

CONTROL RECOMMENDATIONS FOR VEGETABLES INSECTS

Residues

Federal laws prohibit the sale of food produce that contains more than the specifically permitted amounts of pesticide residues. The recommendations in this guide are within these limits and only insecticides that have been approved at the rates and time intervals specified are included. Disregarding the standards established by the Environmental Protection Agency could result in unnecessary losses and inconveniences. The kind and amount of pesticide present on food products are the responsibility of the food producer.

Specific instructions for the safe and effective use of farm chemicals must be given on the container label by law. It is your responsibility to carefully read and follow these label instructions and precautions.

Application checklist

To obtain satisfactory control of vegetable insects:

1. use one of the insecticides recommended for the particular crop against the particular pest.
2. use the correct amount of the insecticide.
3. follow the recommended schedule of applications whenever regular applications are indicated.
4. use hollow cone nozzles not herbicide nozzles.
5. set the nozzles about 20 inches from the surface to be sprayed.
6. use sufficient pressure to obtain a full spray pattern for the nozzle; manufacturer's list recommended psi for each style of nozzle. Excessive pressure will increase drift, decrease deposit, and should generally be avoided.
7. use sufficient spray to cover plants thoroughly especially when fungicides are combined with insecticides. The amount of spray may be increased by slowing the ground speed of the sprayer or by using larger nozzles. Increasing pressure is not recommended.

Dosages and Formulations

Dosages of sprayable powders (water soluble or wettable powders) and liquids are given as the amount of formulated product that should be used in 50 gallons of spray. Sufficient spray should be applied to provide thorough coverage of the plants. Granular insecticides commonly used for soil insect control are stated as the formulated product. Rates given are on the basis of a broadcast application unless otherwise stated.

Formulations listed are not necessarily all that are available. If another formulation is used convert to the proper dosage using those given in these recommendations as a guide.

Most insecticides are available as an emulsifiable concentrate (EC) that is based on solvents and/or oils or as a wettable powder (WP). Wettable powders are safer than emulsions to use on tender foliage. Certain insecticides are available as water soluble (WS) powders and should not be confused with wettable powders. Water soluble powders go into solution while wettable powders merely form suspensions that settle out on standing.

Some insecticides are marketed as a flowable. This formulation is generally less toxic to foliage than the standard EC.

Whenever possible the formulations of emulsifiable concentrates have been quoted in pounds of active ingredient per gallon (example: 5 lbs EC). This was done because in many products the percentage of ingredients will vary due to the use of different solvents. Malathion, for example, is 5 lbs EC yet may be formulated anywhere from 55%-57% of active material.

Precautions:

Phosphate and carbamate insecticides such as Parathion, Azinphos methyl, Methomyl, and Trithion are highly toxic to humans and animals. Take special precautions in handling and applying these chemicals and others of similar nature. Check the label carefully and observe all safety precautions. Wash at once and change clothes if spillage occurs. Bathe promptly after use and wash clothes before re-use. Generally, symptoms of phosphate insecticide poisoning include blurred vision, headache, abdominal cramps, and tightness of the chest.

NOTE: Take special precautions when mixing Methomyl. Wear a recommended respirator. Do not inhale the dust or powder.

WARNING: Re-entry times for workers entering groves and/or treated fields should be strictly observed. Be sure to check the label for this information.

pH: Adjust pH before adding insecticide-optimum range 5.5-6.0 for most insecticides. Diazinon needs no adjustment. Test water to adjust. **DO NOT JUST ADD BUFFER.**

SPREADER STICKERS: Needed on waxy leaf plants. May be used on most crops. Overdose will burn foliage.

ARTICHOKE

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Psyllids	Platinum	5.0-8.0 ozs	30	Observe label.
Leafhoppers	Asana XL	5.8-9.6 ozs	1	Observe label.
	Ambush 25W	6.4-19.2 ozs	0	Observe label.
	Capture 2EC	6.4 ozs	5	Observe label.
	Pounce 25WP	6.4-19.2 ozs	0	Observe label.
	SpinTor 2SC	3.6-6.0 ozs	3	Observe label.

BEANS (SNAP AND LIMA)

