0.16	0.26	2.0
Benomyl	10	1.2	0.24	0.30	3.2
Chlorothalonil	11	2.7	1.27	3.46	38.2
Copper hydroxide	1	3.2	0.41	1.32	1.0
Copper resinate	1	2.8	0.09	0.24	0.2
Mancozeb	7	2.2	1.47	3.25	21.7
Maneb	2	2.2	1.08	2.39	5.1
Mefenoxam	12	1.1	0.09	0.11	1.3
Metalaxyl	2	2.1	0.11	0.23	0.4
Myclobutanil	13	1.0	0.10	0.10	1.4
Sulfur	24	1.3	13.82	18.56	461.6
Thiophanate-methyl	2	2.2	0.25	0.57	1.0
Triadimefon	5	1.2	0.12	0.14	0.8
Other Chemicals:					
Chloropicrin	*	1.0	54.29	54.29	11.9
Dichloropropene	2	1.1	54.49	60.94	102.7
Metam-sodium	3	1.1	110.18	126.60	417.3
Methyl bromide	1	1.0	139.62	141.42	194.0

* Area applied is less than 1 percent.

** Total applied is less than 50 pounds.

1/ Planted acres in 1998 for the 7 states surveyed were 102,380 acres. States included are AZ, CA, DE, GA, IN, MI, and TX.

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

Melons, Cantaloupe: Agricultural Chemical Applications,
Arizona, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	67	1.0	2.82	2.92	36.3
Insecticides:					
Endosulfan	23	1.4	0.52	0.73	3.1
Esfenvalerate	29	1.2	0.03	0.04	0.2
Imidacloprid	37	1.0	0.24	0.26	1.8
Fungicides:					
Azoxystrobin	19	1.1	0.21	0.24	0.9

1/ Planted acres in 1998 for Arizona were 18,500 acres.

Melons, Cantaloupe: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	6	1.1	3.38	3.96	14.2
Sethoxydim	2	1.2	0.15	0.19	0.2
Trifluralin	20	1.0	0.63	0.67	8.4
Insecticides:					
Bt (Bacillus thur.)2/	14	1.1			
Carbaryl	9	1.1	0.91	1.02	5.6
Diazinon	8	1.0	0.46	0.49	2.4
Dicofol	15	1.2	0.52	0.67	6.4
Endosulfan	12	1.5	0.92	1.44	10.7
Esfenvalerate	12	1.1	0.04	0.04	0.3
Imidacloprid	29	1.2	0.23	0.28	5.0
Methomyl	24	1.2	0.56	0.67	10.0
Fungicides:					
Myclobutanil	22	1.0	0.10	0.10	1.4
Sulfur	34	1.3	14.75	19.30	418.6

1/ Planted acres in 1998 for California were 63,000 acres.

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

Melons, Cantaloupe: Agricultural Chemical Applications,
Delaware, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:	:				
Ethalfluralin	: 22	1.0	0.70	0.70	0.1
Fungicides:	:				
Chlorothalonil	: 85	4.2	1.54	6.55	2.7

1/ Planted acres in 1998 for Delaware were 480 acres.

Melons, Cantaloupe: Agricultural Chemical Applications,
Georgia, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:	:				
Ethalfluralin	: 12	1.0	0.57	0.57	0.4
Sethoxydim	: 13	1.0	0.18	0.18	0.1
Insecticides:	:				
Carbaryl	: 40	2.1	0.92	1.99	4.3
Endosulfan	: 24	1.8	0.44	0.83	1.1
Esfenvalerate	: 38	2.4	0.04	0.10	0.2
Methomyl	: 8	1.2	0.31	0.39	0.2
Permethrin	: 5	1.0	0.11	0.11	*
Fungicides:	:				
Benomyl	: 16	1.3	0.24	0.33	0.3
Chlorothalonil	: 56	2.5	1.14	2.89	8.9
Mancozeb	: 24	1.6	0.83	1.34	1.8
Maneb	: 23	2.0	0.72	1.45	1.8

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Georgia were 5,500 acres.

Melons, Cantaloupe: Agricultural Chemical Applications,
Indiana, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	: Number	: Pounds per Acre		: 1,000 lbs
Herbicides:	:	:	:	:	:
Bensulide	: 20	: 1.0	: 3.50	: 3.50	: 2.4
Ethalfuralin	: 62	: 1.0	: 1.08	: 1.18	: 2.5
Naptalam	: 38	: 1.0	: 2.03	: 2.19	: 2.9
Paraquat	: 11	: 1.0	: 0.46	: 0.49	: 0.2
Sethoxydim	: 22	: 1.2	: 0.19	: 0.24	: 0.2
Trifluralin	: 5	: 1.0	: 0.54	: 0.54	: 0.1
Insecticides:	:	:	:	:	:
Carbaryl	: 43	: 3.6	: 0.67	: 2.41	: 3.5
Carbofuran	: 48	: 1.0	: 0.67	: 0.67	: 1.1
Endosulfan	: 36	: 1.0	: 0.63	: 0.67	: 0.8
Oxamyl	: 13	: 1.4	: 1.50	: 2.11	: 1.0
Permethrin	: 61	: 3.6	: 0.13	: 0.49	: 1.0
Fungicides:	:	:	:	:	:
Benomyl	: 23	: 2.4	: 0.20	: 0.49	: 0.4
Chlorothalonil	: 71	: 4.3	: 1.37	: 5.96	: 14.4
Copper hydroxide	: 4	: 6.4	: 0.35	: 2.28	: 0.3
Copper resinate	: 19	: 2.8	: 0.09	: 0.24	: 0.2
Mancozeb	: 66	: 3.6	: 1.65	: 6.05	: 13.6
Metalaxyl	: 1	: 4.7	: 0.20	: 0.94	: *
Thiophanate-methyl	: 15	: 3.4	: 0.24	: 0.84	: 0.4
Triadimefon	: 24	: 1.2	: 0.11	: 0.14	: 0.1
Other Chemicals:	:	:	:	:	:
Methyl bromide	: 12	: 1.0	: 121.54	: 126.97	: 50.0

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Indiana were 3,400 acres.

Melons, Cantaloupe: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:	:				
Bensulide	: 11	1.0	3.95	3.95	0.4
Naptalam	: 9	1.2	2.22	2.70	0.2
Trifluralin	: 6	1.0	0.87	0.87	0.1
Insecticides:	:				
Carbaryl	: 11	2.5	1.16	2.93	0.3
Endosulfan	: 11	2.5	0.32	0.83	0.1
Esfenvalerate	: 21	2.8	0.04	0.12	*
Fungicides:	:				
Benomyl	: 7	1.8	0.42	0.78	0.1
Chlorothalonil	: 74	3.6	1.44	5.26	3.9
Copper hydroxide	: 35	2.9	0.48	1.42	0.5
Metalaxyl	: 18	1.4	0.15	0.22	*

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Michigan were 1,000 acres.

Melons, Cantaloupe: Agricultural Chemical Applications,
Texas, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:	:				
Ethalfluralin	: 11	1.1	0.54	0.59	0.7
Pendimethalin	: 2	1.0	0.72	0.72	0.1
Trifluralin	: 30	1.6	0.84	1.38	4.3
Insecticides:	:				
Bt (Bacillus thur.)2/	: 29	1.4			
Carbaryl	: 2	3.0	0.85	2.62	0.5
Fungicides:	:				
Azoxystrobin	: 26	1.9	0.14	0.28	0.8
Chlorothalonil	: 38	1.8	0.85	1.61	6.4
Mancozeb	: 18	1.4	1.46	2.07	4.0
Metalaxyl	: 11	2.3	0.10	0.22	0.3

1/ Planted acres in 1998 for Texas were 10,500 acres.

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

Melons, Honeydew: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
AZ	3,900	89	605	75	374	3	6
CA	20,500	97	4,171	81	3,458	12	71
TX	2,500	100	279	100	244	99	58
Total	26,900	96	5,055	82	4,076	19	135

Melons, Honeydew: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations Number	Rate per Application	Rate per Crop Year	Total Applied 1,000 Lbs
	Acres	Percent		Pounds per Acre		
Arizona:	3,900					
Nitrogen		89	2.6	66	174	605
Phosphate		75	1.1	113	127	374
Potash		3	1.3	40	54	6
California:	20,500					
Nitrogen		97	3.5	59	210	4,171
Phosphate		81	1.8	114	208	3,458
Potash		12	1.0	30	30	71
Texas:	2,500					
Nitrogen		100	10.0	11	112	279
Phosphate		100	6.6	15	98	244
Potash		99	6.6	4	24	58
Total:	26,900					
Nitrogen		96	4.0	48	195	5,055
Phosphate		82	2.2	81	185	4,076
Potash		19	3.8	7	27	135

Melons, Honeydew: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed			
	ALL	AZ	CA	TX
Herbicides:				
Bensulide	P	*	*	*
DCPA	*	*		
Ethalfluralin	P	*	*	*
Glyphosate	*		*	*
Metolachlor	*			*
Oxyfluorfen	*		*	
Paraquat	*		*	*
Sethoxydim	*	*	*	*
Trifluralin	P	*	*	P
Insecticides:				
Abamectin	P	*	*	
Acephate	*			*
Azinphos-methyl	*	*		
Bifenthrin	*	*	*	
Bt (Bacillus thur.)	P	*	P	*
Buprofezin	*	*	*	
Carbaryl	P	*	*	
Carbofuran	*			*
Chlorpyrifos	*			*
Cyromazine	*	*		*
Diazinon	P	*	*	*
Dicofol	*		*	
Dimethoate	P	*	*	*
Endosulfan	P	P	*	*
Esfenvalerate	P	*	*	
Imidacloprid	P	*	P	*
Malathion	*	*		
Methomyl	P		P	
Oxamyl	*	*	*	
Oxydemeton-methyl	*		*	
Permethrin	P		*	*
Pseudomonas cepacia	*			*
Spinosad	*			*

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Melons, Honeydew: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed			
	ALL	AZ	CA	TX
Fungicides:				
Azoxystrobin	P	*		*
Benomyl	*	*	*	
Chlorothalonil	P	*	*	*
Copper hydroxide	*		*	
Mancozeb	*	*		*
Maneb	*			*
Mefenoxam	*	*	*	
Metalaxyl	*	*		*
Myclobutanil	P		P	
Sulfur	P	*	*	
Thiophanate-methyl	*	*	*	
Triadimefon	P	*	*	*
Other Chemicals:				
Cytokinins	*	*	*	
Dichloropropene	*	*		*
Gibberellic acid	*		*	*
IBA	*			*
Metam-sodium	*	*	*	
Neem Oil, Hydrophob.	*		*	

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Melons, Honeydew: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

Area Receiving and Total Applied									
State:	Planted	:-----							
: Acreage	:	Herbicide	:	Insecticide 1/:	:	Fungicide	:	Other Chemical	:
:	Acres	Percent	1,000	Percent	1,000	Percent	1,000	Percent	1,000
:	:	:	Lbs	:	Lbs	:	Lbs	:	Lbs
AZ 2/:	3,900	45	5.9	61	2.0	74	4.4		
CA 2/:	20,500	30	8.8	78	19.2	45	48.7		
TX 2/:	2,500	42	6.1	99	3.0	99	7.8		
Total:	26,900	33	20.8	78	24.2	54	60.9	6	83.9

- 1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Melons, Honeydew: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
:	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	8	1.5	4.92	7.43	16.6
Ethalfuralin	1	1.5	1.02	1.53	0.4
Trifluralin	9	1.2	0.69	0.86	2.1
Insecticides:					
Abamectin	10	1.0	0.006	0.006	*
Bt (Bacillus thur.)2/:	17	2.1			
Carbaryl	19	1.1	0.48	0.57	2.9
Diazinon	16	1.5	0.64	1.01	4.5
Dimethoate	19	1.0	0.45	0.45	2.4
Endosulfan	8	2.0	0.47	0.94	1.9
Esfenvalerate	12	2.4	0.03	0.07	0.2
Imidacloprid	39	1.1	0.23	0.26	2.7
Methomyl	15	1.0	0.56	0.61	2.5
Permethrin	13	1.3	0.17	0.23	0.8
Fungicides:					
Azoxystrobin	13	1.6	0.18	0.30	1.1
Chlorothalonil	8	2.2	1.22	2.73	6.0
Myclobutanil	10	1.3	0.08	0.11	0.3
Sulfur	7	1.5	16.60	26.18	49.2
Triadimefon	5	1.3	0.10	0.13	0.2

- * Total applied is less 50 pounds.
- 1/ Planted acres in 1998 for the 3 states surveyed were 26,900 acres. States included are AZ, CA, and TX.
- 2/ Rates and total applied are not available because amounts of active ingredient are not comparable between products.

Melons, Honeydew: Agricultural Chemical Applications,
Arizona, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides:					
Endosulfan	23	1.4	0.62	0.90	0.8

1/ Planted acres in 1998 for Arizona were 3,900 acres.

Melons, Honeydew: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides:					
Bt (Bacillus thur.)2/	10	1.9			
Imidacloprid	43	1.1	0.23	0.25	2.3
Methomyl	20	1.0	0.56	0.61	2.5
Fungicides:					
Myclobutanil	12	1.3	0.08	0.11	0.3

1/ Planted acres in 1998 for California were 20,500 acres.

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

Melons, Honeydew: Agricultural Chemical Applications,
Texas, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Trifluralin	42	1.0	0.91	0.91	0.9

1/ Planted acres in 1998 for Texas were 2,500 acres.

Melons, Watermelons: Fertilizer Use by State, 1998
 Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
AZ	7,300	100	1,311	73	516	24	32
CA	16,900	90	1,800	71	780	65	536
DE	2,100	99	216	96	100	98	327
FL	35,000	99	5,022	89	3,839	99	6,754
GA	27,000	98	3,236	93	2,648	96	3,722
IN	6,900	99	980	82	512	94	945
NC	9,900	89	774	80	539	88	1,314
TX	41,000	97	3,520	93	2,561	70	1,544
Total	146,100	97	16,859	87	11,495	82	15,174

Melons, Watermelons: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	: Planted : : Acreage :	Area : : Applied :	Appli- : : cations :	: Rate per : : Application :	: Rate per : : Crop Year :	: Total : : Applied :
	: Acres	Percent	Number	Pounds per Acre		1,000 Lbs
Arizona:	: 7,300					
Nitrogen	:	100	3.1	58	180	1,311
Phosphate	:	73	1.5	64	97	516
Potash	:	24	2.2	9	19	32
California:	: 16,900					
Nitrogen	:	90	2.9	40	118	1,800
Phosphate	:	71	1.1	57	65	780
Potash	:	65	1.0	49	49	536
Delaware:	: 2,100					
Nitrogen	:	99	1.8	55	104	216
Phosphate	:	96	1.8	27	50	100
Potash	:	98	1.8	84	159	327
Florida:	: 35,000					
Nitrogen	:	99	5.5	26	144	5,022
Phosphate	:	89	2.3	52	123	3,839
Potash	:	99	5.5	35	194	6,754
Georgia:	: 27,000					
Nitrogen	:	98	4.4	27	122	3,236
Phosphate	:	93	1.5	69	105	2,648
Potash	:	96	3.9	36	143	3,722
Indiana:	: 6,900					
Nitrogen	:	99	1.7	84	143	980
Phosphate	:	82	1.1	76	91	512
Potash	:	94	1.2	113	145	945
North Carolina:	: 9,900					
Nitrogen	:	89	2.1	40	88	774
Phosphate	:	80	1.2	53	68	539
Potash	:	88	1.6	92	150	1,314
Texas:	: 41,000					
Nitrogen	:	97	2.3	38	89	3,520
Phosphate	:	93	1.8	36	67	2,561
Potash	:	70	2.0	26	54	1,544
Total:	: 146,100					
Nitrogen	:	97	3.5	33	119	16,859
Phosphate	:	87	1.7	51	90	11,495
Potash	:	82	3.3	38	127	15,174

Melons, Watermelons: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed									
	ALL	AZ	CA	DE	FL	GA	IN	NC	TX	
Herbicides:										
Alachlor	*			*						
Atrazine	*				*	*				
Benefin	*									*
Bensulide	P	P	*	*	*		P	*	*	
Bentazon	*						*			
Clomazone	P			*			*			
DCPA	*	*					*			
Diuron	*									*
Ethalfluralin	P	*	*	P	*	P	P	P	P	P
Fluazifop-P-butyl	P					*	P			*
Glyphosate	P	*	*	*	*		P			*
Metolachlor	P			*				*		
Napropamide	*						*			
Naptalam	P			P		*	P	P	*	
Oxyfluorfen	*		*							
Paraquat	P		*	*	*		P	*	*	
Pendimethalin	P					*				P
Pronamide	*					*				
Sethoxydim	P	*	*	*	*	P	P	*	P	
Terbacil	P			P						
Trifluralin	P	P	*	*		P	P	*	P	
Insecticides:										
Abamectin	P	*	P	*	*			*		
Acephate	*				*	*		*		
Azinphos-methyl	*				*					*
Bifenthrin	P	*	*							
Bt (Bacillus thur.)	P	*	P		P	*		*	*	
Buprofezin	*	*								
Carbaryl	P		*	*	*	P	P	P	P	
Carbofuran	P			*			P		*	
Chlorpyrifos	*									*
Cyfluthrin	*		*			*				
Cypermethrin	*					*				
Diazinon	P	*	*	*	*	*	*	*	*	*
Dicofol	P	*	P	*			P			
Dimethoate	P		*	P	P	*	P	*	P	
Endosulfan	P	*	*	*	P	*	P	*	P	
Esfenvalerate	P	*	*	*	*	*	*	P	*	
Imidacloprid	P	*	*							P
Lambda-cyhalothrin	*					*	*	*		
Malathion	P		*		*	*	*	*	*	
Methomyl	P	*	P	P	P	P	*	*	P	
Methoxychlor	*						*			
Naled	*				*					
Oxamyl	P	*	*		*	*	P		*	
Permethrin	P	*	*	*	*	P	P	*	*	
Piperonyl butoxide	*					*				
Propargite	*					*				
Pyrethrins	*					*				
Rotenone	*							*		

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Melons, Watermelons: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed									
	ALL	AZ	CA	DE	FL	GA	IN	NC	TX	
Fungicides:										
Azoxystrobin	P	*		P		*			*	
Basic copper sulfate	*					*				
Benomyl	P	*	*	*	P	P	P	P	*	
Captan	*					*		*		
Chlorothalonil	P	*	*	P	P	P	P	P	P	
Copper ammonium	*					*	*		*	
Copper hydroxide	P	*			P	*	P	*	P	
Copper resinate	P		*				P	*	*	
Copper sulfate	*	*				*		*		
Fosetyl-al	P	*	*		P				*	
Mancozeb	P	*			P	P	P	*	P	
Maneb	P	*			P	P	*	*	*	
Mefenoxam	P	*	*	*	*	*				
Metalaxyl	P	*	*	*	P	*	P	P	P	
Myclobutanil	*		*							
PCNB	*					*				
Sulfur	P	*	*			*		*	*	
Thiophanate-methyl	P	P		*	*	*	P	*	*	
Thiram	*				*					
Triadimefon	P		*	*	*		P	*	*	
Ziram	*						*			
Other Chemicals:										
Chloropicrin	P		*		*		*	*		
Cytokinins	*	*					*		*	
Dichloropropene	P	*				*				
Gibberellic acid	*						*		*	
IBA	*								*	
Maleic hydrazide	*						*			
Metam-sodium	*		*				*			
Methyl bromide	P		*	*	P		P	P		
Neem Oil, Hydrophob.	*	*								

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

Melons, Watermelons: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

Area Receiving and Total Applied									

State:	Planted								

	Acreage	Herbicide	Insecticide 1/	Fungicide	Other Chemical				

	Acres	Percent 1,000	Percent 1,000	Percent 1,000	Percent 1,000	Percent 1,000	Percent 1,000	Percent 1,000	
		Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	

AZ	7,300	40	13.1	25	1.4	76	6.6	38	183.6
CA 2/	16,900	39	3.9	77	14.4	55	298.9		
DE	2,100	95	3.2	32	1.3	41	5.9	11	31.2
FL	35,000	23	5.1	44	19.1	92	240.0	5	223.3
GA 2/	27,000	46	7.1	33	14.6	86	122.9		
IN	6,900	94	15.4	91	16.8	93	49.3	13	87.3
NC	9,900	63	5.3	29	0.9	58	20.1	5	64.3
TX 2/	41,000	54	14.9	40	21.9	52	70.9		

Total:	146,100	46	68.0	45	90.4	71	814.6	5	732.0

- 1/ Total applied excludes Bt's (*Bacillus thuringiensis*). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Melons, Watermelons: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	3	1.0	3.60	3.61	17.6
Clomazone	1	1.0	0.18	0.18	0.3
Ethalfluralin	16	1.0	0.77	0.80	19.0
Fluazifop-P-butyl	1	1.0	0.18	0.19	0.2
Glyphosate	3	1.1	0.46	0.55	2.3
Metolachlor	*	1.0	0.94	0.94	0.2
Naptalam	5	1.0	1.28	1.35	9.1
Paraquat	4	1.0	0.45	0.47	2.6
Pendimethalin	3	1.1	0.64	0.73	2.9
Sethoxydim	8	1.1	0.26	0.29	3.3
Terbacil	1	1.0	0.15	0.15	0.2
Trifluralin	10	1.1	0.59	0.64	9.4
Insecticides:					
Abamectin	2	2.0	0.006	0.01	**
Bifenthrin	1	1.4	0.06	0.09	0.1
Bt (Bacillus thur.)2/	11	3.0			
Carbaryl	7	2.3	0.81	1.91	18.9
Carbofuran	3	1.0	0.57	0.57	2.2
Diazinon	5	1.3	0.29	0.40	2.9
Dicofol	6	2.0	0.49	0.97	8.6
Dimethoate	6	1.5	0.41	0.62	5.3
Endosulfan	11	2.5	0.65	1.66	25.8
Esfenvalerate	4	1.8	0.03	0.06	0.4
Imidacloprid	1	1.5	0.16	0.24	0.5
Malathion	1	1.8	0.98	1.84	1.3
Methomyl	13	1.9	0.48	0.95	17.7
Oxamyl	1	1.2	1.18	1.43	2.8
Permethrin	6	2.0	0.10	0.21	1.8
Fungicides:					
Azoxystrobin	3	1.4	0.16	0.23	1.0
Benomyl	20	2.1	0.25	0.54	15.9
Chlorothalonil	54	2.6	1.24	3.28	258.6
Copper hydroxide	13	2.0	0.49	1.01	18.7
Copper resinate	2	3.5	0.08	0.27	0.6
Fosetyl-al	3	1.2	1.60	1.95	9.4
Mancozeb	30	3.1	1.30	4.13	182.0
Maneb	5	3.5	0.76	2.67	19.2
Mefenoxam	1	2.0	0.25	0.51	0.9
Metalaxyl	10	1.8	0.12	0.23	3.4
Sulfur	6	1.9	16.68	32.21	294.8
Thiophanate-methyl	6	2.0	0.35	0.71	5.7
Triadimefon	1	1.1	0.10	0.11	0.1
Other Chemicals:					
Chloropicrin	1	1.0	27.90	27.90	49.0
Dichloropropene	2	1.0	70.88	77.20	187.0
Methyl bromide	2	1.0	121.97	121.97	437.2

* Area applied is less than 1 percent.

** Total applied is less than 50 pounds.

1/ Planted acres in 1998 for the 8 states surveyed were 146,100 acres. States included are AZ, CA, DE, FL, GA, IN, NC, and TX.

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

Melons, Watermelons: Agricultural Chemical Applications,
Arizona, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	32	1.0	5.28	5.28	12.4
Trifluralin	7	1.1	0.65	0.76	0.4
Fungicides:					
Thiophanate-methyl	44	1.0	0.34	0.36	1.2

1/ Planted acres in 1998 for Arizona were 7,300 acres.

Melons, Watermelons: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides:					
Abamectin	15	2.2	0.006	0.01	*
Bt (Bacillus thur.)2/	50	3.1			
Dicofol	42	2.2	0.49	1.09	7.6
Methomyl	15	1.6	0.55	0.88	2.3

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for California were 16,900 acres.

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

Melons, Watermelons: Agricultural Chemical Applications,
Delaware, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Ethalfluralin	64	1.0	0.92	0.92	1.2
Naptalam	63	1.0	0.59	0.59	0.8
Terbacil	81	1.0	0.15	0.15	0.2
Insecticides:					
Dimethoate	15	1.9	0.53	1.00	0.3
Methomyl	19	2.5	0.56	1.42	0.6
Fungicides:					
Azoxystrobin	12	4.1	0.21	0.85	0.2
Chlorothalonil	40	3.7	1.76	6.68	5.6

1/ Planted acres in 1998 for Delaware were 2,100 acres.

Melons, Watermelons: Agricultural Chemical Applications,
Florida, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides:					
Bt (Bacillus thur.)2/	16	3.4			
Dimethoate	3	1.5	0.56	0.88	1.0
Endosulfan	7	5.2	0.39	2.06	4.9
Methomyl	23	2.6	0.46	1.20	9.7
Fungicides:					
Benomyl	33	2.5	0.28	0.71	8.2
Chlorothalonil	70	2.9	1.26	3.65	89.8
Copper hydroxide	21	2.5	0.50	1.28	9.5
Fosetyl-al	7	1.2	1.37	1.75	4.0
Mancozeb	65	3.8	1.27	4.86	111.2
Maneb	5	4.6	1.20	5.53	10.3
Metalaxyl	21	1.7	0.13	0.23	1.7
Other Chemicals:					
Methyl bromide	5	1.0	113.15	113.15	185.0

1/ Planted acres in 1998 for Florida were 35,000 acres.

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

Melons, Watermelons: Agricultural Chemical Applications,
Georgia, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Ethalfluralin	34	1.0	0.51	0.51	4.7
Sethoxydim	5	1.0	0.18	0.18	0.3
Trifluralin	4	1.0	0.61	0.61	0.7
Insecticides:					
Carbaryl	15	2.5	1.09	2.82	11.5
Methomyl	7	1.6	0.42	0.67	1.2
Permethrin	4	1.0	0.08	0.09	0.1
Fungicides:					
Benomyl	44	2.1	0.22	0.49	5.8
Chlorothalonil	83	3.2	1.14	3.63	81.5
Mancozeb	28	2.5	1.25	3.23	24.6
Maneb	16	3.5	0.51	1.81	7.9

1/ Planted acres in 1998 for Georgia were 27,000 acres.

Melons, Watermelons: Agricultural Chemical Applications,
Indiana, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	21	1.0	2.19	2.19	3.1
Ethalfluralin	56	1.0	1.21	1.24	4.8
Fluazifop-P-butyl	5	1.1	0.14	0.15	0.1
Glyphosate	1	1.0	0.99	0.99	0.1
Naptalam	46	1.1	1.83	2.05	6.5
Paraquat	13	1.2	0.40	0.49	0.4
Sethoxydim	9	1.2	0.19	0.23	0.2
Trifluralin	6	1.0	0.41	0.41	0.2
Insecticides:					
Carbaryl	50	2.8	0.59	1.65	5.7
Carbofuran	31	1.0	0.79	0.79	1.7
Dicofol	19	1.2	0.45	0.58	0.8
Dimethoate	31	2.4	0.44	1.08	2.3
Endosulfan	45	1.7	0.70	1.21	3.7
Oxamyl	11	1.1	1.99	2.18	1.6
Permethrin	41	3.0	0.09	0.28	0.8
Fungicides:					
Benomyl	15	2.3	0.20	0.45	0.5
Chlorothalonil	64	3.4	1.17	4.06	18.0
Copper hydroxide	9	4.0	0.33	1.32	0.8
Copper resinate	27	4.0	0.07	0.29	0.6
Mancozeb	60	3.7	1.69	6.35	26.4
Metalaxyl	2	4.9	0.20	0.99	0.1
Thiophanate-methyl	33	3.0	0.37	1.12	2.6
Triadimefon	5	1.3	0.07	0.10	*
Other Chemicals:					
Methyl bromide	9	1.0	123.65	123.65	80.2

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Indiana were 6,900 acres.

Melons, Watermelons: Agricultural Chemical Applications,
North Carolina, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Ethalfluralin	43	1.0	0.93	0.97	4.1
Naptalam	6	1.0	1.39	1.39	0.8
Insecticides:					
Carbaryl	6	1.5	0.62	0.96	0.5
Esfenvalerate	14	1.0	0.02	0.03	*
Fungicides:					
Benomyl	15	1.2	0.24	0.31	0.5
Chlorothalonil	54	1.8	1.43	2.60	13.8
Metalaxyl	13	1.0	0.10	0.10	0.1
Other Chemicals:					
Methyl bromide	5	1.0	116.15	116.15	59.8

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for North Carolina were 9,900 acres.

Melons, Watermelons: Agricultural Chemical Applications,
Texas, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Ethalfluralin	6	1.0	0.78	0.78	2.0
Pendimethalin	9	1.0	0.63	0.68	2.5
Sethoxydim	7	1.3	0.15	0.19	0.6
Trifluralin	30	1.1	0.58	0.64	7.8
Insecticides:					
Carbaryl	1	1.0	0.70	0.73	0.2
Dimethoate	6	1.0	0.34	0.34	0.8
Endosulfan	19	2.3	0.80	1.90	14.8
Imidacloprid	2	1.9	0.11	0.21	0.2
Methomyl	13	1.4	0.48	0.68	3.7
Fungicides:					
Chlorothalonil	45	1.8	1.34	2.41	44.3
Copper hydroxide	22	1.7	0.51	0.87	7.9
Mancozeb	16	2.0	1.16	2.36	15.5
Metalaxyl	11	2.0	0.11	0.22	0.9

1/ Planted acres in 1998 for Texas were 41,000 acres.

Onions, Dry: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acres	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
AZ	2,500	100	528	99	570		
CA	39,000	99	8,840	83	3,816	63	1,508
GA	15,000	100	2,031	100	1,808	100	2,754
MI	4,900	100	545	98	555	98	990
NY	13,100	100	1,602	98	1,472	98	2,227
OR	19,800	99	5,395	93	2,552	84	2,330
TX	16,200	100	3,289	95	1,617	66	545
WA	20,650	96	4,497	96	2,313	92	2,163
WI	2,100	100	222	96	205	100	590
Total	133,250	99	26,949	92	14,908	79	13,107

Onions, Dry: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acres	Area Applied Percent	Appli- cations Number	Rate per Application Pounds per Acre	Rate per Crop Year	Total Applied 1,000 Lbs
Arizona:	2,500					
Nitrogen		100	3.9	54	211	528
Phosphate		99	1.2	187	231	570
Potash		*	1.0	56	56	**
California:	39,000					
Nitrogen		99	4.3	53	228	8,840
Phosphate		83	1.9	60	117	3,816
Potash		63	1.5	39	61	1,508
Georgia:	15,000					
Nitrogen		100	4.7	29	135	2,031
Phosphate		100	3.1	38	121	1,808
Potash		100	3.1	59	184	2,754
Michigan:	4,900					
Nitrogen		100	2.5	44	111	545
Phosphate		98	1.1	98	115	555
Potash		98	1.6	125	206	990
New York:	13,100					
Nitrogen		100	1.4	86	122	1,602
Phosphate		98	1.2	91	115	1,472
Potash		98	1.2	141	174	2,227
Oregon:	19,800					
Nitrogen		99	3.8	72	274	5,395
Phosphate		93	1.2	112	138	2,552
Potash		84	3.3	42	141	2,330

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Onions, Dry: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998 (continued)

Primary Nutrient	: Planted : : Acreage	: Area : : Applied	: Appli- : : cations	: Rate per : : Application	: Rate per : : Crop Year	: Total : : Applied
	: Acres	Percent	Number	Pounds per Acre		1,000 Lbs
Texas:	: 16,200					
Nitrogen	:	100	4.9	41	203	3,289
Phosphate	:	95	2.0	52	105	1,617
Potash	:	66	2.3	21	51	545
Washington:	: 20,650					
Nitrogen	:	96	5.5	41	227	4,497
Phosphate	:	96	1.1	102	117	2,313
Potash	:	92	1.0	106	114	2,163
Wisconsin:	: 2,100					
Nitrogen	:	100	1.4	72	106	222
Phosphate	:	96	1.1	87	102	205
Potash	:	100	1.7	162	282	590
Total:	: 133,250					
Nitrogen	:	99	4.1	49	204	26,949
Phosphate	:	92	1.7	70	121	14,908
Potash	:	79	2.0	61	124	13,107

* Area applied is less than 1 percent.

** Total applied is less than 50 percent.

Onions, Dry: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed					
	ALL	AZ	CA	GA	MI	NY
Herbicides:						
2,4-D	P		*	*		
Alachlor	*			*		
Atrazine	*					
Bensulide	P	*				
Bentazon	*				*	*
Bromoxynil	P	*	P		P	P
Clethodim	P		P		*	*
DCPA	P	P	P			
Dicamba	*					
Ethofumesate	*					
Fluazifop-P-butyl	P	*	P	*	P	P
Glyphosate	P		*		*	P
Metolachlor	P				P	P
Napropamide	*					
Naptalam	*					
Oxyfluorfen	P	*	P	P	P	P
Paraquat	P				*	*
Pendimethalin	P	*	P	P	P	P
Sethoxydim	P	*	P			*
Trifluralin	P				P	
Insecticides:						
Azadirachtin	*		*			
Azinphos-methyl	P				*	
Bt (Bacillus thur.)	P		*			*
Carbaryl	*		*			*
Chlorpyrifos	P	*	P	P	P	P
Cypermethrin	P	*	P		P	P
Diazinon	P	*	P	P	*	*
Dimethoate	P	*			*	
Endosulfan	*				*	
Esfenvalerate	*			*	*	
Fonofos	*		*			
Lambda-cyhalothrin	P	*			P	P
Malathion	P		P		*	*
Methomyl	P	*	P		*	*
Methyl parathion	P	*	*		P	P
Neem oil	*		*			
Oxamyl	P		*		*	
Oxydemeton-methyl	*		*			
Permethrin	P	*	P	*	P	P
Petroleum distillate	*					*
Potassium salts	*		*			
Pyrethrins	*		*			
Rotenone	*		*			
Tebufenozide	*					
Zeta-cypermethrin	P	*	*		*	P

--continued

Onions, Dry: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed					
	ALL	AZ	CA	GA	MI	NY
Fungicides:						
Basic copper sulfate	*					
Benomyl	*			*		
Chlorothalonil	P	*	P	P	P	P
Copper ammonium	P					*
Copper hydroxide	P	*	P	P	P	P
Copper oxychlo. sul.	*					*
Copper resinate	*		*		*	
Dicloran	*		*			
Dinocap	*			*		
Fosetyl-al	P	*	*			
Iprodione	P		P	P	P	P
Mancozeb	P	*	P	P	P	P
Maneb	P	*	P	*	*	P
Mefenoxam	P	*	P			
Metalaxyl	P	*	P	*	P	P
Metiram	*					
Sulfur	P		P	P		*
Tebuconazole	*		*			
Triadimefon	*					*
Vinclozolin	P			*		*
Other Chemicals:						
Chloropicrin	P					
Cytokinins	*					
Dichloropropene	P					
Maleic hydrazide	P		P			P
Metam-sodium	P		*			
Methyl bromide	*					
Neem Oil, Hydrophob.	*		*	*		*

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Onions, Dry: Active Ingredient Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed			
	OR	TX	WA	WI
Herbicides:				
2,4-D	*			
Alachlor	*			
Atrazine	*			
Bensulide	*	P		
Bentazon				
Bromoxynil	P	*	P	P
Clethodim	P		*	
DCPA	P	P	P	
Dicamba		*		
Ethofumesate	*			
Fluazifop-P-butyl	P	*	P	P
Glyphosate	P	*	P	
Metolachlor	*	*		*
Napropamide				*
Naptalam				*
Oxyfluorfen	P	P	P	*
Paraquat				
Pendimethalin	P	*	P	P
Sethoxydim	P	*	P	P
Trifluralin	P	P		
Insecticides:				
Azadirachtin				
Azinphos-methyl	*		*	
Bt (Bacillus thur.)		*		
Carbaryl				
Chlorpyrifos	P	*	P	*
Cypermethrin		P		*
Diazinon	P	P		*
Dimethoate	*	*	*	
Endosulfan	*			
Esfenvalerate				
Fonofos				
Lambda-cyhalothrin	P	P	P	P
Malathion	P	*	*	
Methomyl	P	P		
Methyl parathion	P	*	*	*
Neem oil				
Oxamyl	P	*	*	
Oxydemeton-methyl	*			
Permethrin	*	P	*	*
Petroleum distillate				
Potassium salts				*
Pyrethrins				
Rotenone				
Tebufenozide		*		
Zeta-cypermethrin	P		*	

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Onions, Dry: Active Ingredient Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed			
	OR	TX	WA	WI
Fungicides:				
Basic copper sulfate		*		
Benomyl				
Chlorothalonil	P	P	P	*
Copper ammonium	*		P	
Copper hydroxide	P	*	P	
Copper oxychlo. sul.				
Copper resinate				
Dicloran			*	
Dinocap				
Fosetyl-al	*	P		
Iprodione	*	P	*	P
Mancozeb	P	P	*	P
Maneb	P	*	*	
Mefenoxam	P	*		
Metalaxyl	P	P	P	*
Metiram	*			
Sulfur	*	*	*	
Tebuconazole				
Triadimefon				
Vinclozolin	*		*	
Other Chemicals:				
Chloropicrin	*		*	
Cytokinins	*			
Dichloropropene	*		*	
Maleic hydrazide	P		*	*
Metam-sodium	P		*	
Methyl bromide			*	
Neem Oil, Hydrophob.				