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Brigade 2EC	1.6-6.4 fl ozs	3	Observe label.
	Warrior 1EC	2.56-3.84 lbs	3	Observe label.
	Thionex 50WP	1.0-2.0 lbs	3	Observe label.
	Thiodan 3EC	1.3-2.3 pts	3	Observe label.
	Dibrom 8EC	0.5 pt	1	Do not feed treated vines to livestock.
	Provado 1.6F	3.25 ozs	7	Observe label.
	Malathion 5EC	1.0 pt	1	Observe label.
	Orthene 75S	0.5	14	Observe label.
	Malathion 25WP	2.5 lbs	1	Observe label.
Mexican bean beetles	Malathion 5EC	1.0 pt	1	Observe label.
Cucumber beetles	Malathion 25WP	2.5 lbs	1	Observe label.
	Thiodan 50WP	1.0-2.0 lbs	3	Observe label.
	Thiodan 3EC	1.3-2.3 pts	3	Observe label.
	Capture 2EC	2.1-6.4 ozs	3	Observe label.
	Fury 2EC	1.4-4.3 ozs	1	Observe label.
	Asana XL	5.8-9.6 ozs	3	Observe label.
	Carbaryl 80S	0.67 lb	None	Observe label.
	Carbaryl 50WP	1.0 lb	None	Observe label.
Flea beetles, Leaf hoppers	Carbaryl 80S	1.0 lb	None	Observe label.
Bean leaf beetles	Carbaryl 50WP	2.0 lbs	None	Observe label.

At pod set: begin weekly applications when longest pods are one-inch long and continue throughout harvest for maximum pod protection. Add an insecticide for control of mites or leafminers as needed.

Earworms, stinkbugs	Brigade 2EC	2.1-6.4 fl ozs	3	Observe label.
Bean leaf beetles	Orthene 75S	0.5	14	Observe label.
Cucumber beetles	Capture 2EC	2.1-6.4 ozs	3	Observe label.
Lima bean pod borers	Fury 2EC	1.4-4.3 ozs	1	Observe label.
Leaf hoppers	Asana XL	5.8-9.6 ozs	3	Observe label.
	Carbaryl 80S	1.25 lbs	None	Observe label.
	Carbaryl 50WP	2.0 lbs	None	Observe label.
Mites	Kelthane MF	1.0-3.0 pts	21	Cover foliage thoroughly.
	Capture 2EC	2.1-6.4 ozs	3	Observe label.
Leafminers	Dibrom 8EC	0.5 lb	1	Do not feed treated vines to meat or dairy animals.
	SpinTor 2SC	3.0-6.0 ozs	3	Observe label.

BEETS

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Flea beetles or webworms	Carbaryl 80S	0.6 lb	3 (14 if tops are used for food)	Observe label.
	Lannate LV	0.75-3.0 pts	0 roots, 10 tops	Observe label.
	Lannate SP	0.25-1.0 lb	0 roots, 10 tops	Observe label.
	SpinTor 2SC	3.0-6.0 ozs	3	Observe label.

BEETS (cont'd)

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Vegetable weevils	Carbaryl 50WP	0.5 lb	3	Observe label.
	Malathion 5EC	1.0 pt	7	Observe label.
	Malathion 25WP	2.5 lbs	7	Observe label.
Armyworms Beet webworms	Radiant	4.5-6.0 ozs	3	Observe label.
Aphids	Admire Pro 4.6F	4.4-10.5 ozs	21	Must be applied to soil.
Leafminer	Raidant	6.0-10.0 ozs	1	Observe label.

BRUSSELS SPROUTS

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations	
Loopers are most difficult to control; watch for loopers on underside of leaf along borders. Treat on a 7-day schedule and change to 5 days for heavy infestations. Use a wetting agent according to manufacturer's instructions.					
Add B.t. to sprays to increase control.					
Loopers	Orthene 75S	1.33 lbs	14	Observe label.	
Imported cabbage worms	Monitor 4EC	0.5-1.0 pt	14	Observe label.	
Diamond back moths	Bacillus thuringiensis-Use maximum rate recommended by manufacturer.				
		Lannate SP	0.25-1.0 lb	3	Do not use in home plantings.
		Lannate LV	1.5-3.0 pts	3	Observe label.
		Ambush 2EC	3.26-4.0 ozs	1	Do not apply more than 8 applications per season.
		Ambush 25WP	3.2-6.4 ozs	1	Observe label.
		Guthion 2L	2.0-3.0 pts	7	Observe label.
		Guthion 50WP	1.0-1.5 lbs	7	Observe label.
		Pounce 3.2 EC	2.0-4.0 ozs	1	Observe label.
		Rimon 0.83EC	6.0-12.0 fl ozs	7	Observe label.
		SpinTor 2SC	1.5-10.0 ozs	1	Observe label.
		Proclaim	2.4-4.8 ozs	7	Observe label.
		Capture 2EC	2.1-6.4 ozs	7	Observe label.
		Avaunt	3.5 ozs	3	Observe label.
		Fury 2EC	2.4-4.3 ozs	1	Observe label.
		Confirm 2F	6.0-8.0 ozs	7	Observe label.
		Thiodan/Phaser 50WP	0.5 lb	7	Observe label.
Root aphids	Lorsban 4E	1.0-2.0 pts	21	Observe label.	
Root maggots					
Aphids	Fulfill	2.75 ozs	7	Observe label.	
	Provado 1.6FL	3.75 ozs	7	Observe label.	
	Orthene 75S	1.33 lbs	14	Observe label.	
Whiteflies	Assail 30SG	2.5-4.0 ozs	7	Observe label.	
	Provado 1.6FL	3.75 ozs	7	Observe label.	
	Fulfill	2.75 ozs	7	Observe label.	
	Venom 70SG	1.0-4.0 ozs	1	Do not apply more than 6 ozs per season foliar.	
		(foliar)			
	5.0-6.0 ozs	21	(soil)		