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Onions, Dry: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

		Area Receiving and Total Applied							
State:	Planted	-----							
:	Acreage	Herbicide	Insecticide 1/	Fungicide	Other Chemical				
:	Acres	Percent 1,000	Percent 1,000	Percent 1,000	Percent 1,000				
:		Lbs	Lbs	Lbs	Lbs				
:									
AZ	: 2,500	88	7.5	86	0.8	79	7.8		
CA	: 39,000	82	106.6	67	36.1	86	177.9	17	226.0
GA 2/	: 15,000	99	5.2	76	12.4	100	153.4		
MI	: 4,900	98	18.1	98	7.5	97	32.9		
NY	: 13,100	97	47.7	99	21.7	99	211.5	28	10.4
OR	: 19,800	99	52.0	96	38.9	98	131.1	76	1,671.6
TX	: 16,200	55	25.7	84	15.9	74	67.0		
WA	: 20,650	80	23.9	59	8.7	59	37.6	22	267.1
WI 2/	: 2,100	100	11.4	95	0.4	99	21.0		
:									
Total:	133,250	85	298.1	78	142.4	86	840.2	24	2,177.9

- 1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Onions, Dry: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
2,4-D	*	1.8	0.72	1.34	0.6
Bensulide	5	1.0	3.92	3.99	25.7
Bromoxynil	41	1.5	0.16	0.24	13.3
Clethodim	5	1.3	0.14	0.19	1.2
DCPA	14	1.1	5.36	6.29	115.3
Fluazifop-P-butyl	22	1.2	0.21	0.25	7.4
Glyphosate	12	1.2	0.59	0.72	11.3
Metolachlor	2	1.2	2.36	2.91	7.7
Oxyfluorfen	60	2.1	0.08	0.18	14.6
Paraquat	*	1.1	0.78	0.92	0.2
Pendimethalin	40	1.7	1.02	1.79	95.5
Sethoxydim	6	1.2	0.23	0.29	2.5
Trifluralin	2	1.0	0.61	0.62	1.4
Insecticides:					
Azinphos-methyl	5	1.7	0.49	0.85	5.6
Bt (Bacillus thur.)2/	*	1.5			
Chlorpyrifos	33	1.0	1.03	1.11	49.1
Cypermethrin	16	1.9	0.09	0.16	3.5
Diazinon	9	1.3	1.73	2.28	26.1
Dimethoate	1	1.1	0.41	0.48	0.4
Lambda-cyhalothrin	31	2.5	0.03	0.07	2.8
Malathion	4	1.4	1.28	1.84	10.5
Methomyl	10	1.9	0.48	0.92	12.0
Methyl parathion	6	1.8	0.51	0.95	8.0
Oxamyl	5	1.4	0.83	1.20	8.5
Permethrin	18	2.5	0.13	0.34	8.1
Zeta-cypermethrin	10	2.2	0.04	0.09	1.3
Fungicides:					
Chlorothalonil	55	3.2	1.20	3.88	284.1
Copper ammonium	3	1.6	0.30	0.48	1.7
Copper hydroxide	28	2.4	0.72	1.76	66.0
Fosetyl-al	5	1.4	1.34	1.88	12.6
Iprodione	19	2.2	0.60	1.36	35.4
Mancozeb	43	3.2	1.44	4.73	272.1
Maneb	18	3.5	1.62	5.70	136.3
Mefenoxam	16	1.8	0.09	0.17	3.7
Metalaxyl	26	1.4	0.17	0.24	8.3
Sulfur	4	2.0	1.92	3.83	17.9
Vinclozolin	1	1.3	0.61	0.85	1.2
Other Chemicals:					
Chloropicrin	3	1.0	34.78	35.26	154.4
Dichloropropene	5	1.0	168.98	171.77	1,066.3
Maleic hydrazide	17	1.0	1.82	1.89	41.8
Metam-sodium	5	1.0	119.40	125.15	907.7

* Area applied is less than 1 percent.

1/ Planted acres in 1998 for the 9 states surveyed were 133,250 acres.
States included are AZ, CA, GA, MI, NY, OR, TX, WA, and WI.

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

Onions, Dry: Agricultural Chemical Applications,
Arizona, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
DCPA	75	1.0	3.19	3.19	6.0

1/ Planted acres in 1998 for Arizona were 2,500 acres.

Onions, Dry: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bromoxynil	59	1.5	0.18	0.27	6.2
Clethodim	9	1.4	0.16	0.24	0.8
DCPA	29	1.1	6.50	7.66	85.3
Fluazifop-P-butyl	16	1.0	0.21	0.23	1.4
Oxyfluorfen	67	1.6	0.13	0.21	5.6
Pendimethalin	13	1.3	0.90	1.17	5.8
Sethoxydim	7	1.2	0.22	0.26	0.7
Insecticides:					
Chlorpyrifos	9	1.3	0.96	1.33	4.4
Cypermethrin	37	2.0	0.09	0.18	2.6
Diazinon	10	1.5	2.09	3.25	13.2
Malathion	2	2.0	1.37	2.82	2.6
Methomyl	10	1.3	0.68	0.90	3.6
Permethrin	31	1.3	0.19	0.25	3.0
Fungicides:					
Chlorothalonil	55	1.8	1.36	2.52	53.7
Copper hydroxide	24	1.7	0.76	1.32	12.2
Iprodione	20	1.4	0.69	1.02	8.0
Mancozeb	31	1.7	1.64	2.90	35.5
Maneb	24	3.1	1.62	5.07	48.1
Mefenoxam	49	1.8	0.09	0.17	3.2
Metalaxyl	35	1.3	0.18	0.23	3.1
Sulfur	4	1.0	5.45	5.83	9.8
Other Chemicals:					
Maleic hydrazide	16	1.0	1.77	1.86	11.5

1/ Planted acres in 1998 for California were 39,000 acres.

Onions, Dry: Agricultural Chemical Applications,
Georgia, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Oxyfluorfen	99	1.0	0.25	0.25	3.8
Pendimethalin	9	1.0	0.87	0.87	1.2
Insecticides:					
Chlorpyrifos	73	1.0	1.00	1.05	11.6
Diazinon	6	1.2	0.70	0.88	0.8
Fungicides:					
Chlorothalonil	98	5.0	1.36	6.90	101.9
Copper hydroxide	36	4.9	0.75	3.67	19.5
Iprodione	15	4.8	0.95	4.63	10.5
Mancozeb	35	5.0	0.63	3.18	16.9
Sulfur	5	5.8	0.47	2.71	2.2

1/ Planted acres in 1998 for Georgia were 15,000 acres.

Onions, Dry: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bromoxynil	29	1.3	0.16	0.21	0.3
Fluazifop-P-butyl	69	1.3	0.15	0.19	0.7
Metolachlor	14	1.1	2.97	3.40	2.4
Oxyfluorfen	74	3.1	0.04	0.14	0.5
Pendimethalin	87	1.8	1.75	3.26	13.8
Trifluralin	*	1.0	0.72	0.77	**
Insecticides:					
Chlorpyrifos	47	1.0	2.07	2.07	4.8
Cypermethrin	26	1.9	0.08	0.15	0.2
Lambda-cyhalothrin	83	2.1	0.03	0.06	0.2
Methyl parathion	14	1.6	0.47	0.78	0.5
Permethrin	27	5.0	0.11	0.56	0.7
Fungicides:					
Chlorothalonil	51	2.7	1.15	3.17	7.9
Copper hydroxide	26	2.9	0.47	1.37	1.8
Iprodione	76	1.7	0.54	0.93	3.5
Mancozeb	78	2.8	1.62	4.62	17.6
Metalaxyl	24	1.3	0.12	0.17	0.2

* Area applied is less than 1 percent.

** Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Michigan were 4,900 acres.

Onions, Dry: Agricultural Chemical Applications,
New York, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	1,000 lbs	:	
Herbicides:	:		:		:		:		:	
Bromoxynil	:	34	:	1.0	:	0.20	:	0.21	:	0.9
Fluazifop-P-butyl	:	47	:	1.0	:	0.18	:	0.20	:	1.2
Glyphosate	:	12	:	2.8	:	0.78	:	2.19	:	3.6
Metolachlor	:	11	:	1.1	:	2.12	:	2.38	:	3.3
Oxyfluorfen	:	53	:	6.5	:	0.009	:	0.06	:	0.4
Pendimethalin	:	97	:	2.7	:	1.10	:	3.00	:	38.1
Insecticides:	:		:		:		:		:	
Chlorpyrifos	:	49	:	1.0	:	1.67	:	1.70	:	10.9
Cypermethrin	:	15	:	1.7	:	0.09	:	0.15	:	0.3
Lambda-cyhalothrin	:	51	:	3.9	:	0.02	:	0.09	:	0.6
Methyl parathion	:	7	:	4.2	:	0.57	:	2.42	:	2.1
Permethrin	:	49	:	4.4	:	0.12	:	0.55	:	3.5
Zeta-cypermethrin	:	25	:	4.2	:	0.04	:	0.17	:	0.6
Fungicides:	:		:		:		:		:	
Chlorothalonil	:	78	:	6.4	:	0.88	:	5.67	:	57.7
Copper hydroxide	:	7	:	1.7	:	0.36	:	0.63	:	0.6
Iprodione	:	44	:	3.0	:	0.36	:	1.12	:	6.5
Mancozeb	:	56	:	6.9	:	1.69	:	11.71	:	85.8
Maneb	:	35	:	7.4	:	1.77	:	13.13	:	59.4
Metalaxyl	:	23	:	1.1	:	0.15	:	0.17	:	0.5
Other Chemicals:	:		:		:		:		:	
Maleic hydrazide	:	26	:	1.0	:	2.60	:	2.60	:	8.9

1/ Planted acres in 1998 for New York were 13,100 acres.

Onions, Dry: Agricultural Chemical Applications,
Oregon, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	1,000 lbs	:	
Herbicides:	:		:		:		:		:	
Bromoxynil	:	78	:	1.9	:	0.13	:	0.25	:	3.9
Clethodim	:	5	:	1.0	:	0.15	:	0.15	:	0.2
DCPA	:	9	:	1.0	:	4.34	:	4.61	:	8.4
Fluazifop-P-butyl	:	20	:	1.0	:	0.29	:	0.31	:	1.2
Glyphosate	:	52	:	1.0	:	0.55	:	0.57	:	6.0
Oxyfluorfen	:	67	:	2.2	:	0.07	:	0.15	:	2.0
Pendimethalin	:	84	:	1.4	:	0.86	:	1.20	:	19.8
Sethoxydim	:	13	:	1.4	:	0.18	:	0.26	:	0.7
Trifluralin	:	7	:	1.0	:	0.55	:	0.55	:	0.7
Insecticides:	:		:		:		:		:	
Chlorpyrifos	:	78	:	1.0	:	0.96	:	0.97	:	14.9
Diazinon	:	12	:	1.1	:	0.60	:	0.67	:	1.6
Lambda-cyhalothrin	:	91	:	2.7	:	0.03	:	0.08	:	1.4
Malathion	:	21	:	1.3	:	1.31	:	1.78	:	7.2
Methomyl	:	19	:	1.1	:	0.63	:	0.74	:	2.8
Methyl parathion	:	28	:	1.6	:	0.49	:	0.80	:	4.5
Oxamyl	:	16	:	1.7	:	0.97	:	1.69	:	5.4
Zeta-cypermethrin	:	7	:	1.4	:	0.04	:	0.06	:	0.1
Fungicides:	:		:		:		:		:	
Chlorothalonil	:	62	:	1.8	:	1.32	:	2.45	:	30.2
Copper hydroxide	:	58	:	2.3	:	0.65	:	1.52	:	17.6
Mancozeb	:	88	:	2.5	:	1.57	:	4.02	:	70.3
Maneb	:	12	:	2.3	:	1.15	:	2.70	:	6.3
Mefenoxam	:	3	:	1.4	:	0.20	:	0.30	:	0.2
Metalaxyl	:	53	:	1.5	:	0.18	:	0.28	:	2.9
Other Chemicals:	:		:		:		:		:	
Maleic hydrazide	:	41	:	1.0	:	1.78	:	1.78	:	14.5
Metam-sodium	:	27	:	1.0	:	110.53	:	110.73	:	592.2

1/ Planted acres in 1998 for Oregon were 19,800 acres.

Onions, Dry: Agricultural Chemical Applications,
Texas, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	26	1.0	4.03	4.14	17.6
DCPA	11	1.5	1.94	2.93	5.4
Oxyfluorfen	36	1.3	0.07	0.10	0.6
Trifluralin	6	1.0	0.69	0.72	0.6
Insecticides:					
Cypermethrin	14	1.4	0.08	0.12	0.3
Diazinon	18	1.2	2.65	3.28	9.8
Lambda-cyhalothrin	33	1.9	0.02	0.05	0.2
Methomyl	28	3.1	0.36	1.14	5.1
Permethrin	16	2.0	0.06	0.11	0.3
Fungicides:					
Chlorothalonil	35	2.9	1.22	3.59	20.2
Fosetyl-al	30	1.5	1.13	1.70	8.3
Iprodione	25	1.9	0.66	1.25	5.0
Mancozeb	32	3.7	1.08	4.06	20.8
Metalaxyl	27	1.7	0.13	0.22	1.0

1/ Planted acres in 1998 for Texas were 16,200 acres.

Onions, Dry: Agricultural Chemical Applications,
Washington, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bromoxynil	39	1.4	0.16	0.23	1.8
DCPA	8	1.0	5.68	6.17	10.3
Fluazifop-P-butyl	32	1.5	0.21	0.32	2.2
Glyphosate	14	1.0	0.41	0.41	1.2
Oxyfluorfen	34	1.6	0.11	0.17	1.2
Pendimethalin	38	1.5	0.54	0.85	6.6
Sethoxydim	9	1.0	0.29	0.29	0.5
Insecticides:					
Chlorpyrifos	24	1.2	0.33	0.40	2.0
Lambda-cyhalothrin	24	1.2	0.02	0.03	0.1
Fungicides:					
Chlorothalonil	15	1.2	1.35	1.70	5.3
Copper ammonium	15	1.4	0.32	0.44	1.4
Copper hydroxide	31	1.4	0.60	0.90	5.8
Metalaxyl	7	1.5	0.22	0.34	0.5

1/ Planted acres in 1998 for Washington were 20,650 acres.

Onions, Dry: Agricultural Chemical Applications,
Wisconsin, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bromoxynil	77	1.1	0.07	0.08	0.1
Fluazifop-P-butyl	87	1.1	0.18	0.20	0.4
Pendimethalin	99	2.0	1.96	3.97	8.3
Sethoxydim	19	2.3	0.26	0.59	0.2
Insecticides:					
Lambda-cyhalothrin	84	2.7	0.02	0.06	0.1
Fungicides:					
Iprodione	91	1.9	0.41	0.82	1.6
Mancozeb	99	4.2	1.73	7.40	15.4

1/ Planted acres in 1998 for Wisconsin were 2,100 acres.

Peas, Green, Proc.: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
MN	88,000	60	1,357	60	2,044	61	3,280
NY	19,600	100	812	100	1,407	97	1,396
OR	31,300	92	867	30	390	6	154
WA	56,400	53	1,026	67	3,003	57	2,603
WI	57,400	89	1,983	79	1,991	90	3,798
Total	252,700	72	6,045	65	8,835	63	11,231

Peas, Green, Proc.: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	: Planted : : Acreage :	Area : : Applied :	Appli- : : cations :	Rate per : : Application :	Rate per : : Crop Year :	Total : : Applied :
	: Acres	Percent	Number	Pounds per Acre		1,000 Lbs
Minnesota:	: 88,000					
Nitrogen	:	60	1.0	25	26	1,357
Phosphate	:	60	1.0	38	39	2,044
Potash	:	61	1.0	60	61	3,280
New York:	: 19,600					
Nitrogen	:	100	1.0	41	41	812
Phosphate	:	100	1.0	72	72	1,407
Potash	:	97	1.0	73	73	1,396
Oregon:	: 31,300					
Nitrogen	:	92	1.2	24	30	867
Phosphate	:	30	1.0	42	42	390
Potash	:	6	1.0	78	78	154
Washington:	: 56,400					
Nitrogen	:	53	1.1	31	34	1,026
Phosphate	:	67	1.2	65	80	3,003
Potash	:	57	1.1	71	81	2,603
Wisconsin:	: 57,400					
Nitrogen	:	89	1.5	26	39	1,983
Phosphate	:	79	1.0	41	44	1,991
Potash	:	90	1.0	68	74	3,798
Total:	: 252,700					
Nitrogen	:	72	1.2	27	33	6,045
Phosphate	:	65	1.0	50	54	8,835
Potash	:	63	1.0	67	71	11,231

Peas, Green, Proc.: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed					
	ALL	MN	NY	OR	WA	WI
Herbicides:	:	:	:	:	:	:
2,4-D	*	*			*	*
Atrazine	*	*			*	
Bentazon	P	P	P	P	P	P
Bromoxynil	*				*	
Clomazone	P	P	*		P	*
Clopyralid	*	*				
Dicamba	*		*			
Diuron	*				*	
Glyphosate	P	*	*	P	P	
Imazethapyr	P	P		P	P	P
MCPA	P			*	P	*
MCPB	P	*	P		*	P
Metolachlor	P	P		*	*	P
Metribuzin	P			*	*	
Paraquat	*	*	*			
Pendimethalin	P	P		P	P	P
Quizalofop-ethyl	P		*	*	P	
Sethoxydim	P	*	P	*	P	P
Simazine	*				*	
Triallate	P			P	P	
Trifluralin	P	P	P	P	P	P
Insecticides:	:	:	:	:	:	:
Bt (Bacillus thur.)	*				*	
Diazinon	P			P	P	
Dimethoate	P	*		P	P	*
Esfenvalerate	P	P		P	P	P
Imidacloprid	*					*
Malathion	P			*	*	
Methomyl	P				P	
Methoxychlor	*			*		
Mevinphos	*	*				
Permethrin	*	*				
Phosmet	P			*	*	
Fungicides:	:	:	:	:	:	:
Chlorothalonil	*				*	
Sulfur	*				*	
Vinclozolin	*		*			
Other Chemicals:	:	:	:	:	:	:
Cytokinins	P				P	

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Peas, Green, Proc.: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

: : Area Receiving and Total Applied									

State: Planted	: Acreage	: Herbicide	: Insecticide 1/	: Fungicide	: Other Chemical				

	: Acres	Percent	1,000	Percent	1,000	Percent	1,000	Percent	1,000
			Lbs		Lbs		Lbs		Lbs

MN	: 88,000	92	70.2	30	1.0				
NY 2/	: 19,600	95	18.3						
OR	: 31,300	95	26.2	66	5.6				
WA 2/	: 56,400	98	75.9	67	13.9			4	*
WI	: 57,400	93	41.7	18	1.4				
	:								
Total:	252,700	94	232.3	38	21.9	**	1.1	1	*

* Total applied is less than 50 pounds.

** Area applied is less than one percent.

1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.

2/ Insufficient reports to publish data for one or more of the pesticide classes.

Peas, Green, Proc.: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	26	1.1	0.66	0.79	52.0
Clomazone	10	1.0	0.39	0.41	10.3
Glyphosate	5	1.0	0.35	0.38	5.1
Imazethapyr	32	1.0	0.02	0.02	1.8
MCPA	7	1.0	0.19	0.20	3.8
MCPB	14	1.0	0.56	0.59	21.1
Metolachlor	4	1.0	1.73	1.88	17.4
Metribuzin	5	1.1	0.17	0.19	2.5
Pendimethalin	28	1.0	0.63	0.64	45.8
Quizalofop-ethyl	3	1.0	0.07	0.07	0.5
Sethoxydim	4	1.0	0.19	0.20	1.9
Triallate	9	1.0	1.08	1.09	24.6
Trifluralin	31	1.0	0.55	0.56	43.6
Insecticides:					
Diazinon	2	1.0	0.58	0.58	3.6
Dimethoate	22	1.2	0.17	0.20	11.1
Esfenvalerate	20	1.0	0.03	0.04	1.8
Malathion	1	1.0	0.98	0.98	1.8
Methomyl	*	1.0	0.45	0.46	0.3
Phosmet	2	1.1	0.71	0.81	3.1
Other Chemicals:					
Cytokinins	1	1.2	**	**	**

* Area applied is less than 1 percent.

** Total applied is less than 50 pounds. Rate is less than .0005 pounds per acre.

1/ Planted acres in 1998 for the 5 states surveyed were 252,700 acres.