CABBAGE AND BROCCOLI

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Loopers are most difficult to control; watch for loopers on underside of leaf along borders. Treat on 7-day schedule and change to 5 days for heavy infestations. Use a wetting agent according to manufacturer's instructions.				
Loopers	Ambush 2EC	3.2-6.4 ozs	1	Observe label.
Imported cabbage worm	Ambush 25WP	3.2-6.4 ozs	1	Observe label.
Diamond back moth	Confirm 2F	6.0-8.0 ozs	7	Observe label.

CABBAGE AND BROCCOLI (cont'd)

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Loopers	Asana XL	5.8-9.6 ozs	3	Observe label.
Imported cabbage worm	Lannate SP	0.25-1.0 lb	3	Do not use in plantings.
Diamond back moth	Lannate LV	1.5-3.0 pts	3	Observe label.
	Thiodan/Phaser 50WP	0.5 lb	7	Observe label.
	Pounce 3.2 EC	2.0-4.0 ozs	1	Observe label.
	Guthion 2L	2.0-3.0 pts	21-cabbage	Observe label.
			15-broccoli	Observe label.
	Guthion 50WP	1.0-1.5 lbs	21-cabbage	Observe label.
			15-broccoli	Observe label.
	Proclaim	2.4-4.8 ozs	7	Observe label.
	Capture 2EC	2.1-6.4 ozs	7	Observe label.
	Avaunt	3.5 ozs	3	Observe label.
	Fury 2EC	2.4-4.3 ozs	1	Observe label.
	Larvin 3.2	16.0-40.0 ozs	7	Observe label.
Leafminers, thrips	SpinTor 2SC	3.0-10.0 ozs	1	Observe label.
Wireworms	Diazinon AG500	3.0-4.0 qts	14	
Root aphids	Lorsban 4E	1.6-2.4 fl ozs/1,000/linear/row ft		Use 40 gals/acre.
Root maggots	Lorsban 15G	4.6-9.2 ozs/1,000 ft		
	Diazinon AG500	2.0-3.0 qts	7-broccoli	Broadcast just before planting and immediately incorporate into the top 3-4 inches of soil.
			21-cabbage	
Whiteflies	Oberon 2SC	7.0-8.5 fl ozs	7	Do not exceed 25.5 fl ozs per acre per season.

B.t. = Bacillus thuringiensis: use maximum amount recommended by manufacturer.
(Javelin, Biobit, Dipel, Agree, Condor, Xentari, Ketch)

CANTALOUPE

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Metasystox-R 2EC	1.0-1.5 pts	7	Observe label.
	Thionex/Phaser 50WP	0.5 lb	None	Observe label.
Leafminers	Dibrom 8EC	0.25-0.5 pt	1	Observe label.
	Oxamyl	2.0-4.0 pts	1	Observe label.
	(Vydate L) 2EC			
	SpinTor 2SC	4.0-8.0 ozs	3	Observe label.
	Oxamyl 10G	40-60 lbs, broadcast		Apply within one week of planting.
	Pounce 3.2EC	8.0 ozs	1	Observe label.
	Pounce 2.5WP	12.8 ozs	1	Observe label.
Spider mites	Kelthane 50WP	1.25 lbs	2	Observe label.
	Guthion 2L	1.5-2.0 pts	7	Observe label.
	Guthion 50WP	0.75-1.0 lb	7	Observe label.
	Capture 2EC	5.12-6.4 ozs	3	Observe label.
	Ambush 25W	6.4-12.8 ozs	0	Observe label.
Make first applications for cucumber beetle control when seedlings first crack and repeat as needed.				
Cucumber beetles	Guthion 2L	1.5-2.0 pts	7	Observe label.
Pickleworms	Guthion 50WP	0.75-1.0 lb	7	Observe label.
Melon worms	Carbaryl 80S	0.6 lb	None	Observe label.
Squash bugs	Carbaryl 50WP	1.0 lb	None	Observe label.
Squash vine borers	Thionex 2EC	1.0 pt	None	Observe label.
	Thionex 50WP	0.5 lb	None	Observe label.
	Capture 2EC	5.12-6.4 ozs	3	Observe label.
	Ambush 25W	6.4-12.8 ozs	3	Observe label.
	Asana XL	5.6-9.8 ozs	3	Observe label.
Cutworms	Diazinon AG500	2.0-4.0 qts	3	Observe label.
Wireworms	Diazinon AG500	3.0-4.0 qts	3	Observe label.