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

Peas, Green, Proc.: Agricultural Chemical Applications,
Minnesota, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	7	1.0	0.84	0.91	5.3
Clomazone	19	1.0	0.46	0.47	8.0
Imazethapyr	20	1.0	0.03	0.03	0.5
Metolachlor	3	1.0	2.00	2.00	6.0
Pendimethalin	33	1.0	0.76	0.77	22.4
Trifluralin	41	1.0	0.55	0.56	20.3
Insecticides:					
Esfenvalerate	28	1.0	0.03	0.03	0.8

1/ Planted acres in 1998 for Minnesota were 88,000 acres.

Peas, Green, Proc.: Agricultural Chemical Applications,
New York, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	86	1.0	0.54	0.54	9.1
MCPB	81	1.0	0.42	0.44	6.9
Sethoxydim	5	1.0	0.22	0.22	0.2
Trifluralin	11	1.0	0.69	0.70	1.5

1/ Planted acres in 1998 for New York were 19,600 acres.

Peas, Green, Proc.: Agricultural Chemical Applications,
Oregon, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	7	1.0	0.68	0.68	1.6
Glyphosate	5	1.0	0.46	0.48	0.8
Imazethapyr	84	1.0	0.02	0.02	0.5
Pendimethalin	51	1.0	0.43	0.43	6.9
Triallate	29	1.0	1.02	1.02	9.4
Trifluralin	39	1.0	0.46	0.46	5.5
Insecticides:					
Diazinon	3	1.0	0.50	0.50	0.4
Dimethoate	61	1.2	0.17	0.21	3.9
Esfenvalerate	25	1.1	0.03	0.04	0.3

1/ Planted acres in 1998 for Oregon were 31,300 acres.

Peas, Green, Proc.: Agricultural Chemical Applications,
Washington, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	58	1.3	0.64	0.87	28.8
Clomazone	9	1.0	0.19	0.20	1.1
Glyphosate	20	1.0	0.32	0.34	3.8
Imazethapyr	23	1.0	0.02	0.02	0.3
MCPA	23	1.1	0.21	0.24	3.2
Pendimethalin	10	1.0	0.47	0.47	2.8
Quizalofop-ethyl	12	1.0	0.07	0.07	0.5
Sethoxydim	2	1.0	0.25	0.25	0.3
Triallate	24	1.0	1.13	1.15	15.2
Trifluralin	29	1.0	0.61	0.62	10.0
Insecticides:					
Diazinon	9	1.0	0.59	0.59	3.1
Dimethoate	54	1.2	0.17	0.20	6.1
Esfenvalerate	23	1.0	0.04	0.04	0.5
Methomyl	1	1.0	0.45	0.46	0.3
Other Chemicals:					
Cytokinins	4	1.2	*	*	**

* Rate is less than .0005 pounds per acre.

** Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Washington were 56,400 acres.

Peas, Green, Proc.: Agricultural Chemical Applications,
Wisconsin, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bentazon	14	1.0	0.86	0.88	7.3
Imazethapyr	40	1.0	0.02	0.02	0.5
MCPB	20	1.0	0.65	0.65	7.4
Metolachlor	6	1.0	1.39	1.39	4.5
Pendimethalin	35	1.0	0.65	0.67	13.7
Sethoxydim	9	1.0	0.16	0.16	0.9
Trifluralin	20	1.0	0.55	0.55	6.2
Insecticides:					
Esfenvalerate	9	1.0	0.04	0.04	0.2

1/ Planted acres in 1998 for Wisconsin were 57,400 acres.

Peppers, Bell: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	22,000	99	4,805	79	1,533	86	1,680
FL	19,400	100	5,277	70	1,802	100	6,749
MI	2,000	83	261	76	159	89	363
NJ	4,100	98	535	98	383	98	459
NC	6,300	99	783	92	605	93	1,330
TX	1,600	69	181	100	172	70	84
Total	55,400	98	11,842	79	4,654	92	10,665

Peppers, Bell: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations Number	Rate per Application Pounds per Acre	Rate per Crop Year	Total Applied 1,000 Lbs
California:	22,000					
Nitrogen		99	3.9	56	222	4,805
Phosphate		79	1.3	66	89	1,533
Potash		86	2.1	41	89	1,680
Florida:	19,400					
Nitrogen		100	5.8	46	272	5,277
Phosphate		70	7.0	19	134	1,802
Potash		100	5.8	59	348	6,749
Michigan:	2,000					
Nitrogen		83	3.6	43	158	261
Phosphate		76	1.6	64	106	159
Potash		89	1.5	128	204	363
New Jersey:	4,100					
Nitrogen		98	5.2	26	133	535
Phosphate		98	4.9	19	95	383
Potash		98	4.9	23	114	459
North Carolina:	6,300					
Nitrogen		99	2.6	47	125	783
Phosphate		92	1.7	59	104	605
Potash		93	2.0	112	226	1,330
Texas:	1,600					
Nitrogen		69	5.4	30	165	181
Phosphate		100	2.1	50	108	172
Potash		70	2.5	30	75	84
Total:	55,400					
Nitrogen		98	4.6	47	219	11,842
Phosphate		79	3.5	30	106	4,654
Potash		92	3.7	56	209	10,665

Peppers, Bell: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed						
	ALL	CA	FL	MI	NJ	NC	TX
Herbicides:							
Atrazine	*				*		
Bensulide	P	*		*	*		*
Clomazone	P			*	P	*	
DCPA	P	*	*			*	*
Diclofop-methyl	*				*		
Glyphosate	P	P	P	*	*		*
Linuron	*	*					
Metolachlor	P		*	P	P		*
Napropamide	P	P	*	P	P	P	*
Naptalam	*			*			
Oxyfluorfen	*	*					
Paraquat	P	P	P	*	*	*	
Pendimethalin	*						*
Propanil	*				*		
Sethoxydim	P	P	*		*		
Trifluralin	P	P	P	P	P	P	P
Insecticides:							
Abamectin	P	*	*				*
Acephate	P	P	P	P	P	P	
Azadirachtin	*	*					*
Azinphos-methyl	P		*	P			*
Bt (Bacillus thur.)	P	P	P	*	*	P	*
Carbaryl	P	P	*	P	P	P	*
Carbofuran	*				*		
Chlorpyrifos	P	*	*			*	*
Cryolite	P	P					
Cyfluthrin	P	P	*	*	*	*	*
Cyromazine	P	P					*
Diazinon	P	P	*	*	*	*	*
Dicofol	P	*	*		*		*
Dimethoate	P	P			P	*	*
Disulfoton	P	*					*
Endosulfan	P	P	P	*	*	*	*
Esfenvalerate	P	P	*	P	*	P	P
Fonofos	P	P					
Imidacloprid	P	P	P	*	*		*
Lambda-cyhalothrin	P		*	*	P	*	
Malathion	*	*					*
Methamidophos	P	*					*
Methomyl	P	P	P	*	P	*	*
Methyl parathion	*						*
Naled	P	*		*			
Neem oil	*	*					
Oxamyl	P	P	P		*		*
Oxydemeton-methyl	P	*			*		
Permethrin	P	P	P	*	P	P	*
Piperonyl butoxide	*	*					
Propargite	*			*			
Pyrethrins	*	*	*				
Rotenone	*	*	*		*		
Spinosad	P	P	*		*		
Tebufenozide	*						*

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Peppers, Bell: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed						
	ALL	CA	FL	MI	NJ	NC	TX
Fungicides:							
Azoxystrobin	*				*		
Basic copper sulfate	*		*		*		
Benomyl	*			*			
Chlorothalonil	P		*	P	P	*	P
Copper ammonium	P		*		*	*	
Copper chloride hyd.	*				*		
Copper hydroxide	P	P	P	P	P	P	P
Copper oxide	*	*					
Copper oxychlo. sul.	*			*	*		
Copper resinate	P	*		*	P	*	
Copper sulfate	P			*	*	*	
Mancozeb	P	*	P	P	*	*	*
Maneb	P	*	P	P	P	P	*
Mefenoxam	P	P			P		
Metalaxyl	P	*	P	P	P	*	P
Myclobutanil	P	P					
PCNB	*				*		
Streptomycin	*	*					*
Sulfur	P	P	*			*	
Other Chemicals:							
Chloropicrin	P	*	P			*	
Cytokinins	*				*		
Dichloropropene	P	*	*			*	
Ethephon	P	P					
Gibberellic acid	*			*			*
Metam-sodium	P	*	*	*	*		
Methyl bromide	P	P	P	*		P	
Neem Oil, Hydrophob.	*		*				

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

Peppers, Bell: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

Area Receiving and Total Applied									
State:	Planted								
:	Acreage	Herbicide	Insecticide 1/	Fungicide	Other Chemical				
:	Acres	Percent	1,000	Percent	1,000	Percent	1,000	Percent	1,000
:			Lbs		Lbs		Lbs		Lbs
CA	: 22,000	51	22.0	82	101.3	52	48.3	15	519.4
FL	: 19,400	94	21.4	99	50.8	99	347.3	94	3,787.4
MI 2/	: 2,000	78	2.2	90	3.8	83	7.6		
NJ 2/	: 4,100	59	7.4	90	17.4	88	28.1		
NC	: 6,300	61	4.9	64	5.6	50	9.8	28	351.8
TX 2/	: 1,600	48	1.6	69	3.0	67	2.9		
Total:	55,400	69	59.5	87	181.9	72	444.0	43	4,677.8

- 1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Peppers, Bell: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Bensulide	: 1	1.3	2.36	3.28	2.4
Clomazone	: 3	1.0	0.48	0.48	0.7
DCPA	: 5	1.0	2.11	2.19	6.4
Glyphosate	: 7	1.2	0.86	1.07	4.3
Metolachlor	: 13	1.0	1.07	1.11	8.3
Napropamide	: 17	1.1	1.38	1.58	15.1
Paraquat	: 40	1.2	0.54	0.65	14.2
Sethoxydim	: 5	1.3	0.19	0.26	0.6
Trifluralin	: 12	1.0	0.74	0.77	4.9
Insecticides:					
Abamectin	: 5	1.1	0.01	0.01	*
Acephate	: 34	2.5	0.74	1.87	34.8
Azinphos-methyl	: **	1.6	0.40	0.68	0.1
Bt (Bacillus thur.)2/	: 46	8.2			
Carbaryl	: 4	11.0	1.47	16.21	35.4
Chlorpyrifos	: 1	1.1	0.86	1.02	0.6
Cryolite	: 3	2.0	8.03	16.18	28.2
Cyfluthrin	: 9	1.7	0.04	0.07	0.3
Cyromazine	: 6	1.4	0.11	0.15	0.5
Diazinon	: 11	1.2	0.39	0.47	2.9
Dicofol	: 4	1.6	0.50	0.82	2.0
Dimethoate	: 8	1.8	0.27	0.49	2.1
Disulfoton	: 2	1.3	1.89	2.53	3.0
Endosulfan	: 5	4.7	0.69	3.31	8.3
Esfenvalerate	: 15	2.3	0.04	0.09	0.7

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Peppers, Bell: Agricultural Chemical Applications,
States Surveyed, 1998 1/ (continued)

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides:					
Fonofos	7	1.1	1.17	1.34	5.2
Imidacloprid	27	1.5	0.16	0.25	3.8
Lambda-cyhalothrin	1	2.2	0.04	0.10	0.1
Methamidophos	1	1.4	0.37	0.53	0.3
Methomyl	39	2.8	0.48	1.40	30.0
Naled	3	1.2	1.58	1.92	2.9
Oxamyl	18	2.9	0.55	1.61	16.3
Oxydemeton-methyl	3	1.7	0.37	0.67	1.1
Permethrin	10	2.4	0.15	0.37	2.1
Spinosad	10	2.7	0.07	0.18	1.0
Fungicides:					
Chlorothalonil	4	2.4	1.01	2.50	5.1
Copper ammonium	1	5.4	0.24	1.31	0.8
Copper hydroxide	50	6.9	0.61	4.25	118.7
Copper resinate	3	4.1	0.11	0.45	0.6
Copper sulfate	1	3.8	0.34	1.31	0.5
Mancozeb	3	5.2	0.88	4.58	7.2
Maneb	45	7.8	1.10	8.64	214.8
Mefenoxam	10	2.4	0.24	0.59	3.1
Metalaxyl	26	1.3	0.24	0.32	4.6
Myclobutanil	15	2.2	0.09	0.21	1.8
Sulfur	24	3.2	1.79	5.81	78.0
Other Chemicals:					
Chloropicrin	15	1.0	65.50	68.10	575.5
Dichloropropene	1	1.0	62.51	68.17	26.2
Ethephon	2	1.2	0.63	0.77	0.8
Metam-sodium	1	1.1	107.16	123.55	56.5
Methyl bromide	38	1.0	188.64	188.64	4,018.3

* Total applied is less than 50 pounds.

** Area applied is less than 1 percent.

1/ Planted acres in 1998 for the 6 states surveyed were 55,400 acres.
States included are CA, FL, MI, NJ, NC, and TX.

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

Peppers, Bell: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Glyphosate	13	1.2	0.61	0.75	2.1
Napropamide	22	1.2	1.55	1.98	9.5
Paraquat	22	1.6	0.44	0.73	3.6
Sethoxydim	5	1.5	0.17	0.26	0.3
Trifluralin	15	1.0	0.62	0.66	2.1
Insecticides:					
Acephate	28	1.5	0.70	1.06	6.4
Bt (Bacillus thur.)2/	24	4.9			
Carbaryl	8	13.2	1.50	19.82	34.4
Cryolite	8	2.0	8.03	16.18	28.2
Cyfluthrin	17	1.5	0.04	0.07	0.2
Cyromazine	13	1.4	0.11	0.15	0.4
Diazinon	22	1.2	0.34	0.41	2.0
Dimethoate	16	1.6	0.28	0.45	1.6
Endosulfan	2	1.1	0.59	0.67	0.3
Esfenvalerate	27	2.2	0.04	0.09	0.5
Fonofos	18	1.1	1.17	1.34	5.2
Imidacloprid	31	1.8	0.14	0.26	1.7
Methomyl	22	3.5	0.42	1.49	7.0
Oxamyl	19	1.5	0.64	0.99	4.1
Permethrin	9	2.3	0.17	0.39	0.8
Spinosad	20	2.9	0.07	0.20	0.9
Fungicides:					
Copper hydroxide	18	2.7	0.53	1.45	5.8
Mefenoxam	23	2.3	0.25	0.58	3.0
Myclobutanil	38	2.2	0.09	0.21	1.8
Sulfur	33	1.9	2.38	4.73	34.7
Other Chemicals:					
Ethephon	5	1.2	0.63	0.77	0.8
Methyl bromide	7	1.0	293.46	293.46	454.5

1/ Planted acres in 1998 for California were 22,000 acres.

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

Peppers, Bell: Agricultural Chemical Applications,
Florida, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Glyphosate	5	1.0	0.76	0.79	0.7
Paraquat	87	1.0	0.58	0.62	10.5
Trifluralin	2	1.0	0.95	1.03	0.4
Insecticides:					
Acephate	28	3.0	0.76	2.32	12.6
Bt (Bacillus thur.)2/	95	9.5			
Endosulfan	9	6.1	0.71	4.36	7.6
Imidacloprid	41	1.2	0.19	0.25	2.0
Methomyl	67	2.5	0.48	1.22	15.8
Oxamyl	28	4.0	0.52	2.12	11.5
Permethrin	8	2.2	0.14	0.32	0.5
Fungicides:					
Copper hydroxide	95	8.7	0.62	5.41	100.1
Mancozeb	4	9.0	0.80	7.22	4.9
Maneb	92	9.6	1.10	10.63	189.7
Metalaxyl	61	1.0	0.23	0.23	2.7
Other Chemicals:					
Chloropicrin	35	1.0	74.66	74.66	512.3
Methyl bromide	94	1.0	178.92	178.92	3,270.0

1/ Planted acres in 1998 for Florida were 19,400 acres.

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

Peppers, Bell: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Metolachlor	34	1.0	1.20	1.20	0.8
Napropamide	11	1.0	1.22	1.22	0.3
Trifluralin	56	1.0	0.71	0.71	0.8
Insecticides:					
Acephate	77	2.5	0.65	1.68	2.6
Azinphos-methyl	6	1.5	0.48	0.75	0.1
Carbaryl	6	3.3	1.06	3.59	0.4
Esfenvalerate	45	1.9	0.03	0.06	0.1
Fungicides:					
Chlorothalonil	2	3.0	0.58	1.75	0.1
Copper hydroxide	53	3.8	0.62	2.41	2.5
Mancozeb	11	2.9	1.59	4.66	1.0
Maneb	46	3.4	1.03	3.56	3.3
Metalaxyl	8	2.1	0.52	1.14	0.2

1/ Planted acres in 1998 for Michigan were 2,000 acres.

Peppers, Bell: Agricultural Chemical Applications,
New Jersey, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Clomazone	27	1.0	0.41	0.41	0.5
Metolachlor	24	1.3	1.29	1.73	1.7
Napropamide	27	1.0	1.17	1.17	1.3
Trifluralin	8	1.0	0.85	0.85	0.3
Insecticides:					
Acephate	76	4.2	0.77	3.25	10.2
Carbaryl	3	3.4	0.51	1.76	0.2
Dimethoate	16	2.6	0.26	0.69	0.5
Lambda-cyhalothrin	4	1.7	0.02	0.04	*
Methomyl	59	4.1	0.53	2.18	5.3
Permethrin	5	5.1	0.18	0.92	0.2
Fungicides:					
Chlorothalonil	3	2.8	0.93	2.64	0.3
Copper hydroxide	64	5.3	0.53	2.85	7.5
Copper resinate	13	6.0	0.08	0.51	0.3
Maneb	60	5.8	1.06	6.21	15.2
Mefenoxam	5	3.8	0.19	0.75	0.2
Metalaxyl	25	5.1	0.25	1.31	1.4

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for New Jersey were 4,100 acres.

Peppers, Bell: Agricultural Chemical Applications,
North Carolina, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Napropamide	52	1.0	1.12	1.12	3.7
Trifluralin	17	1.0	1.04	1.04	1.1
Insecticides:					
Acephate	39	1.6	0.77	1.26	3.1
Bt (Bacillus thur.)2/	14	2.3			
Carbaryl	2	2.1	0.90	1.89	0.3
Esfenvalerate	7	1.6	0.03	0.05	*
Permethrin	16	1.9	0.09	0.18	0.2
Fungicides:					
Copper hydroxide	23	1.5	0.88	1.35	2.0
Maneb	31	1.4	1.14	1.60	3.1
Other Chemicals:					
Methyl bromide	23	1.0	199.07	199.07	288.5

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for North Carolina were 6,300 acres.

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

Peppers, Bell: Agricultural Chemical Applications,
Texas, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Trifluralin	16	1.1	0.69	0.77	0.2
Insecticides:					
Esfenvalerate	29	1.8	0.04	0.07	*
Fungicides:					
Chlorothalonil	48	1.0	1.15	1.15	0.9
Copper hydroxide	22	4.6	0.54	2.48	0.9
Metalaxyl	57	1.2	0.15	0.19	0.2

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Texas were 1,600 acres.

Spinach, Fresh: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	15,000	99	2,817	89	1,963	73	1,073
NJ	2,100	99	387	99	184	99	310
TX	2,700	98	424	97	238	41	27
Total	19,800	99	3,628	91	2,385	71	1,410

Spinach, Fresh: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	15,000					
Nitrogen		99	3.6	52	190	2,817
Phosphate		89	2.5	59	148	1,963
Potash		73	2.7	35	98	1,073
New Jersey:	2,100					
Nitrogen		99	1.2	152	186	387
Phosphate		99	1.2	73	88	184
Potash		99	1.2	122	149	310
Texas:	2,700					
Nitrogen		98	2.0	78	161	424
Phosphate		97	1.0	87	91	238
Potash		41	1.0	23	24	27
Total:	19,800					
Nitrogen		99	3.2	58	186	3,628
Phosphate		91	2.1	62	133	2,385
Potash		71	2.4	41	100	1,410

Spinach, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed			
	ALL	CA	NJ	TX
Herbicides:				
Alachlor	*			*
Chlorpropham	*			*
Cycloate	P	P	*	*
Diethatyl-ethyl	*	*	*	
Glyphosate	*			*
Metolachlor	P		P	P
Phenmedipham	*	*	*	
Sethoxydim	*	*	*	
Insecticides:				
Abamectin	P	P		
Azadirachtin	P	P		
Bt (Bacillus thur.)	P	*	*	P
Carbaryl	*	*	*	
Chlorpyrifos	*			*
Cypermethrin	*	*		*
Cyromazine	*	*		
Diazinon	P	P	*	*
Dimethoate	P	*	*	
Endosulfan	*	*		*
Esfenvalerate	*		*	
Imidacloprid	P	*		*
Malathion	*	*		
Methomyl	P	P	P	P
Methyl parathion	*	*		
Naled	*	*		
Permethrin	P	P	P	P
Piperonyl butoxide	*	*		
Potassium salts	*	*		
Pyrethrins	P	P		

--continued

Spinach, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed			
	ALL	CA	NJ	TX
Insecticides: (cont.)				
Rotenone	P	P		
Spinosad	P	*	*	
Tebufenozide	*	*		*
Thiodicarb	*	*		
Fungicides:				
Basic copper sulfate	*			*
Chlorothalonil	*		*	
Copper ammonium	*		*	
Copper hydroxide	P	*	P	*
Copper resinate	*		*	
Copper sulfate	*			*
Fosetyl-al	P	P	*	*
Iprodione	*	*		
Maneb	P	P	*	*
Mefenoxam	P	P	*	*
Metalaxyl	P	*	P	*
Sulfur	*			*
Other Chemicals:				
Dichloropropene	*	*		
Gibberellic acid	*			*
Neem Oil, Hydrophob.	*	*		

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Spinach, Fresh: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

		Area Receiving and Total Applied								
State:	Planted	Herbicide		Insecticide 1/:		Fungicide		Other Chemical		
: Acreage :		Acres	Percent	1,000	Percent	1,000	Percent	1,000	Percent	1,000
		Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs
CA 2/:	15,000	35	8.4	88	14.0	51	19.9			
NJ :	2,100	54	1.9	18	0.1	18	0.4			
TX 2/:	2,700	61	2.0	85	3.2	43	1.6			
Total:	19,800	41	12.3	80	17.3	46	21.9	1	4.2	

- 1/ Total applied excludes Bt's (*Bacillus thuringiensis*). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Spinach, Fresh: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Cycloate	27	1.0	1.62	1.74	9.1
Metolachlor	7	1.0	1.12	1.12	1.6
Insecticides:					
Abamectin	11	1.0	0.009	0.01	*
Azadirachtin	8	1.0	0.02	0.02	*
Bt (<i>Bacillus thur.</i>)2/:	23	1.8			
Diazinon	26	1.4	1.32	1.90	9.7
Dimethoate	4	1.0	0.24	0.25	0.2
Imidacloprid	17	1.3	0.05	0.06	0.2
Methomyl	13	1.6	0.53	0.85	2.2
Permethrin	53	2.0	0.14	0.30	3.2
Pyrethrins	13	1.0	0.01	0.01	*
Rotenone	7	1.0	0.003	0.003	*
Spinosad	12	1.0	0.06	0.07	0.2
Fungicides:					
Copper hydroxide	2	1.2	0.69	0.89	0.4
Fosetyl-al	22	1.0	2.93	3.11	13.8
Maneb	15	1.1	1.14	1.35	4.1
Mefenoxam	22	1.1	0.46	0.53	2.3
Metalaxyl	5	1.0	0.39	0.40	0.4

- * Total applied is less than 50 pounds.
- 1/ Planted acres in 1998 for the 3 states surveyed were 19,800 acres. States included are CA, NJ, and TX.
- 2/ Rates and total applied are not available because amounts of active ingredient are not comparable between products.

Spinach, Fresh: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Cycloate	32	1.0	1.51	1.63	7.8
Insecticides:					
Abamectin	14	1.0	0.009	0.01	*
Azadirachtin	11	1.0	0.02	0.02	*
Diazinon	31	1.2	1.49	1.92	8.8
Methomyl	7	1.4	0.67	0.97	1.1
Permethrin	58	1.7	0.13	0.23	2.0
Pyrethrins	18	1.0	0.01	0.01	*
Rotenone	9	1.0	0.003	0.003	*
Fungicides:					
Fosetyl-al	29	1.0	2.98	3.14	13.5
Maneb	19	1.2	1.15	1.38	3.9
Mefenoxam	29	1.1	0.47	0.54	2.3

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for California were 15,000 acres.

Spinach, Fresh: Agricultural Chemical Applications,
New Jersey, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Metolachlor	4	1.0	0.44	0.44	*
Insecticides:					
Methomyl	5	1.9	0.50	0.94	0.1
Permethrin	7	2.0	0.11	0.23	*
Fungicides:					
Copper hydroxide	3	1.1	0.44	0.53	*
Metalaxyl	4	1.2	0.47	0.59	0.1

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for New Jersey were 2,100 acres.

Spinach, Fresh: Agricultural Chemical Applications,
Texas, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	1,000 lbs	:	
Herbicides:	:		:		:		:		:	
Metolachlor	:	48	:	1.0	:	1.17	:	1.17	:	1.5
Insecticides:	:		:		:		:		:	
Bt (Bacillus thur.)2/	:	48	:	3.6	:		:		:	
Methomyl	:	48	:	1.7	:	0.43	:	0.74	:	1.0
Permethrin	:	63	:	4.0	:	0.17	:	0.69	:	1.2

1/ Planted acres in 1998 for Texas were 2,700 acres.

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

Spinach, Processing: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	:	Planted Acreage	:	Percent of Acres Treated and Total Applied										
	:	Acres	:	Nitrogen	:	Phosphate	:	Potash						
	:	Acres	:	Percent	:	1,000 Lbs	:	Percent	:	1,000 Lbs	:	Percent	:	1,000 Lbs
TX	:	5,400	:	96	:	916	:	91	:	618	:	70	:	177

Spinach, Processing: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	: Planted Acreage	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Acres	Percent	Number	Pounds per Acre		1,000 Lbs
Texas:	5,400					
Nitrogen		96	2.1	82	177	916
Phosphate		91	1.0	125	125	618
Potash		70	1.0	47	47	177

Spinach, Processing: Active Ingredient Publication Status
By States Surveyed, 1998

Active Ingredient	: TX
Herbicides:	:
Metolachlor	: P
Sethoxydim	: *
Insecticides:	:
Bt (Bacillus thur.)	: P
Dimethoate	: *
Methomyl	: P
Permethrin	: P
Thiodicarb	: *
Tebufenozide	: *
Fungicides:	:
Basic copper sulfate	: P
Copper hydroxide	: P
Chlorothalonil	: *
Mefenoxam	: *
Metalaxyl	: P
Sulfur	: p

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Spinach, Processing: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
Texas, 1998

Area Receiving and Total Applied							
State:	Planted	Acreage					
		Herbicide	Insecticide 1/	Fungicide	Other Chemical		
	Acres	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs	Percent 1,000 Lbs		
TX	5,400	90	5.2	100	2.6	40	7.3

1/ Total applied excludes Bt's (Bacillus thuringiensis). Quantities are not available because amounts of active ingredient are not comparable between products.

Spinach, Processing: Agricultural Chemical Applications,
Texas, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Metolachlor	90	1.0	1.05	1.05	5.1
Insecticides:					
Bt (Bacillus thur.)2/	81	3.0			
Methomyl	27	1.2	0.49	0.62	0.9
Permethrin	49	2.3	0.18	0.42	1.1
Fungicides:					
Basic copper sulfate	18	1.7	0.28	0.47	0.4
Copper hydroxide	18	1.0	1.08	1.08	1.0
Metalaxyl	26	1.0	0.42	0.42	0.6
Sulfur	18	1.7	3.13	5.33	5.1

1/ Planted acres in 1998 for Texas were 5,400 acres.

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

Strawberries: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	24,200	96	4,460	81	1,622	79	2,152
FL	6,200	100	590	94	356	100	661
MI	1,500	95	102	68	67	76	98
NJ	500	95	52	95	46	95	48
NY	1,700	93	119	81	78	83	82
NC	1,700	97	243	83	137	92	293
OR	4,500	96	326	94	447	95	391
WA	1,500	93	80	78	154	81	97
WI	1,200	90	119	80	90	80	56
Total	43,000	96	6,091	84	2,997	85	3,878

Strawberries: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	: Planted : : Acreage :	Area : : Applied :	Appli- : : cations :	: Rate per : : Application :	: Rate per : : Crop Year :	: Total : : Applied :
	: Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	: 24,200					
Nitrogen	:	96	6.7	28	191	4,460
Phosphate	:	81	4.8	17	83	1,622
Potash	:	79	5.7	20	112	2,152
Florida:	: 6,200					
Nitrogen	:	100	53.5	2	95	590
Phosphate	:	94	49.3	1	61	356
Potash	:	100	53.5	2	107	661
Michigan:	: 1,500					
Nitrogen	:	95	1.4	48	72	102
Phosphate	:	68	1.2	52	66	67
Potash	:	76	1.1	72	86	98
New Jersey:	: 500					
Nitrogen	:	95	2.2	48	110	52
Phosphate	:	95	2.0	46	97	46
Potash	:	95	2.0	49	103	48
New York:	: 1,700					
Nitrogen	:	93	1.4	53	75	119
Phosphate	:	81	1.2	44	57	78
Potash	:	83	1.2	46	59	82
North Carolina:	: 1,700					
Nitrogen	:	97	4.7	31	147	243
Phosphate	:	83	1.7	56	98	137
Potash	:	92	4.0	47	189	293
Oregon:	: 4,500					
Nitrogen	:	96	1.2	60	76	326
Phosphate	:	94	1.1	96	106	447
Potash	:	95	1.1	77	92	391
Washington:	: 1,500					
Nitrogen	:	93	1.2	47	57	80
Phosphate	:	78	1.4	89	131	154
Potash	:	81	1.4	55	81	97
Wisconsin:	: 1,200					
Nitrogen	:	90	3.5	31	110	119
Phosphate	:	80	1.9	48	94	90
Potash	:	80	1.6	36	58	56
Total:	: 43,000					
Nitrogen	:	96	12.3	12	147	6,091
Phosphate	:	84	11.0	8	83	2,997
Potash	:	85	12.6	8	107	3,878

Strawberries: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed					
	ALL	CA	FL	MI	NJ	NY
Herbicides:						
2,4-D	P			P	*	P
Clethodim	*					
DCPA	P			P		P
Dicamba	*				*	
Fluazifop-P-butyl	*					*
Glyphosate	P	*	P	*		*
Imazethapyr	*			*		
MCPA	*			*		
Napropamide	P	P	*	P	P	P
Oxyfluorfen	P					
Paraquat	P	P	P		*	*
Pendimethalin	*					*
Sethoxydim	P	*	*	P	*	P
Simazine	P			*		
Terbacil	P			P	*	P
Trifluralin	*			*		
Insecticides:						
Abamectin	P	P	P			
Acephate	*					
Azadirachtin	*	*	*			
Azinphos-methyl	P	*		P	*	P
Bifenthrin	P	P	P	*		
Bt (Bacillus thur.)	P	P	P			
Carbaryl	P	P	*	P		*
Carbofuran	P					
Chlorpyrifos	P	P		P	*	P
Diazinon	P	P	P	*		
Dicofol	P	P			*	
Endosulfan	P		*	P	*	P
Esfenvalerate	*					*
Ethyl parathion	*	*				
Fenbutatin-oxide	P	*	P			
Fenpropathrin	P	P	*			
Hexythiazox	P	P				
Lindane	*					
Malathion	P	P	P	*	*	P
Methomyl	P	P	P	*	*	
Methoxychlor	P				*	*
Mevinphos	*	*				
Naled	P	P	P			*
Oxamyl	*		*			
Oxydemeton-methyl	P		*			
Oxythioquinox	*	*				
Permethrin	*					*
Petroleum distillate	*	*				*
Piperonyl butoxide	*	*				*
Potassium salts	P	*				
Propargite	P	*				
Pseudomonas cepacia	*		*			
Pyrethrins	P	*				*
Rotenone	*	*				
Spinosad	*		*			

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Strawberries: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed					
	ALL	CA	FL	MI	NJ	NY
Fungicides:						
Anilazine	*	*				
Basic copper sulfate	*			*		
Benomyl	P	P	P	P	P	P
Captan	P	P	P	P	P	P
Chlorothalonil	P	*	*			*
Copper ammonium	P		*			
Copper hydroxide	P	P	*	P		
Copper oxide	*		*			
Copper oxychloro. sul.	*			*		
Copper resinate	P	P				
Copper sulfate	P	*	*	*		*
Dodine	P					
Fenbuconazole	*			*		
Fosetyl-al	P	P	*	*		
Iprodione	P	P	P	P	*	*
Mancozeb	*			*		
Maneb	*		*			
Mefenoxam	P	P				
Metalaxyl	P	*	*	*		*
Myclobutanil	P	P	P			
Potassium bicarbon.	*	*				
Streptomycin	*					
Sulfur	P	P	P	*		
Thiophanate-methyl	P	*	P		*	
Thiram	P	P	P			
Vinclozolin	P	P		P	P	P
Other Chemicals:						
Chloropicrin	P	P	*			
Dichloropropene	*	*				
Farnesol	*	*				
Metaldehyde	P	P				*
Metam-sodium	*			*	*	*
Methyl bromide	P	P	P			
Nerolidol	*	*				

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Strawberries: Active Ingredient Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed			
	NC	OR	WA	WI
Herbicides:				
2,4-D	*			P
Clethodim		*		
DCPA	*			*
Dicamba				
Fluazifop-P-butyl			*	*
Glyphosate	*	*		*
Imazethapyr				
MCPA				
Napropamide	*	P	P	P
Oxyfluorfen		P	P	
Paraquat	P	*		
Pendimethalin				
Sethoxydim	P	P		P
Simazine		P	*	
Terbacil			*	P
Trifluralin				
Insecticides:				
Abamectin	*	*	*	
Acephate	*			
Azadirachtin				
Azinphos-methyl		*	*	*
Bifenthrin	*	*	*	
Bt (Bacillus thur.)	*			
Carbaryl	P	*	*	
Carbofuran		*	*	
Chlorpyrifos	*	*	*	P
Diazinon	*	*		*
Dicofol	P	*		
Endosulfan	P	P	P	P
Esfenvalerate				
Ethyl parathion				
Fenbutatin-oxide	*	*	*	
Fenpropathrin				
Hexythiazox				
Lindane			*	
Malathion	*			P
Methomyl				
Methoxychlor		*		P
Mevinphos				
Naled	*			
Oxamyl				
Oxydemeton-methyl		P	*	
Oxythioquinox				
Permethrin				*
Petroleum distillate				
Piperonyl butoxide				
Potassium salts	*			
Propargite	*			
Pseudomonas cepacia				
Pyrethrins				
Rotenone				
Spinosad				

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Strawberries: Active Ingredient Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed			
	NC	OR	WA	WI
Fungicides:				
Anilazine				
Basic copper sulfate				
Benomyl	P	P	P	P
Captan	P	P	P	P
Chlorothalonil	*	*		
Copper ammonium				*
Copper hydroxide	*	*		*
Copper oxide				
Copper oxychlor. sul.				
Copper resinate				
Copper sulfate				*
Dodine		*	*	*
Fenbuconazole				
Fosetyl-al		P	*	*
Iprodione	P	P	P	P
Mancozeb		*		
Maneb				
Mefenoxam		*		
Metalaxyl		*	*	*
Myclobutanil				
Potassium bicarbon.				
Streptomycin	*			
Sulfur			*	
Thiophanate-methyl	*		*	*
Thiram	*	*		
Vinclozolin	*	P	P	*
Other Chemicals:	P			
Chloropicrin				*
Dichloropropene				
Farnesol				
Metaldehyde		P	*	
Metam-sodium				
Methyl bromide	*			*
Nerolidol				

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Strawberries: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

State:	Planted	Area Receiving and Total Applied							
:	Acreage	Herbicide	:	Insecticide 1/:	Fungicide	:	Other Chemical		
:	Acres	Percent	1,000	Percent	1,000	Percent	1,000	Percent	1,000
:			Lbs		Lbs		Lbs		Lbs
CA	: 24,200	4	6.6	93	68.1	93	561.5	79	5,601.5
FL	: 6,200	92	11.6	98	26.3	100	237.2	99	1,240.8
MI 2/:	1,500	82	3.7	82	2.7	80	11.4		
NJ 2/:	500	46	0.9	53	0.4	78	1.4		
NY 2/:	1,700	74	4.4	71	1.9	55	3.3		
NC	: 1,700	43	0.7	72	2.6	78	12.0	51	168.2
OR	: 4,500	61	8.9	85	6.0	95	31.6	23	0.8
WA 2/:	1,500	68	1.5	65	0.8	96	6.6		
WI 2/:	1,200	95	2.8	87	1.9	78	5.1		
	:								
Total:	43,000	35	41.1	89	110.7	91	870.1	63	7,030.7

- 1/ Total applied excludes Bt's (*Bacillus thuringiensis*). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Strawberries: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	: Area : Applied	: Appli- : cations	: Rate per : Application	: Rate per : Crop Year	: Total : Applied
	: Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
2,4-D	4	1.0	0.98	1.07	1.9
DCPA	*	1.1	7.29	8.52	1.7
Glyphosate	6	1.4	1.26	1.84	4.4
Napropamide	14	1.1	2.94	3.39	21.0
Oxyfluorfen	2	1.0	0.29	0.30	0.3
Paraquat	14	1.8	0.69	1.27	7.6
Sethoxydim	5	1.1	0.26	0.29	0.7
Simazine	6	1.0	0.92	0.97	2.6
Terbacil	5	1.3	0.28	0.37	0.9
Insecticides:					
Abamectin	47	2.0	0.02	0.03	0.7
Azinphos-methyl	5	1.2	0.62	0.77	1.8
Bifenthrin	17	1.7	0.10	0.17	1.2
Bt (Bacillus thur.)2/	31	3.7			
Carbaryl	12	1.3	1.03	1.35	6.8
Carbofuran	*	1.0	1.96	1.96	0.4
Chlorpyrifos	26	1.1	0.95	1.08	11.8
Diazinon	8	1.3	0.68	0.95	3.4
Dicofol	3	1.9	0.88	1.75	2.5
Endosulfan	12	1.2	0.80	1.01	5.2
Fenbutatin-oxide	8	1.6	0.72	1.19	3.9
Fenpropathrin	10	1.5	0.30	0.48	2.2
Hexythiazox	7	1.2	0.36	0.47	1.5
Malathion	21	1.7	1.68	2.98	27.4
Methomyl	20	4.1	0.57	2.39	21.0
Methoxychlor	1	1.2	0.57	0.73	0.4
Naled	12	2.1	0.84	1.83	9.5
Oxydemeton-methyl	5	1.0	0.45	0.47	1.1
Potassium salts	1	2.5	4.50	11.38	7.2
Propargite	3	1.1	0.73	0.85	1.0
Pyrethrins	1	1.3	0.03	0.04	**
Fungicides:					
Benomyl	44	2.7	0.45	1.21	22.7
Captan	75	6.5	1.86	12.25	393.5
Chlorothalonil	1	2.4	0.49	1.18	0.5
Copper ammonium	1	2.5	0.28	0.72	0.2
Copper hydroxide	10	1.8	0.57	1.06	4.4
Copper resinate	5	3.1	0.09	0.29	0.6
Copper sulfate	3	1.2	0.35	0.44	0.5
Dodine	1	1.6	1.01	1.65	0.5
Fosetyl-al	8	1.5	2.82	4.48	15.0
Iprodione	46	2.5	0.78	1.95	38.8
Mefenoxam	3	1.3	0.40	0.55	0.8
Metalaxyl	3	1.0	0.61	0.63	0.7
Myclobutanil	34	2.9	0.10	0.29	4.2
Sulfur	46	3.8	3.07	11.73	234.3
Thiophanate-methyl	7	2.4	0.68	1.64	4.9
Thiram	49	3.4	1.62	5.54	117.9
Vinclozolin	31	1.7	0.83	1.49	20.0

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Strawberries: Agricultural Chemical Applications,
States Surveyed, 1998 1/ (continued)

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Other Chemicals:					
Chloropicrin	37	1.3	81.21	106.92	1,701.1
Metaldehyde	4	1.2	0.89	1.10	1.8
Methyl bromide	50	1.0	245.03	245.03	5,305.2

* Area applied is less than 1 percent.