CARROTS

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Leafhoppers	Carbaryl 80S	0.6 lb	None	Observe label.
Flea beetles	Carbaryl 50WP	0.5 lb	None	Observe label.
	Radiant	3.0-6.0 fl ozs	3	Radiant will not control leafhoppers; no more than 4 applications/year.
	Malathion 5EC	1.0-1.5 pts	7	Observe label.
	Lannate SP	0.33-1.0 lb	1	Observe label.
	Lannate LV	1.0-3.0 pts	1	Observe label.
	Asana XL	5.8-9.6 ozs	7	Observe label.
	Baythroid 2EC	1.6-2.8 ozs	0	Observe label.
Vegetables weevils	Malathion 5EC	1.0 pt	7	Observe label.
Aphids	Thiodan/Phaser 3EC	1.33-2.67 ozs	7	Only two applications per season.
Wireworms	Diazinon AG500	3.0-4.0 qts	14	Observe label.

CAULIFLOWER

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Loopers are most difficult to control; watch for loopers on underside of leaf along borders. Treat on a 7-day schedule and change to 5 days for heavy infestations. Use a wetting agent according to manufacturer's instructions.				
Add B.t. to sprays to increase control.				
Loopers	Asana 1.9EC	1.7-3.4 ozs	1	Observe label.
Flea beetles	Ambush 2EC	3.2-6.4 ozs	1	Observe label.
Diamond back moths	Ambush 25WP	3.2-6.4 ozs	1	Observe label.
	Thiodan/Phaser 50WP	0.5 lb	14	Observe label.
Imported cabbage worms	Guthion 2L	2.0-3.0 pts	15	Observe label.
	Guthion 50WP	1.0-1.5 lbs	15	Observe label.
	Pounce 3.2EC	24.0 ozs	1	Observe label.
	Pounce 25WP	3.2-6.4 ozs	1	Observe label.
	Orthene 75S	1.33 lbs	14	Observe label.
	Lannate SP	0.25-1.0 lb	3	Do not use in home plantings.
	Lannate LV	0.75-3.0 pts	3	Do not use in home plantings.
	Proclaim	2.4-4.8 ozs	7	Observe label.
	Capture 2EC	2.1-6.4 ozs	7	Observe label.
	Fury 2EC	2.4-4.3 ozs	1	Observe label.
	Avaunt	3.5 ozs	1	Observe label.
	Confirm 2F	6.0-8.0 ozs	7	Observe label.
	SpinTor SC	1.5-10.0 ozs	1	Observe label.
	Larvin 80 DF/WSP	0.5-10.0 ozs	7	Observe label.
	Bacillus thuringiensis-use maximum amount recommended by manufacturer.			
Root maggots	Diazinon AG500	2.0-3.0 pts	7	Observe label.
Root aphids	Lorsban 15G	1.6-2.4 ozs/ 1,000 linear ft	30	Do not use Methomyl or B.t.
Aphids	Fulfill	2.75 ozs	7	Observe label.
	Provado 1.6FL	3.75 ozs	7	Observe label.
	Orthene 75S	1.33 lbs	14	Observe label.
Whiteflies	Provado 1.6FL	3.75 ozs	7	Observe label.
	Fulfill	2.75 ozs	7	Observe label.
Mole crickets	Diazinon AG500	1.0 qt	7	Observe label.
Wireworms	Diazinon AG500	3.0-4.0 qts	7	Observe label.

COLLARDS AND GREENS

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Malathion 5EC	1.0 pt	7	Observe label.
	Malathion 25WP	2.5 lbs	7	Observe label.

COLLARDS AND GREENS (cont'd)

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations	
Aphids	Fulfill	2.75 ozs	7	Observe label.	
	Assail 30SG	2.0-3.0 ozs	7	Observe label.	
	Lorsban 50W	2.0 lbs	21	Observe label.	
	Provado 1.6FL	3.75 ozs	7	Observe label.	
Loopers	Spray on 5-7 day schedule. Apply sufficient spray to cover foliage completely.				
Caterpillars	Thionex 50WP	1.5 lbs	21	Apply only once per season.	
Add B.t. for better control.	Thionex 3EC	1.0 qt	21	Observe label.	
	Asana XL	5.8-9.6 ozs	7	Collards only.	
	Diazinon AG500	3.0-4.0 qts	10	Observe label.	
	Proclaim 5WDG	2.4-4.8 ozs	14	Observe label.	
	Avaunt 30WDG	2.5-3.5 ozs	3	Observe label.	
	Mustang Max 0.8EC	2.24-4.0 ozs	1	Observe label.	
	SpinTor 2SC	1.5-10.0 ozs	1	Observe label.	
	Fury 2EC	2.4-4.3 ozs	1	Observe label.	
	Pounce 25WP	3.2-6.4 ozs	1	Observe label.	
	Ambush 25W	3.2-6.4 ozs	1	Observe label.	
		Bacillus thuringiensis-use maximum rate recommended by manufacturer.			
	Flea beetles	Sevin 50WP	3.0 lbs	14	Observe label.
	Stinkbugs	Assail 30SG	3.0-4.0 ozs	7	Observe label.
Whiteflies	Assail 30SG	2.5-4.0 ozs	7	Observe label.	
	Oberon 2SC	7.0-8.5 fl ozs	7	Observe label.	