** Total applied is less than 50 pounds.

1/ Planted acres in 1998 for the 9 states surveyed were 43,000 acres. States included are CA, FL, MI, NJ, NY, NC, OR, WA, and WI.

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

Strawberries: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Napropamide	4	1.8	3.60	6.56	6.5
Paraquat	1	1.1	0.40	0.44	0.1
Insecticides:					
Abamectin	67	2.1	0.02	0.04	0.6
Bifenthrin	17	2.1	0.09	0.20	0.8
Bt (Bacillus thur.)2/	43	2.1			
Carbaryl	12	1.4	1.12	1.60	4.5
Chlorpyrifos	35	1.1	0.95	1.11	9.4
Diazinon	8	1.0	0.61	0.66	1.3
Dicofol	4	2.2	0.94	2.08	2.2
Fenpropathrin	17	1.5	0.30	0.48	2.0
Hexythiazox	13	1.2	0.36	0.47	1.5
Malathion	30	1.8	1.80	3.30	24.2
Methomyl	12	2.5	0.75	1.92	5.8
Naled	17	1.6	0.86	1.45	5.9
Fungicides:					
Benomyl	46	2.0	0.48	0.97	10.8
Captan	79	5.7	1.86	10.67	203.6
Copper hydroxide	11	1.7	0.50	0.87	2.3
Copper resinate	9	3.1	0.09	0.29	0.6
Fosetyl-al	4	1.0	2.84	2.97	2.5
Iprodione	51	2.6	0.82	2.19	27.1
Mefenoxam	6	1.4	0.41	0.58	0.8
Myclobutanil	53	3.0	0.10	0.31	3.9
Sulfur	66	4.1	2.95	12.09	194.1
Thiram	67	3.4	1.67	5.72	92.4
Vinclozolin	31	1.9	0.89	1.75	13.0

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Strawberries: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Appliations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Other Chemicals:					
Chloropicrin	61	1.3	83.27	111.82	1,643.5
Metaldehyde	3	1.6	1.03	1.69	1.0
Methyl bromide	61	1.0	269.78	269.78	3,953.8

1/ Planted acres in 1998 for California were 24,200 acres.

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

Strawberries: Agricultural Chemical Applications,
Florida, 1998 1/

Agricultural Chemical	Area Applied	Appliations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Glyphosate	37	1.4	1.30	1.87	4.3
Paraquat	80	1.9	0.72	1.37	6.8
Insecticides:					
Abamectin	53	1.6	0.010	0.02	0.1
Bifenthrin	42	1.2	0.12	0.14	0.4
Bt (Bacillus thur.)2/	46	10.0			
Diazinon	14	2.3	0.67	1.58	1.4
Fenbutatin-oxide	41	1.8	0.69	1.25	3.2
Malathion	17	1.6	0.89	1.46	1.5
Methomyl	89	5.1	0.53	2.72	15.1
Naled	17	4.1	0.81	3.32	3.5
Fungicides:					
Benomyl	42	7.4	0.43	3.22	8.4
Captan	96	14.4	1.81	26.15	154.9
Iprodione	64	2.9	0.65	1.93	7.7
Myclobutanil	28	2.0	0.07	0.14	0.2
Sulfur	58	2.8	3.92	10.99	39.8
Thiophanate-methyl	46	2.4	0.68	1.66	4.7
Thiram	60	4.0	1.28	5.24	19.4
Other Chemicals:					
Methyl bromide	99	1.0	196.12	196.12	1,198.5

1/ Planted acres in 1998 for Florida were 6,200 acres.

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

Strawberries: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	: Number	: Pounds per Acre		: 1,000 lbs
Herbicides:					
2,4-D	34	1.0	0.98	1.01	0.5
DCPA	8	1.1	8.53	9.60	1.1
Napropamide	59	1.0	1.89	1.95	1.7
Sethoxydim	30	1.0	0.37	0.40	0.2
Terbacil	41	1.1	0.26	0.30	0.2
Insecticides:					
Azinphos-methyl	31	1.6	0.49	0.79	0.4
Carbaryl	21	1.5	1.07	1.63	0.5
Chlorpyrifos	30	1.0	0.89	0.92	0.4
Endosulfan	62	1.3	0.91	1.24	1.2
Fungicides:					
Benomyl	70	2.3	0.38	0.88	0.9
Captan	77	3.0	2.38	7.15	8.2
Copper hydroxide	19	2.2	0.55	1.24	0.3
Iprodione	25	1.9	0.82	1.62	0.6
Vinclozolin	22	2.1	0.54	1.14	0.4

1/ Planted acres in 1998 for Michigan were 1,500 acres.

Strawberries: Agricultural Chemical Applications,
New Jersey, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	: Number	: Pounds per Acre		: 1,000 lbs
Herbicides:					
Napropamide	33	1.1	2.88	3.26	0.5
Fungicides:					
Benomyl	43	2.3	0.37	0.88	0.2
Captan	46	2.2	1.64	3.59	0.8
Vinclozolin	31	2.0	0.55	1.11	0.2

1/ Planted acres in 1998 for New Jersey were 500 acres.

Strawberries: Agricultural Chemical Applications,
New York, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
2,4-D	34	1.0	1.14	1.23	0.7
DCPA	4	1.2	5.98	7.48	0.5
Napropamide	46	1.0	3.43	3.64	2.8
Sethoxydim	14	1.1	0.28	0.30	0.1
Terbacil	46	1.0	0.35	0.37	0.3
Insecticides:					
Azinphos-methyl	17	1.0	0.45	0.47	0.1
Chlorpyrifos	25	1.1	0.96	1.09	0.5
Endosulfan	24	1.9	0.80	1.60	0.6
Malathion	16	1.3	0.96	1.33	0.4
Fungicides:					
Benomyl	17	1.6	0.29	0.48	0.1
Captan	37	1.8	2.16	3.92	2.4
Vinclozolin	31	1.6	0.71	1.17	0.6

1/ Planted acres in 1998 for New York were 1,700 acres.

Strawberries: Agricultural Chemical Applications,
North Carolina, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Paraquat	5	1.4	0.24	0.35	*
Sethoxydim	28	1.1	0.33	0.39	0.2
Insecticides:					
Carbaryl	45	1.2	1.23	1.49	1.1
Dicofol	10	1.5	0.62	0.96	0.2
Endosulfan	7	2.7	0.47	1.32	0.2
Fungicides:					
Benomyl	37	2.4	0.37	0.91	0.6
Captan	70	3.5	2.27	8.09	9.6
Iprodione	13	2.7	0.65	1.77	0.4
Other Chemicals:					
Chloropicrin	9	1.0	103.31	103.31	15.3

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for North Carolina were 1,700 acres.

Strawberries: Agricultural Chemical Applications,
Oregon, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Napropamide	39	1.0	3.28	3.28	5.8
Oxyfluorfen	15	1.0	0.32	0.32	0.2
Sethoxydim	5	1.0	0.31	0.34	0.1
Simazine	51	1.0	0.91	0.97	2.2
Insecticides:					
Endosulfan	44	1.0	0.77	0.77	1.5
Oxydemeton-methyl	40	1.0	0.49	0.51	0.9
Fungicides:					
Benomyl	35	1.1	0.47	0.54	0.9
Captan	47	1.6	2.36	3.79	8.1
Fosetyl-al	40	1.5	3.27	5.19	9.3
Iprodione	41	1.0	0.92	0.99	1.8
Vinclozolin	83	1.4	0.81	1.16	4.4
Other Chemicals:					
Metaldehyde	23	1.0	0.76	0.76	0.8

1/ Planted acres in 1998 for Oregon were 4,500 acres.

Strawberries: Agricultural Chemical Applications,
Washington, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Napropamide	48	1.0	1.52	1.52	1.1
Oxyfluorfen	15	1.1	0.20	0.23	0.1
Insecticides:					
Endosulfan	55	1.0	0.81	0.81	0.7
Fungicides:					
Benomyl	38	1.8	0.34	0.62	0.4
Captan	69	1.2	1.59	1.98	2.0
Iprodione	52	1.9	0.54	1.08	0.8
Vinclozolin	52	1.1	0.53	0.59	0.5

1/ Planted acres in 1998 for Washington were 1,500 acres.

Strawberries: Agricultural Chemical Applications,
Wisconsin, 1998 1/

Agricultural Chemical	:	Area Applied	:	Appli- cations	:	Rate per Application	:	Rate per Crop Year	:	Total Applied
	:	Percent	:	Number	:	Pounds per Acre	:	1,000 lbs	:	
Herbicides:	:		:		:		:		:	
2,4-D	:	47	:	1.1	:	0.84	:	0.98	:	0.6
Napropamide	:	39	:	1.0	:	3.55	:	3.73	:	1.7
Sethoxydim	:	55	:	1.2	:	0.16	:	0.20	:	0.1
Terbacil	:	65	:	1.8	:	0.23	:	0.43	:	0.3
Insecticides:	:		:		:		:		:	
Chlorpyrifos	:	49	:	1.0	:	0.94	:	0.96	:	0.6
Endosulfan	:	31	:	1.0	:	0.93	:	1.01	:	0.4
Malathion	:	36	:	1.0	:	1.22	:	1.23	:	0.5
Methoxychlor	:	13	:	1.0	:	0.85	:	0.89	:	0.1
Fungicides:	:		:		:		:		:	
Benomyl	:	55	:	1.9	:	0.38	:	0.73	:	0.5
Captan	:	64	:	2.6	:	1.80	:	4.84	:	3.7
Iprodione	:	20	:	1.2	:	0.71	:	0.90	:	0.2

1/ Planted acres in 1998 for Wisconsin were 1,200 acres.

Tomatoes, Fresh: Fertilizer Use by State, 1998
 Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
		Nitrogen		Phosphate		Potash	
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs
CA	32,000	100	12,553	77	8,242	69	5,691
FL	40,600	100	11,065	65	4,577	100	20,268
GA	3,600	100	869	50	198	100	1,504
MI	3,000	94	326	91	165	93	805
NJ	3,900	95	470	95	475	95	513
NY	3,400	92	280	91	280	91	275
NC	2,300	98	235	97	495	98	582
TX	1,700	98	160	98	146	69	70
Total	90,500	99	25,958	73	14,578	88	29,708

Tomatoes, Fresh: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	: Planted : : Acreage :	Area : : Applied :	Appli- : : cations :	: Rate per : : Application :	: Rate per : : Crop Year :	: Total : : Applied :
	: Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	: 32,000					
Nitrogen	:	100	3.9	99	394	12,553
Phosphate	:	77	3.3	99	334	8,242
Potash	:	69	3.6	70	257	5,691
Florida:	: 40,600					
Nitrogen	:	100	12.3	22	273	11,065
Phosphate	:	65	12.6	14	175	4,577
Potash	:	100	12.4	40	499	20,268
Georgia:	: 3,600					
Nitrogen	:	100	42.3	6	242	869
Phosphate	:	50	3.1	34	109	198
Potash	:	100	42.3	10	418	1,504
Michigan:	: 3,000					
Nitrogen	:	94	1.2	92	115	326
Phosphate	:	91	1.0	58	61	165
Potash	:	93	1.5	188	288	805
New Jersey:	: 3,900					
Nitrogen	:	95	3.7	34	127	470
Phosphate	:	95	3.7	34	129	475
Potash	:	95	3.7	37	139	513
New York:	: 3,400					
Nitrogen	:	92	1.7	52	89	280
Phosphate	:	91	1.4	63	90	280
Potash	:	91	1.4	62	89	275
North Carolina:	: 2,300					
Nitrogen	:	98	5.0	20	104	235
Phosphate	:	97	1.2	184	221	495
Potash	:	98	4.8	53	258	582
Texas:	: 1,700					
Nitrogen	:	98	1.8	52	97	160
Phosphate	:	98	1.2	70	88	146
Potash	:	69	1.3	45	60	70
Total:	: 90,500					
Nitrogen	:	99	9.1	32	290	25,958
Phosphate	:	73	6.7	33	221	14,578
Potash	:	88	9.7	38	374	29,708

Tomatoes, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed									
	ALL	CA	FL	GA	MI	NJ	NY	NC	TX	
Herbicides:										
Atrazine	*						*			
Bensulide	*				*	*			*	
Chloramben	*				*					
Cyanazine	*				*					
DCPA	*							*	*	
Diclofop-methyl	*					*				
Diquat	*		*							
Ethalfluralin	*			*	*			*		
Fluazifop-P-butyl	*				*					
Glyphosate	P	P	*		*		*	*	*	*
Linuron	*					*	*			
Metolachlor	*				*	*				
Metribuzin	P	P	P	*	P	P	P	*		
Napropamide	P	*	*		*	P	P	P	*	*
Naptalam	*				*					
Oxyfluorfen	P	P								
Paraquat	P	*	P	*	*	*	*	*	P	
Pebulate	P	*	*			*	*			
Pendimethalin	*									*
Pronamide	*	*								
Propanil	*					*				
Sethoxydim	P	P	*		*	*	*	*	*	*
Trifluralin	P	P		*	P	P	P	*	P	

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Tomatoes, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed									
	ALL	CA	FL	GA	MI	NJ	NY	NC	TX	
Insecticides:										
Abamectin	P	*	P			*				
Acephate	P			*	*	*		*		
Azadirachtin	*	*								
Azinphos-methyl	P		*		P	P	P		*	
Bt (Bacillus thur.)	P	P	P	*		*		P	*	
Buprofezin	*		*							
Carbaryl	P	P	*	P	P	*	P	P	P	
Carbofuran	*								*	
Chlorpyrifos	P		*	*			*		*	
Cryolite	*	*								
Cyfluthrin	P	*	P			P		*	*	
Cyromazine	P	*	*							
Diazinon	P	*	*	*	*	*	*	*	*	*
Dicofol	P	*	*			P				
Dimethoate	P	P	*		*	*		*	*	
Endosulfan	P		P	*	P	P	P	P	*	
Esfenvalerate	P	P	P	*	P	P	*	P	P	
Fenamiphos	*			*						
Fenbutatin-oxide	*					*				
Fenpropathrin	*		*							
Fonofos	*	*								
Imidacloprid	P	P	P		*	*	P			
Lambda-cyhalothrin	P	*	*	*	*	P	*			
Malathion	P	*		*				*	P	
Methamidophos	P	P	P	*		*				
Methomyl	P	P	P	*	P	P	*	*	*	
Methoxychlor	*							*		
Methyl parathion	*				*					
Naled	*	*								
Neem oil	*	*								
Oxamyl	P	*	*		*	P			*	
Permethrin	P	P	P	*	P	*	P	*	*	
Phosmet	*						*			
Piperonyl butoxide	*	*				*				
Potassium salts	*						*			
Propargite	*					*				
Pyrethrins	P	*				*				
Rotenone	P	*				*				
Spinosad	P	P	P	*		*				

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Tomatoes, Fresh: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed									
	ALL	CA	FL	GA	MI	NJ	NY	NC	TX	
Fungicides:										
Azoxystrobin	P	P	*		*	P	*	*		
Basic copper sulfate	*	:	*							
Benomyl	P	:	*	P	*	*	P	*		
Captan	*	:						*	*	
Chlorothalonil	P	:	P	P	P	P	P	P	P	P
Copper ammonium	P	:		*			*			
Copper chloride hyd.	P	:					P		*	
Copper hydroxide	P	:	P	P	P	P	P	P	P	P
Copper oxychlo. sul.	P	:	*			*	*	*		
Copper resinate	P	:	*			*	P		P	
Copper sulfate	P	:		*			*	*		
Dimethomorph	*	:		*						
Fosetyl-al	P	:	P	*					*	
Iprodione	*	:	*							
Mancozeb	P	:	P	P	*	P	P	P	P	*
Maneb	P	:	P	P	P	*	P	P	*	*
Mefenoxam	P	:	*	*						*
Metalaxyl	P	:	*	P	*	*	P	*	*	
Metiram	*	:				*				
Myclobutanil	P	:	P							
Propamocarb hydroch.	P	:	P	*			*	*		
Sulfur	P	:	P	*			*			*
Thiophanate-methyl	*	:								*
Other Chemicals:										
Chloropicrin	P	:	*	P	*	*			P	
Dichloropropene	*	:	*							
Ethephon	*	:	*							
Gibberellic acid	*	:								*
Gossyplure	*	:		*						
Metam-sodium	P	:	*			*	*			
Methyl bromide	P	:	*	P	P	*			P	

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

Tomatoes, Fresh: Pesticide, Total Acreage,
Percent of Area Receiving Applications and Total Applied,
States Surveyed and Total, 1998

State:	Area Receiving and Total Applied									
	Planted	Acreage	Herbicide	Insecticide 1/	Fungicide	Other Chemical				
	Acres	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs	Percent	1,000 Lbs	
CA	32,000	27	5.9	91	33.1	93	485.9	8	181.5	
FL	40,600	83	30.0	99	105.0	99	1,071.7	94	6,844.3	
GA	3,600	11	0.2	99	6.6	96	75.7	47	383.8	
MI 2/	3,000	82	2.7	82	18.6	89	104.9			
NJ 2/	3,900	50	3.4	80	8.3	90	29.5			
NY	3,400	37	1.5	49	2.0	70	16.9			
NC	2,300	81	2.6	92	3.7	93	24.2	74	381.2	
TX 2/	1,700	59	1.2	89	2.7	52	2.4			
Total:	90,500	57	47.5	92	180.0	94	1,811.2	49	7,834.2	

- 1/ Total applied excludes Bt's (*Bacillus thuringiensis*). Quantities are not available because amounts of active ingredient are not comparable between products.
- 2/ Insufficient reports to publish data for one or more of the pesticide classes.

Tomatoes, Fresh: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Glyphosate	4	1.1	0.64	0.72	2.4
Metribuzin	24	1.0	0.44	0.47	10.2
Napropamide	17	1.0	0.56	0.56	8.4
Oxyfluorfen	1	1.0	0.17	0.18	0.2
Paraquat	23	1.2	0.62	0.78	16.1
Pebulate	2	1.0	1.86	1.90	2.7
Sethoxydim	3	1.3	0.28	0.38	1.0
Trifluralin	7	1.0	0.63	0.66	4.3
Insecticides:					
Abamectin	18	1.1	0.008	0.01	0.2
Acephate	*	2.0	0.60	1.22	0.1
Azinphos-methyl	7	2.6	0.42	1.13	7.4
Bt (<i>Bacillus thur.</i>)2/	52	4.1			
Carbaryl	8	1.2	0.87	1.11	7.6
Chlorpyrifos	5	1.9	0.39	0.76	3.7
Cyfluthrin	9	4.0	0.03	0.12	1.0
Cyromazine	5	1.9	0.10	0.19	0.8
Diazinon	2	2.0	0.67	1.38	2.1
Dicofol	2	1.8	0.37	0.70	1.3
Dimethoate	13	2.1	0.20	0.44	5.1
Endosulfan	16	3.2	0.59	1.91	28.3

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Tomatoes, Fresh: Agricultural Chemical Applications,
States Surveyed, 1998 1/ (continued)

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides: (cont.)					
Esfenvalerate	39	2.7	0.03	0.08	2.8
Imidacloprid	28	1.7	0.15	0.25	6.5
Lambda-cyhalothrin	4	3.8	0.02	0.07	0.3
Malathion	*	2.0	1.16	2.33	0.4
Methamidophos	17	5.7	0.65	3.75	58.1
Methomyl	27	2.1	0.58	1.25	31.0
Oxamyl	5	1.2	0.78	1.00	4.5
Permethrin	37	5.0	0.07	0.35	11.5
Pyrethrins	1	1.7	0.007	0.01	**
Rotenone	*	1.2	0.04	0.05	**
Spinosad	13	3.1	0.07	0.23	2.7
Fungicides:					
Azoxystrobin	15	1.9	0.08	0.16	2.1
Benomyl	13	2.5	0.26	0.66	7.8
Chlorothalonil	47	4.7	1.14	5.44	233.4
Copper ammonium	1	4.9	0.23	1.12	0.6
Copper chloride hyd.	1	3.5	1.08	3.85	2.5
Copper hydroxide	60	8.5	0.88	7.54	408.8
Copper oxychlo. sul.	1	7.5	1.34	10.09	7.4
Copper resinate	4	6.6	0.11	0.71	2.4
Copper sulfate	1	1.6	0.52	0.88	1.1
Fosetyl-al	6	1.6	0.82	1.34	7.1
Mancozeb	52	8.4	1.47	12.35	581.4
Maneb	23	4.4	1.34	5.91	120.3
Mefenoxam	7	1.0	0.11	0.11	0.7
Metalaxyl	7	3.2	0.12	0.39	2.4
Myclobutanil	1	1.8	0.10	0.18	0.1
Propamocarb hydroch.	2	1.5	0.72	1.15	2.6
Sulfur	22	1.4	15.36	21.66	426.2
Other Chemicals:					
Chloropicrin	22	1.0	47.25	47.38	933.5
Metam-sodium	2	1.2	57.68	73.62	141.4
Methyl bromide	47	1.0	158.46	159.55	6,756.6

* Area applied is less than 1 percent.

** Total applied is less than 50 pounds

1/ Planted acres in 1998 for the 8 states surveyed were 90,500 acres. States included are CA, FL, GA, MI, NJ, NY, NC, and TX.

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

Tomatoes, Fresh: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Glyphosate	6	1.2	0.66	0.79	1.5
Metribuzin	3	1.0	0.26	0.27	0.2
Oxyfluorfen	3	1.0	0.17	0.18	0.2
Sethoxydim	3	1.4	0.19	0.27	0.3
Trifluralin	13	1.0	0.57	0.61	2.6
Insecticides:					
Bt (Bacillus thur.)2/	40	1.2			
Carbaryl	15	1.0	0.72	0.75	3.5
Dimethoate	22	1.3	0.31	0.43	3.0
Esfenvalerate	30	1.2	0.04	0.05	0.4
Imidacloprid	29	1.7	0.08	0.14	1.3
Methamidophos	10	1.5	0.76	1.15	3.6
Methomyl	60	1.5	0.62	0.94	18.1
Permethrin	6	1.4	0.16	0.24	0.4
Spinosad	4	3.4	0.05	0.18	0.3
Fungicides:					
Azoxystrobin	24	1.2	0.08	0.10	0.7
Chlorothalonil	22	2.4	1.33	3.22	22.6
Copper hydroxide	38	2.0	0.69	1.42	17.4
Fosetyl-al	4	1.2	2.13	2.70	3.8
Mancozeb	49	1.2	1.22	1.46	22.9
Maneb	8	1.1	1.17	1.33	3.4
Myclobutanil	2	1.8	0.10	0.18	0.1
Propamocarb hydroch.	4	1.3	0.84	1.13	1.4
Sulfur	55	1.3	17.76	23.28	412.6

1/ Planted acres in 1998 for California were 32,000 acres.

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

Tomatoes, Fresh: Agricultural Chemical Applications,
Florida, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Metribuzin	38	1.0	0.46	0.49	7.5
Paraquat	42	1.1	0.65	0.74	12.6
Insecticides:					
Abamectin	38	1.1	0.008	0.01	0.1
Bt (Bacillus thur.)2/	77	5.2			
Cyfluthrin	13	3.7	0.03	0.10	0.5
Endosulfan	23	2.9	0.56	1.64	15.5
Esfenvalerate	53	3.3	0.03	0.09	2.0
Imidacloprid	35	1.6	0.22	0.35	5.1
Methamidophos	26	7.1	0.64	4.58	49.1
Methomyl	7	5.7	0.48	2.75	8.0
Permethrin	75	5.3	0.07	0.36	10.8
Spinosad	18	2.5	0.09	0.23	1.7
Fungicides:					
Benomyl	20	2.0	0.25	0.52	4.1
Chlorothalonil	59	5.4	0.89	4.82	116.3
Copper hydroxide	85	10.8	0.89	9.66	333.2
Mancozeb	60	13.8	1.53	21.20	513.4
Maneb	32	4.0	1.50	6.00	78.6
Metalaxyl	14	3.4	0.11	0.38	2.1
Other Chemicals:					
Chloropicrin	40	1.0	41.21	41.21	664.8
Methyl bromide	95	1.0	159.37	160.35	6,179.5

1/ Planted acres in 1998 for Florida were 40,600 acres.

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

Tomatoes, Fresh: Agricultural Chemical Applications,
Georgia, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Insecticides:					
Carbaryl	1	2.5	1.09	2.80	0.1
Fungicides:					
Chlorothalonil	45	3.4	1.10	3.72	6.0
Copper hydroxide	95	10.8	0.66	7.19	24.6
Maneb	75	10.6	1.16	12.33	33.2
Other Chemicals:					
Methyl bromide	47	1.0	159.56	159.56	267.4

1/ Planted acres in 1998 for Georgia were 3,600 acres.

Tomatoes, Fresh: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Metribuzin	29	1.0	0.50	0.54	0.5
Trifluralin	19	1.0	0.59	0.61	0.4
Insecticides:					
Azinphos-methyl	69	4.1	0.34	1.39	2.9
Carbaryl	50	1.1	1.44	1.63	2.5
Endosulfan	73	5.9	0.58	3.44	7.5
Esfenvalerate	60	1.2	0.04	0.06	0.1
Methomyl	48	2.9	0.86	2.52	3.7
Permethrin	2	1.3	0.14	0.18	*
Fungicides:					
Chlorothalonil	85	9.3	1.98	18.54	47.0
Copper hydroxide	74	9.8	1.37	13.49	29.8
Mancozeb	74	10.0	0.97	9.74	21.6

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for Michigan were 3,000 acres.

Tomatoes, Fresh: Agricultural Chemical Applications,
New Jersey, 1998 1/

Agricultural Chemical	: Area Applied	: Appli- cations	: Rate per Application	: Rate per Crop Year	: Total Applied
	: Percent	: Number	: Pounds per Acre		: 1,000 lbs
Herbicides:	:	:	:	:	:
Metribuzin	: 41	: 1.1	: 0.39	: 0.43	: 0.7
Napropamide	: 22	: 1.0	: 1.42	: 1.43	: 1.2
Trifluralin	: 15	: 1.0	: 0.76	: 0.76	: 0.4
Insecticides:	:	:	:	:	:
Azinphos-methyl	: 21	: 2.5	: 0.47	: 1.18	: 1.0
Cyfluthrin	: 26	: 2.5	: 0.04	: 0.10	: 0.1
Dicofol	: 40	: 1.7	: 0.35	: 0.60	: 0.9
Endosulfan	: 29	: 2.0	: 0.71	: 1.44	: 1.6
Esfenvalerate	: 18	: 3.2	: 0.05	: 0.17	: 0.1
Lambda-cyhalothrin	: 18	: 3.3	: 0.02	: 0.08	: 0.1
Methomyl	: 11	: 1.9	: 0.61	: 1.18	: 0.5
Oxamyl	: 13	: 3.2	: 0.43	: 1.40	: 0.7
Fungicides:	:	:	:	:	:
Azoxystrobin	: 11	: 1.4	: 0.09	: 0.13	: 0.1
Benomyl	: 29	: 2.2	: 0.38	: 0.86	: 1.0
Chlorothalonil	: 86	: 3.4	: 1.50	: 5.21	: 17.4
Copper chloride hyd.	: 16	: 3.5	: 1.10	: 3.90	: 2.4
Copper hydroxide	: 25	: 1.8	: 0.43	: 0.82	: 0.8
Copper resinate	: 37	: 2.8	: 0.09	: 0.27	: 0.4
Mancozeb	: 32	: 2.1	: 1.14	: 2.46	: 3.0
Maneb	: 41	: 2.8	: 0.77	: 2.18	: 3.4
Metalaxyl	: 8	: 2.0	: 0.30	: 0.62	: 0.2

1/ Planted acres in 1998 for New Jersey were 3,900 acres.

Tomatoes, Fresh: Agricultural Chemical Applications,
New York, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Metribuzin	23	1.7	0.26	0.45	0.4
Napropamide	5	1.0	1.04	1.04	0.2
Trifluralin	29	1.0	0.80	0.84	0.8
Insecticides:					
Azinphos-methyl	7	1.9	0.52	1.01	0.2
Carbaryl	6	4.4	0.90	3.94	0.8
Endosulfan	5	2.4	0.89	2.16	0.4
Imidacloprid	18	3.1	0.03	0.11	0.1
Permethrin	6	2.4	0.10	0.23	0.1
Fungicides:					
Chlorothalonil	45	3.4	1.67	5.82	9.0
Copper hydroxide	14	4.2	0.60	2.53	1.2
Mancozeb	26	3.6	1.31	4.79	4.2
Maneb	9	2.7	1.48	4.13	1.3

1/ Planted acres in 1998 for New York were 3,400 acres.

Tomatoes, Fresh: Agricultural Chemical Applications,
North Carolina, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Napropamide	5	1.0	1.28	1.28	0.1
Paraquat	75	1.6	0.53	0.85	1.5
Insecticides:					
Bt (Bacillus thur.)2/	29	4.0			
Carbaryl	3	3.4	0.68	2.36	0.2
Endosulfan	82	2.3	0.74	1.69	3.2
Esfenvalerate	12	5.8	0.03	0.15	*
Fungicides:					
Chlorothalonil	93	4.4	1.53	6.75	14.4
Copper hydroxide	10	5.5	1.25	6.98	1.5
Copper resinate	78	9.9	0.11	1.11	2.0
Mancozeb	85	2.5	1.14	2.85	5.6
Other Chemicals:					
Chloropicrin	77	1.0	70.33	70.33	124.8
Methyl bromide	78	1.0	142.63	142.63	256.4

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for North Carolina were 2,300 acres.

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

Tomatoes, Fresh: Agricultural Chemical Applications,
Texas, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Trifluralin	6	1.0	0.62	0.62	0.1
Insecticides:					
Carbaryl	20	2.5	0.61	1.57	0.5
Esfenvalerate	34	4.0	0.03	0.12	0.1
Malathion	7	2.2	1.10	2.42	0.3
Fungicides:					
Chlorothalonil	38	1.3	0.82	1.07	0.7
Copper hydroxide	7	1.4	1.17	1.70	0.2

1/ Planted acres in 1998 for Texas were 1,700 acres.

Tomatoes, Processing: Fertilizer Use by State, 1998
Percent of Acres Treated and Total Amount Applied

State	Planted Acreage	Percent of Acres Treated and Total Applied					
	Acres	Nitrogen	Phosphate	Potash	1,000 Lbs	1,000 Lbs	1,000 Lbs
CA	282,000	98	83	53	56,984	20,452	11,336
MI	2,300	93	93	95	213	223	656
Total	284,300	98	83	53	57,197	20,675	11,992

Tomatoes, Processing: Fertilizer Primary Nutrient Applications,
States Surveyed and Total, 1998

Primary Nutrient	Planted Acreage	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Acres	Percent	Number	Pounds per Acre		1,000 Lbs
California:	282,000					
Nitrogen		98	3.3	62	207	56,984
Phosphate		83	1.7	51	88	20,452
Potash		53	1.8	41	76	11,336
Michigan:	2,300					
Nitrogen		93	2.6	38	100	213
Phosphate		93	1.9	54	104	223
Potash		95	1.9	150	299	656
Total:	284,300					
Nitrogen		98	3.3	62	206	57,197
Phosphate		83	1.7	51	88	20,675
Potash		53	1.8	42	79	11,992

Tomatoes, Processing: Active Ingredients Applied and Publication Status
By States Surveyed, 1998

Active Ingredient	States Surveyed		
	ALL	CA	MI
Herbicides:			
2,4-D	*	*	
Benefin	*	*	
Bromoxynil	*	*	
EPTC	P	P	
Ethalfluralin	*	*	
Fenoxaprop	*	*	
Glyphosate	P	P	
Metolachlor	P	*	*
Metribuzin	P	P	P
Napropamide	P	P	*
Oxyfluorfen	P	P	
Paraquat	P	P	
Pebulate	P	P	
Pendimethalin	*	*	
Rimsulfuron	P	P	
Sethoxydim	P	P	P
Trifluralin	P	*	*
Insecticides:			
Abamectin	*	*	
Aldicarb	*	*	
Azadirachtin	*	*	
Azinphos-methyl	*		*
Bifenthrin	*	*	
Bt (Bacillus thur.)	P	P	
Carbaryl	P	P	*
Cyfluthrin	P	P	
Diazinon	P	P	
Dimethoate	P	P	
Endosulfan	P	P	
Esfenvalerate	P	*	*
Fonofos	P	P	
Imidacloprid	P	P	
Lambda-cyhalothrin	P	P	P
Malathion	*	*	
Methamidophos	P	P	
Methomyl	P	P	
Neem oil	*	*	
Oxamyl	P	P	
Permethrin	P	P	
Potassium salts	*	*	
Propargite	*	*	
Pyrethrins	*	*	
Rotenone	*	*	
Spinosad	P	P	

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Tomatoes, Processing: Active Ingredients Applied and Publication Status
By States Surveyed, 1998 (continued)

Active Ingredient	States Surveyed		
	ALL	CA	MI
Fungicides:			
Azoxystrobin	P	P	P
Basic copper sulfate	*	*	
Benomyl	*		*
Chlorothalonil	P	P	P
Copper ammonium	P	P	
Copper hydroxide	P	P	P
Copper oxide	P	P	
Fosetyl-al	P	P	
Mancozeb	P	P	P
Maneb	P	P	
Mefenoxam	P	P	
Metalaxyl	P	*	*
Myclobutanil	*	*	
Propamocarb hydroch.	P	P	
Sulfur	P	P	
Ziram	*		*
Other Chemicals:			
Brodifacoum	*	*	
Dichloropropene	*	*	
Ethephon	P	P	P
Metam-sodium	P	P	
Tridencenyl acetate	*	*	

P Usage data are published for this active ingredient.

* Usage data are not published for this active ingredient.

Tomatoes, Processing: Agricultural Chemical Applications,
States Surveyed, 1998 1/

Agricultural Chemical	Area Applied	Appli- cations	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
EPTC	2	1.0	2.61	2.71	15.3
Glyphosate	54	1.2	0.61	0.76	116.8
Metolachlor	1	1.0	1.62	1.77	3.1
Metribuzin	12	1.1	0.26	0.29	9.7
Napropamide	22	1.0	0.82	0.87	55.2
Oxyfluorfen	12	1.0	0.06	0.07	2.4
Paraquat	4	1.0	0.85	0.89	10.5
Pebulate	14	1.3	2.49	3.42	140.3
Rimsulfuron	15	1.0	0.008	0.009	0.4
Sethoxydim	5	1.0	0.20	0.22	3.3
Trifluralin	58	1.2	0.47	0.60	97.6
Insecticides:					
Bt (Bacillus thur.)2/	15	1.4			
Carbaryl	5	1.1	1.00	1.20	15.4
Cyfluthrin	3	1.2	0.03	0.04	0.3
Diazinon	11	1.0	0.69	0.75	24.0
Dimethoate	34	1.1	0.43	0.49	47.6
Endosulfan	1	1.0	0.81	0.88	3.4
Esfenvalerate	32	1.2	0.04	0.05	4.2
Fonofos	2	1.1	1.15	1.26	5.8
Imidacloprid	4	1.0	0.04	0.04	0.5
Lambda-cyhalothrin	1	1.4	0.02	0.04	0.1
Methamidophos	13	1.3	0.86	1.16	41.5
Methomyl	27	1.2	0.54	0.66	49.7
Oxamyl	1	1.4	0.69	0.97	1.8
Permethrin	14	1.2	0.17	0.20	8.0
Spinosad	1	1.1	0.07	0.08	0.1
Fungicides:					
Azoxystrobin	21	1.2	0.08	0.10	6.3
Chlorothalonil	62	1.4	1.55	2.19	386.5
Copper ammonium	1	1.4	0.49	0.69	2.4
Copper hydroxide	65	1.7	0.91	1.58	291.9
Copper oxide	1	1.0	1.62	1.70	4.6
Fosetyl-al	4	1.0	1.98	2.13	23.3
Mancozeb	50	1.4	1.02	1.46	206.1
Maneb	8	1.2	0.98	1.19	26.1
Mefenoxam	21	1.2	0.15	0.19	11.3
Metalaxyl	3	1.4	0.14	0.20	2.0
Propamocarb hydroch.	14	1.1	0.78	0.88	34.7
Sulfur	62	1.6	23.77	38.41	6,818.7
Other Chemicals:					
Ethephon	14	1.0	0.51	0.55	21.2
Metam-sodium	16	1.0	53.80	58.32	2,722.6

1/ Planted acres in 1998 for the 2 states surveyed were 284,300 acres.
States included are CA and MI.