CUCUMBERS

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Dibrom 8EC	0.5 pt	None	Observe label.
	Thionex/Phaser 50WP	0.5 lb	None	Observe label.
	Actara	2.0-3.0 ozs	None	Observe label.
	Fulfill	2.75 ozs	14	Observe label.
	Platinum	5.0-8.0 ozs	30	Observe label.
	Admire 2F	1.4 ozs/1,000 plants	0	(Greenhouse only; see restrictions under Greenhouse Tomatoes)
Leafminers	Dibrom 8EC	0.5-0.75 pt	None	Observe label.
	Pounce 3.2 EC	4.0-8.0 ozs	To harvest	Not more than 1.6 lbs/A.I./acre per season.
	Pounce 25WP	6.4-12.8 ozs	To harvest	
	SpinTor 2SC	4.0-8.0 ozs	1	Observe label.
	Agri-Mek 0.15 EC	8.0-16.0 ozs	7	Observe label.
	Vydate L	2.0-4.0 pts	1	Observe label.
	Ambush 25W	0.1-0.2 lbs	None	Observe label.
Spider mites	Dicofol 50WP	12.0 fl ozs	2	Observe label.
	Brigade 2EC	2.6-6.4 ozs	7	Observe label.
Vegetable weevils	Malathion 5EC	1.0 pt	7	Observe label.
Cucumber beetles	Lannate LV	1.5-3.0 pts	1.5 (1-day) > 1.5 (3-days)	Observe label.
	Lannate SP	0.5-1.0 lb	0.5 (1-day) > 0.5 (3-days)	Observe label.
Pickleworms	Guthion 2L	1.38 lbs	1	Observe label.
Melon worms	Pounce 3.2 EC	4.0-8.0 ozs	To harvest	Not more than 1.6 lbs
Squash bugs	Pounce 25WP	6.4-12.8 ozs	To harvest	Observe label.
Squash vine borers	Carbaryl 80S	0.6 lb	None	Observe label.
	Carbaryl 50WP	1.0 lb	None	Observe label.
	Ambush 25W	0.1-0.2 lb	None	Observe label.
	Capture 2EC	2.6-6.4 ozs	3	Observe label.

CUCUMBERS (cont'd)

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Pickleworms	SpinTor 2SC	4.0-8.0 ozs	1	Observe label.
Melon worms	Thiodan/Phaser 50WP	0.5 lb	None	Observe label.
Squash bugs	Asana XL	5.8-9.6 ozs	3	Observe label.
Squash vine borers	Brigade 2EC	2.6-6.4 fl ozs	3	Limit 19.2 fl ozs per acre per season; allow 7 days between applications.

Make first applications for cucumber beetle control when seedlings first crack soil and repeat as needed.

EGGPLANT

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Dibrom 8EC	0.5 pt	1	Observe label.
	Thionex 50WP	0.5 lb	1	Observe label.
	Thionex 2EC	1.0 pt	1	Observe label.
	Metasystox-R 2EC	2.0 pts	14	Observe label.
	Actara	2.0-4.0 ozs	None	Observe label.
	Provado 1.6FL	3.75 ozs	None	Observe label.
	Malathion 5EC	1.0 pt	3	Observe label.
	Malathion 25WP	3.5 lbs	3	Observe label.
Spider mites	Capture 2E	2.1-6.4 ozs	7	Observe label.
Colorado potato beetles	Asana XL	5.8-9.6 ozs	1	Observe label.
Flea beetles	Pounce 3.2 EC	8.0 ozs	3	Observe label.
Thrips	Carbaryl 80S	1.5 lbs	None	Observe label.
Horn worms	Admire 2F	10.0-24.0 ozs		
Tomato fruitworms	Carbaryl 50WP	2.0 lbs	None	Observe label.
	Thionex 2EC	1.0 pt	1	Observe label.
	Thionex 50WP	0.5 lb	1	Observe label.
	Confirm 2F	6.0-8.0 ozs	7	Observe label.
	Capture 2E	2.1-6.4 ozs	7	Observe label.
	Avaunt	3.5 ozs	3	Observe label.
	Fury 2EC	2.4-4.3 ozs	1	Observe label.
	Guthion 50WP	0.75-1.0 lbs	7	Observe label.
	Guthion 2L	1.5-2.0 pts	7	Observe label.
	Ambush 25WP	0.1-0.2 lb	3	Observe label.
	Whiteflies	Platinum	5.0-8.0 ozs	30
Actara		2.0-4.0 ozs	0	Observe label.
Oberon 2EC		7.0-8.5 SC	7	

ENGLISH PEAS

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Malathion 5EC	1.0 pt	3	Observe label.
Cutworms, aphids	Asana XL	5.8-9.6 ozs	1	Observe label.
Cabbage loopers	SpinTor 2SC	3.6 ozs	3	Observe label.
	Capture 2EC	1.6-6.4 ozs	3	Observe label.
	Fury 2EC	1.4-4.3 ozs	1	Observe label.

IRISH POTATOES

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Monitor 4 EC	0.75-1.0 pt.	14	Observe label.
	Provado 1.6 F	3.25 ozs	7	Observe label.
	Fulfill	2.75 ozs	14	Observe label.
	Platinum	5.0-8.0 ozs	30	Observe label.
	Actara	1.5 ozs	14	Observe label.

IRISH POTATOES (cont'd)

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Asail 30SG	1.5-4.0 ozs	7	Observe label.
	Thionex 3EC	0.67-1.33 qts	1	Observe label.
Flea beetles	Ambush 25W	0.05-0.2 lb	7	Observe label.
Colorado potato beetles	Asana XL	5.8-9.6 ozs	1	Observe label.
Plant bugs	Pounce 3.2 EC	4.0-8.0 ozs	7	Observe label.
Cucumber beetles	Provado 1.6 F	3.25 ozs	7	Observe label.
Fleahoppers	Monitor 4EC	0.75-1.0 pt	14	Observe label.
Caterpillars	Thiodan/Phaser 3EC	1.0 pt	None	Observe label.
Leafhoppers	Thiodan/Phaser 50WP	0.5 lb	None	Do not plant root crops other than sweet potatoes, carrots, or potatoes as follow-up crops.
Psyllids				
	SpinTor 2SC	3.0-6.0 ozs	7	Observe label.
	Avaunt	3.5-6.0 ozs	7	Observe label.
	Agri-Mek 0.15 EC	8.0-16.0 ozs	14	Observe label.
	Carbaryl 80S	0.6 lb	None	Foliage applications only.
	Guthion 2L	1.5-3.0 pts	None	Foliage applications only.
	Guthion 50WP	0.75-1.5 lbs	7	Observe label.
Whiteflies	Provado 1.6 F	3.25 ozs	7	Observe label.
	Platinum	5.0-8.0 ozs	30	Observe label.
	Fulfill	2.75 ozs	14	Observe label.
	Actara	1.5 ozs	14	Observe label.
Mites	Agri-Mek 0.15 EC	8.0-16.0 ozs	14	Observe label.
Caterpillars	Lannate LV	0.75-3.0 pts	10	Do not use in home plantings.
	Lannate SP	0.25-1.0 lbs	14	Observe label.
Wireworm	Mocap 15G	1.4 lbs per 1,000 ft row	90	Observe label.
Potato tuberworm	Monitor 4EC	1.5-2.0 pts	14	Observe label.

LETTUCE

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations	
Caterpillars	Thiodan/Phaser 3EC	1.0 qt	14	On head lettuce do not use more than 3 times after thinning and remove outside leaves. Do not feed refuse leaves to livestock. On leaf lettuce do not use more than two applications per season; head lettuce only.	
	Thiodan/Phaser 50WP	1.5-2.0 lbs	14		
	Ambush 25W	0.1-0.2 lbs	1		
	Pounce 3.2EC	4.0-8.0 ozs	7		
	Larvin 3.2	0.5-0.75 lb	14		
	Larvin 3.2F	0.4-0.75 lb	14		
	Pounce 25WP	6.4-12.8 ozs	1		
	Bacillus thuringiensis	Use maximum rate recommended by manufacturer.			
	Avaunt	2.5-3.5 ozs	3		Observe label.
	Proclaim	2.4-4.8 ozs	7		Observe label.
	Confirm	6.0-8.0 ozs	7		Observe label.
	Fury	2.4-4.3 ozs	5		Observe label.
	Capture 2EC	2.1-6.4 ozs	7		Observe label.
SpinTor 2SC	1.5-3.0 ozs	1	Observe label.		
Aphids	Malathion 5EC	1.0-2.0 pts	7 (head)	Observe label.	
			14 (leaf)	Observe label.	
	Diazinon				
	AG500 50WP	0.5-1.0 pt	14	On foliage as needed.	
	Fulfill	2.75 ozs	7	Observe label.	
	SpinTor 2SC	1.5-3.0 ozs	1	Observe label.	
Leafhoppers	Malathion 25WP	2.0-5.0 lbs	7 (head)	Observe label.	
Leafminers			14 (leaf)	Observe label.	
	Brigade 2EC	2.6-6.4 ozs	1	Observe label.	