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

Tomatoes, Processing: Agricultural Chemical Applications,
California, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
EPTC	2	1.0	2.61	2.71	15.3
Glyphosate	54	1.2	0.61	0.76	116.8
Metribuzin	11	1.1	0.26	0.28	9.1
Napropamide	23	1.0	0.82	0.87	55.1
Oxyfluorfen	13	1.0	0.06	0.07	2.4
Paraquat	4	1.0	0.85	0.89	10.5
Pebulate	15	1.3	2.49	3.42	140.3
Rimsulfuron	15	1.0	0.008	0.009	0.4
Sethoxydim	5	1.0	0.20	0.22	3.1
Insecticides:					
Bt (Bacillus thur.)2/	15	1.4			
Carbaryl	4	1.0	0.92	0.99	12.3
Cyfluthrin	3	1.2	0.03	0.04	0.3
Diazinon	11	1.0	0.69	0.75	24.0
Dimethoate	34	1.1	0.43	0.49	47.6
Endosulfan	1	1.0	0.81	0.88	3.4
Fonofos	2	1.1	1.15	1.26	5.8
Imidacloprid	4	1.0	0.04	0.04	0.5
Lambda-cyhalothrin	1	1.2	0.03	0.03	*
Methamidophos	13	1.3	0.86	1.16	41.5
Methomyl	27	1.2	0.54	0.66	49.7
Oxamyl	1	1.4	0.69	0.97	1.8
Permethrin	14	1.2	0.17	0.20	8.0
Spinosad	1	1.1	0.07	0.08	0.1
Fungicides:					
Azoxystrobin	21	1.2	0.08	0.10	6.0
Chlorothalonil	62	1.3	1.55	2.09	364.8
Copper ammonium	1	1.4	0.49	0.69	2.4
Copper hydroxide	65	1.6	0.93	1.56	284.4
Copper oxide	1	1.0	1.62	1.70	4.6
Fosetyl-al	4	1.0	1.98	2.13	23.3
Mancozeb	50	1.4	1.02	1.45	203.5
Maneb	8	1.2	0.98	1.19	26.1
Mefenoxam	21	1.2	0.15	0.19	11.3
Propamocarb hydroch.	14	1.1	0.78	0.88	34.7
Sulfur	63	1.6	23.77	38.41	6,818.7
Other Chemicals:					
Ethephon	13	1.0	0.52	0.56	20.5
Metam-sodium	17	1.0	53.80	58.32	2,722.6

* Total applied is less than 50 pounds.

1/ Planted acres in 1998 for California were 282,000 acres.

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

Tomatoes, Processing: Agricultural Chemical Applications,
Michigan, 1998 1/

Agricultural Chemical	Area Applied	Applications	Rate per Application	Rate per Crop Year	Total Applied
	Percent	Number	Pounds per Acre		1,000 lbs
Herbicides:					
Metribuzin	67	1.4	0.26	0.36	0.6
Sethoxydim	40	1.0	0.23	0.23	0.2
Insecticides:					
Lambda-cyhalothrin	69	1.7	0.02	0.04	0.1
Fungicides:					
Azoxystrobin	57	2.3	0.09	0.21	0.3
Chlorothalonil	80	7.0	1.66	11.75	21.7
Copper hydroxide	80	7.4	0.55	4.10	7.6
Mancozeb	46	1.9	1.29	2.48	2.6
Other Chemicals:					
Ethephon	76	1.0	0.37	0.38	0.7

1/ Planted acres in 1998 for Michigan were 2,300 acres.

Survey Procedures: Large screening samples were drawn from the NASS List Sampling Frame. This extensive sampling frame covers all types of farms and accounts for about 82% of all land in farms in the U.S. The screening samples were selected in such a way as to insure that all farms on the list had a possibility of being selected. Farms that were more likely to be producers of crops of interest were more likely to be in the sample. The sampled farms were screened to determine the presence of all the crops of interest. From this subpopulation of operations identified as producing the crop of interest, a subsample of farms was selected in such a way as to insure that each identified producer had an opportunity to be selected. In general, larger farms were more likely to be selected than smaller farms.

Estimation Procedures: The chemical applications data, reported by product name or trade name are reviewed within 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 "**Vegetables - 1998 Summary**" [Vg 1-2(99)c] released on January 28, 1999. 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: 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 are 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.

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 use of a commonly used product, such as Carbaryl, exhibit less variability than a more rarely used product. For more commonly used chemicals, cv's will range from 1-30 percent at the U.S. level and 5-65 percent at the State level. Some rarer items will have cv's above 100 percent. These items have insufficient data for publication and these instances are noted.

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.

Agricultural chemicals: The phrase agricultural chemicals refers to the active ingredients in fertilizers and pesticides.

Application Rates: The 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 agricultural chemical.

Area applied: The area that represents the percentage of crop acres receiving one or more applications of a specific agricultural chemical. 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.

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

Crop year: A crop year refers to the period immediately following harvest for the previous crop through harvest of the current crop.

Fertilizer: The term fertilizer refers to applications of the primary nutrients, nitrogen, phosphate, and potash.

Pesticides: As defined by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), pesticides include any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.

The four classes of pesticides presented in this report and the pests targeted are: herbicides - weeds, insecticides - insects, fungicides - fungi, and other chemicals - other forms of life. Miticides and nematicides are included as insecticides while soil fumigants, growth regulators, defoliants, and desiccants are included as other chemicals. This report excludes pesticides used for seed treatments, for spot treatments, and for postharvest applications to the commodity.

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. Some formulations as in the case of pre-mixes, can contain more than one active ingredient.

Trade Name, Common Name, and Pesticide Class

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

Class	: Common Name	: Trade Name
H,O	2,4-D	several
I	Abamectin	Agri-Mek, Avid, Zephyr
I	Acephate	Orthene, Payload
H	Acetochlor	Harness, Topnotch
H	Alachlor	Lasso
I	Aldicarb	Temik
H	Ametryn	Evik
O	Aminopyridine	Avitrol
O	Ammonium soap	Hinder
F	Anilazine	Dyrene
H	Atrazine	AAtrex, Atrazine
I	Azadirachtin	Align, Margosan-O
I	Azinphos-methyl	Guthion
F	Azoxystrobin	Abound, Quadris
F	Basic copper sulfate	Top Cop, Tri-Basic
H	Benefin	Balan
F	Benomyl	Benlate
H	Bensulide	Prefar
H	Bentazon	Basagran, Pledge
I	Bifenthrin	Brigade, Capture, Talstar
O	Brodifacoum	several
H	Bromacil	Hyvar
H	Bromoxynil	Brominal, Buc tril
I	BT (Bacillus thuringiensis)	several
I	Buprofezin	Applaud
H	Butylate	Genate, Sutan
F	Captan	Captan
I,O	Carbaryl	Savit, Sevin
I	Carbofuran	Furadan
H	Chloramben	Amiben
O	Chloropicrin	several
F	Chlorothalonil	Bravo, Daconil
O	Chlorpropham	Furloe 20G
I	Chlorpyrifos	Dursban, Lorsban
H	Clethodim	Select
H	Clomazone	Command
H	Clopyralid	Reclaim, Stinger
F	Copper ammonium carbonate	Copper-Count-N
F	Copper chloride hyd.	copper oxychloride
F	Copper hydroxide	several
F	Copper oxide	Nordox
F	Copper oxychloride sulfate	C-O-C-S
F	Copper resinate	Tenn-Cop
F	Copper sulfate	Copper sulfate
I	Cryolite	Kryocide
H	Cyanazine	Bladex, Conquest, Cycle, Extrazine
H	Cycloate	Ro-Neet
I	Cyfluthrin	Baythroid
I	Cypermethrin	Ammo, Cymbush
I	Cyromazine	Trigard

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Class	Common Name	Trade Name
O	Cytokinins	Burst, Promalin, Triggrr
H	DCPA	Dacthal
I	Diazinon	several
H	Dicamba	Banvel
H	Dicamba, Potassium salt	Marksman
O	Dichloropropene	Telone
H	Diclofop-methyl	Hoelon
F	Dicloran	Allisan, Botran
I	Dicofol	Kelthane
H	Diethatyl-ethyl	Antor
H	Dimethenamid	Frontier, Guardsman
I	Dimethoate	several
F	Dimethomorph	Acrobat
F	Dinocap	Karathane
O	Diphacinone	Ramik
H,O	Diquat	Diquat
I	Disulfoton	Di-Syston
H	Diuron	Direx, Karmex
F	Dodine	Cyprex, Syllit
H	Disodium Methanearsonate	DSMA
I	Endosulfan	Thiodan
H	EPTC	Eptam, Eradicane, Genep
I	Esfenvalerate	Asana
H	Ethalfuralin	Curbit, Sonalan
O	Ethephon	Cerone, Ethrel, Prep
I	Ethion	Ethion
H	Ethofumesate	Nortron
I	Ethoprop	Holdem, Mocap
I	Ethyl parathion	several
O	Farnesol	Stirrup
I	Fenamiphos	Nemacur
F	Fenbuconazole	RH-7592
I	Fenbutatin-oxide	Vendex
H	Fenoxaprop-ethyl and-p-ethyl	Option, Whip
I	Fenpropathrin	Danitol
H	Fluazifop-P-butyl	Fusilade
H	Flumetsulam	Broadstrike
H	Fomesafen	Reflex
I	Fonofos	Dyfonate
F	Fosetyl-al	Aliette
O	Garlic oil	Envirepel, Nutripel
O	Gibberellic acid	GibGro, ProGibb, ProVide
H,O	Glyphosate	Ranger, Rattler, Rodeo, Roundup
O	Gossyplure	Checkmate, NoMate, Stirrup
I	Hexythiazox	Savey
O	IBA	PGR IV
H	Imazethapyr	Pursuit
I	Imidacloprid	Admire
F	Iprodione	Rovral
H	Lactofen	Cobra
I	Lambda-cyhalothrin	Karate, Saber, Warrior
I	Lindane	Isotox, Lindane
H	Linuron	Linex, Lorox
I	Malathion	several
O	Maleic hydrazide	Royal MH-30, Super Sprout Stop
F	Mancozeb	several
F	Maneb	several
H	MCPA	several
H	MCPB	Thistrol
F	Mefenoxam	Ridomil Gold

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Class	Common Name	Trade Name
O	Mepiquat chloride	Pix, Ponnax
F	Metalaxyl	Ridomil
O	Metaldehyde	Metaldehyde
O	Metam-sodium	Vapam
I	Methamidophos	Monitor
I	Methiocarb	Mesuroil
I	Methomyl	Lannate
I	Methoxychlor	several
O	Methyl bromide	several
I	Methyl parathion	several
F	Metiram	Polyram
H	Metolachlor	Dual
H	Metribuzin	Axiom, Lexone, Sencor
I	Mevinphos	Duraphos, Phosdrin
F	Myclobutanil	Nova, Rally
I	Myrothecium verrucaria	Ditera
I	Naled	Dibrom
H	Napropamide	Devrinol
H	Naptalam	Alanap
I	Hydrophobic Extract of Neem Oil	Neemgard
I	Neem Oil, Hydrophobic extract	Trilogy
O	Nerolidol	Stirrup M
H	Nicosulfuron	Accent
H	Norflurazon	Evital, Solicam, Zorial
I	Oxamyl	Vydate
I	Oxydemeton-methyl	Metasystox-R
H	Oxyfluorfen	Goal
I	Oxythioquinox	Morestan
H,O	Paraquat	Cyclone, Gramoxone, Starfire
F	PCNB	Terraclor
H	Pebulate	Tillam
H	Pendimethalin	Prowl
I	Permethrin	Ambush, Pounce
I	Petroleum distillate	several
H	Phenmedipham	Spin-Aid
I	Phorate	Thimet
I	Phosmet	Imidan
I	Piperonyl butoxide	Butacide, Incite, PBO-8
F	Potassium bicarbonate	Kaligreen
I	Potassium salts	M-Pede, Safer Insecticidal Soap
H	Prometryn	Caparol, Cotton-Pro
H	Pronamide	Kerb
H	Propachlor	Ramrod
F	Propamocarb hydrochloride	Tattoo
H	Propanil	Stam
I	Propargite	Comite, Omite
F	Propiconazole	Banner, Orbit, Tilt
I	Pseudomonas cepacia type Wis.	Deny
I	Pyrethrins	several
H	Pyridate	Tough
H	Quizalofop-ethyl	Assure
H	Rimsulfuron	Basis
I	Rotenone	Rotenone
I	Sabadilla	Sabadilla
H	Sethoxydim	Poast
I	Silicon dioxide	Celite, Diatomaceous earth
H	Simazine	Princep, Simazine
I	Soybean oil	Golden Natur'l Spray Oil
I	Spinosad	SpinTor, Success, Tracer
F	Streptomycin	Agri-Strep

-- continued

Class	Common Name	Trade Name
O	Strychnine	several
H	Sulfosate	Touchdown
I,F	Sulfur	several
F	Tebuconazole	Folicur, Lynx
I	Tebufenozide	Confirm
I	Tebupirimphos	Aztec
I	Tefluthrin	Force
H	Terbacil	Sinbar
I	Terbufos	Counter
I	Thiodicarb	Larvin
F	Thiophanate-methyl	Topsin
F,O	Thiram	Thiram
I	Toxaphene	Hels-Mate
I	Tralomethrin	Scout
F	Triadimefon	Bayleton
H	Triallate	Far-Go
H	Tribenuron-methyl	Express
I	Trichlorfon	Dylox, Proxol
O	Tridencen-1-yl acetate	Checkmate TPWF, Nomate TPW
H	Trifluralin	Treflan, Trific, Trilin
F	Triforine	Funginex
F	Vinclozolin	Ronilan
I	Xylene	Hels-Mate
I	Zeta-cypermethrin	Fury, Mustang
F	Ziram	Ziram

E

FERTILIZER APPLICATIONS

E

4. I need to record complete information on all commercial fertilizers applied to the target vegetables you grew during the 1998 crop year. Include all applications regardless of how they were applied. (Irrigation water, foliar applications, etc.) [Record amount and analysis of fertilizers applied or pounds of actual plant nutrients applied. Complete the table below (and any necessary supplemental fertilizer tables).]

T-TYPE	TABLE
2	001
OFFICE USE LINES IN TABLE	
LINE 99	299

LINE	1	2	3	4	5	6	7	8	9	10	
	CROP	CROP CODE	NITROGEN N	PHOSPHATE P ₂ O ₅	POTASH K ₂ O	How much was applied per acre per application? [Leave this column blank if actual nutrients were reported.]	UNIT CODES 1 POUNDS 12 GALLONS 13 QUARTS 15 OUNCES, LIQUID 28 OUNCES, DRY 19 ACTUAL NUTRIENTS	How many acres was this applied to? [Include bearing acres only.]	How many times was it applied?	Were these applications made by-- 1 Operator, Partner, or Family Member 2 Custom Applicator 3 Employee/ Other	
								ACRES	NUMBER		
01		201	202	203	204	205	206	207	208	209	210
02		201	202	203	204	205	206	207	208	209	210
03		201	202	203	204	205	206	207	208	209	210
04		201	202	203	204	205	206	207	208	209	210
05		201	202	203	204	205	206	207	208	209	210
06		201	202	203	204	205	206	207	208	209	210
07		201	202	203	204	205	206	207	208	209	210
08		201	202	203	204	205	206	207	208	209	210
09		201	202	203	204	205	206	207	208	209	210
10		201	202	203	204	205	206	207	208	209	210
11		201	202	203	204	205	206	207	208	209	210
12		201	202	203	204	205	206	207	208	209	210
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16		201	202	203	204	205	206	207	208	209	210
17		201	202	203	204	205	206	207	208	209	210
18		201	202	203	204	205	206	207	208	209	210
19		201	202	203	204	205	206	207	208	209	210
20		201	202	203	204	205	206	207	208	209	210

F

CHEMICAL APPLICATIONS

F

Now I have some questions about pesticide and chemical applications to your vegetables before harvest. Please consider all applications made since the harvest of crops grown immediately before the target vegetable crops.

1. Since last year's (1997) harvest, did you use herbicides on any of your vegetable acreage? YES NO
2. Since last year's (1997) harvest, did you use insecticides, nematocides or miticides on any of your vegetable acreage? YES NO
3. Did you use fungicides on any of your vegetable acreage since last year's (1997) harvest? YES NO
4. Did you use any other chemicals such as growth regulators, soil fumigants, chemical thinners, microbial agents, rodenticides, etc. on any of your vegetable acreage since last year's (1997) harvest? YES NO
5. [ENUMERATOR ACTION: Are items 1 - 4 all NO?]
 - YES - [Go to Section H, page 14.]
 - NO -[Go to item 6, on next page.]

OFFICE USE LINES IN TABLE	T-TYPE 3	TABLE 001	LINE 99	399
------------------------------	----------	-----------	---------	-----

L I N E	1	2	3	4	6
	CROP	CROP CODE	What product(s) was applied to the [crop]? [Enter product code.]	Was this product bought in liquid or dry form? [Enter L or D.]	[Enter line number of first product in the tank mix.]
NOTES:					
01		301	302		304
02		301	302		304
03		301	302		304
04		301	302		304
05		301	302		304
06		301	302		304
07		301	302		304
08		301	302		304
09		301	302		304
10		301	302		304

For pesticides not listed on card, specify

Line #	Pesticide Type (Herb., Insect., Fung., etc.)	Tradename & Formulation	Form Purchased (Liquid or Dry)	EPA Number
_____	_____	_____	_____	_____

F

CHEMICAL APPLICATIONS

F

6. Now I need to get complete information on all of the chemicals you applied during the 1998 crop year to each of the target vegetables you grew. Let's start with the first application to your [crop].

[Complete the tables for all chemical applications to the target vegetables. Use supplemental tables if necessary. Exclude seed treatment and applications made to vegetables after harvest. If foliar applications of nutrients are reported, record these in Section E, not in Section F.]

CODES FOR COLUMN 9		CLASS	ABBREV.	CODE SERIES
1 POUNDS	30 GRAMS	INSECTICIDES	I	1000's
12 GALLONS	40 KILOGRAMS	HERBICIDES	H	4000's
13 QUARTS	41 LITERS	FUNGICIDES	F	7000's
14 PINTS	46 SPIRALS	OTHER	M, MG, MS	9000's
15 OUNCES	47 PACKETS			
	50 OTHER (Specify _____)			

LINE	7 OR 8		9 [Enter unit code from above.]	10 How many acres were treated with this product? (Include only bearing acres.) ACRES	12 How many times was it applied? NUMBER	16 Were these applications made by-- 1 operator, partner, or family member 2 custom applicator 3 employee/other CODE	
	How much was applied per acre per application?	What was the total amount applied per application?				316	317
01	305	306	307	308	310	316	317
02	305	306	307	308	310	316	317
03	305	306	307	308	310	316	317
04	305	306	307	308	310	316	317
05	305	306	307	308	310	316	317
06	305	306	307	308	310	316	317
07	305	306	307	308	310	316	317
08	305	306	307	308	310	316	317
09	305	306	307	308	310	316	317
10	305	306	307	308	310	316	317

For pesticides not listed on card, specify

Line #	Pesticide Type (Herb., Insect., Fung., etc.)	Tradename & Formulation	Form Purchased (Liquid or Dry)	EPA Number
_____	_____	_____	_____	_____

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Report Features

Released July 21, 1999 by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, U.S. Department of Agriculture. For information on "Agricultural Chemical Usage" call (202) 720-2127, office hours 7:30 a.m. to 4:00 p.m. ET.

The next "Agricultural Chemical Usage" report will be released October 5, 1999. This report will cover agricultural chemical use of restricted use pesticides for the 1998 crop year for field crops and fruits in major states.

The next "Agricultural Chemical Usage" report for fruit crops will be released in July 2000. This report will cover agricultural chemical use for the 1999 crop year for major states.

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