LETTUCE (cont'd)

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Leafhoppers Leafminers	Agri-Mek 0.15EC	8.0-16.0 ozs	7	Observe label.
Wireworms	Diazinon AG500	3.0-4.0 qts	14	Observe label.

OKRA

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Malathion 5EC	1.0 pt	1	Observe label.
	Malathion 25WP	2.5 lbs	1	Observe label.
Corn earworms	Carbaryl 80S	1.25 lbs	None	Observe label.
	Carbaryl 50WP	2.0 lbs	None	Observe label.
	SpinTor 2SC	1.5-8.0 ozs	1	Observe label.
Stinkbugs	Carbaryl 80S	1.25 lbs	None	Observe label.
Leaf-footed bugs	Carbaryl 50WP	2.0 lbs	None	Observe label.
	Brigade 2EC	2.6-6.4 ozs	7	Observe label.

ONIONS AND SHALLOTS

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Thrips	Malathion 5EC	0.6 pt	3	Observe label.
Onion thrips	Diazinon AG500	1.0 pt	14	Observe label.
	Malathion 25WP	1.5 lbs	3	Observe label.
	Pounce 25WP	9.6-19.2 ozs	1	Observe label.
	Guthion 2L	2.0-3.0 pts	28-dry	Observe label.
	Guthion 50WP	1.0-1.5 lbs	14-green	Observe label.
	Fury 2EC	3.2-4.3 ozs	7	Observe label.
	Ambush 25W	9.6-19.2 ozs	1	Observe label.
Onion maggots	Lorsban 15G	3.7 ozs/1,000 ft		Observe label.
		1.1 ozs/1,000 ft		Observe label.
	Diazinon AG500	2.0-4.0 qts	14	Observe label.

PARSLEY

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Malathion 5EC	1.0 pt	21	Observe label.
	Fulfill	2.75 ozs	7	Observe label.
	Provado 2FL	3.75 ozs	7	Observe label.
	Admire 2F	10.0-24.0 ozs	21	Soil application.
Loopers	B.t.		None	Observe label.
Caterpillars	Ambush 25W	0.4-0.8 lb	1	Observe label.
Flea beetles	Lannate LV	1.5-3.0 pts	10	Observe label.
	Lannate SP	0.5-1.0 lbs	10	Observe label.
	Confirm 2F	6.0-8.0 ozs	7	Observe label.
	Malathion 5EC	1.0-2.0 pts	21	Observe label.
	Sevin 50W	2.0-4.0 lbs	14	Observe label.

PEPPERS

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Provado 2FL	3.75 ozs	7	Observe label.
	Admire 2F	16.0-32.0 ozs	21	Soil application.
	Dibrom 8EC	0.5 pt	1	Observe label.
	Orthene 75S	0.67 lb	7	Bell peppers only.
	Lannate LV	1.5-3.0 pts	3	Observe label.
	Lannate SP	0.5-1.0 lb	3	Observe label.

PEPPERS (cont'd)

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Actara	2.0-4.0 ozs	0	Observe label.
	Platinum	5.0-8.0 ozs	30	Observe label.
	Vidate L	2.0-4.0 pts	7-14	Observe label.
Whiteflies	Actara	2.0-4.0 ozs	None	Observe label.
	Platinum	5.0-8.0 ozs	30	Observe label.
	Fulfill	2.75 ozs	7	Observe label.
	Admire 2F	16.0-32.0 ozs	21	Soil application.
	Provado 2FL	3.75 ozs	7	Observe label.
Flea beetles	Pounce 3.2 EC	4.0-8.0 ozs	3	Observe label.
Tomato fruitworms	Carbaryl 80S	1.25 lbs	None	Observe label.
Leaf-footed bugs	Carbaryl 50WP	2.0 lbs	None	Observe label.
Hornworms	Thiodan/Phaser 3EC	1.0 qt	4	Observe label.
Yellow-striped	Thiodan/Phaser 50WP	1.0 lb	4	Observe label.
Armyworms	Lannate LV	1.5-3.0 pts	3	Observe label.
	Lannate SP	0.5-1.0 lb	3	Observe label.
	SpinTor 2SC	1.5-8.0 ozs	1	Observe label.
	Capture 2EC	2.1-6.4 ozs	7	Observe label.
	Fury 2EC	2.4-4.3 ozs	1	Observe label.
	Confirm 2F	6.0-8.0 ozs	7	Observe label.
	Spider mites	Kelthane MF	0.75-1.5 pts	2
Capture 2EC		2.1-6.4 ozs	7	Observe label.
Agri-Mek 0.15 EC		8.0-16.0 ozs	7	Observe label.
Leafminers	Dibrom 8EC	0.25 pt	1	Observe label.
	Pounce 3.2EC	4.0-8.0 ozs	3	Observe label.
	SpinTor 2SC	1.5-8.0 ozs	1	Observe label.
	Agri-Mek 0.15 EC	8.0-16.0 ozs	7	Observe label.
	Fury 2EC	2.4-4.3 ozs	1	Observe label.
	Vydate L	2.0-4.0 pts	7-14	Observe label.
Pepper weevils	Carbaryl 80S	2.5 lbs	None	Observe label.
	Pounce 3.2EC/25WP	4.0-8.0 ozs	3	Bell peppers only.
	Orthene 75S	0.66 lb	7	Use in conjunction with pyrethroids.
		(not on bell peppers)		
	Capture 2EC	2.1-6.4 ozs	7	Observe label.
	Fury 2EC	2.4-4.3 ozs	1	Observe label.
	Asana XL	5.8-9.7 ozs	7	Observe label.
	Ambush 25WP	6.4-12.8 ozs	3	Bell peppers only.
Vegetable weevils	Malathion 57EC	1.0 pt	7	Late afternoon and evening spraying is
Thrips	Admire 2F	16.0-32.0 ozs	21	best. Clearing or treating dead lands and
	Agri-Mek 0.15 EC	8.0-16.0 ozs	7	ditch banks is effective.
	Radiant	4.0-8.0 ozs	1	Observe label.

Begin spray application for control of pepper weevil as soon as damage is observed. Spray on 3- to 4-day schedule until control is obtained (usually 3 weeks). Destroy all pepper plants when through harvesting.

PUMPKINS

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids, Whiteflies	Thiodan/Phaser 3EC	1.0 pt	None	Observe label.
	Thiodan/Phaser 50WP	0.5 lb	None	Observe label.
	Fulfill	2.75 ozs	7	Observe label.
	Brigade 2EC	2.6-6.4 fl ozs	3	Observe label.
	Admire 2F	16.0-24.0 ozs	21	Soil application.
	Actara	2.0-4.0 ozs	None	Observe label.

PUMPKINS (cont'd)

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Cucumber beetles	Carbaryl 80S	0.6 lb	None	Observe label.
Pickleworms	Carbaryl 50WP	1.0 lb	None	Observe label.
Melon worms	Thiodan/Phaser 3EC	1.0 pt	None	Observe label.
Squash bugs	Thiodan/Phaser 50WP	0.5 lb	None	Observe label.
Squash vine borers	SpinTor 2SC	4.0-8.0 ozs	3	Observe label.
	Pounce 3.2 EC	8.0 ozs	1	Observe label.
	Pounce 25WP	12.8 ozs	1	Observe label.
	Asana XL	5.8-9.6 ozs	3	Observe label.
	Ambush 25WP	6.4-12.8 ozs		Observe label.
Make first application for cucumber beetle when seedlings first crack soil and repeat as needed.				
Spider mites	Kelthane 50WSP	1.25 pts	2	Observe label.
	Agri-Mek 0.15 EC	8.0-16.0 ozs	7	Observe label.

RADISHES

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Malathion 5EC	1.0 pt	7	Observe label.
Flea beetles	Carbaryl 80S	0.6 lbs	3	Observe label.
Dipterous leafminers	Carbaryl 50WP	1.0 lbs	3	Observe label.
	Diazinon AG500	0.5-1.0 pt	14	Observe label.
	Asana XL	5.8-9.6 ozs	7	Observe label.
	Baythroid	1.6-2.8 ozs	None	Observe label.
	SpinTor 2SC	3.0-6.0 ozs	7	Observe label.
Wireworms	Diazinon AG500	3.0-4.0 qts	14	Observe label.
Root aphids	Lorsban 15G	3.3 ozs/1,000		Observe label.
Root maggots				

SOUTHERN PEAS

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Provado 2F	3.75 ozs	7	Observe label.
	Malathion 5EC	1.0 pt	1	Observe label.
	Malathion 25WP	2.5 lbs	1	Observe label.
	Admire 2F	16.0-24.0 ozs	21	Soil application.
Cowpeas	Carbaryl 80S	1.25 lbs	None	Carbaryl should be applied as a spray rather than a dust.
Curculios				
Stinkbugs	Carbaryl 50WP	2.0 lbs	None	
Corn earworms	Thiodan 2 lbs EC	1.0 qt	3	Do not feed treated threshing to livestock or allow to graze treated fields.
	Thiodan 50WP	1.0 lb	3	
	SpinTor 2SC	3.0-6.0 ozs	3	Observe label.
	Capture 2EC	2.1-6.4 ozs	3	Observe label.
	Fury 2EC	1.4-4.3 ozs	1	Observe label.
	Lannate LV	0.75-3.0 pts	3	Do not graze or feed treated forage to livestock.
	Lannate SP	0.25-1.0 lb	3	

SPINACH

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Dibrom 8EC	0.5 pt	1	Observe label.
	Malathion 5EC	1.0 pt	7	Observe label.
	Admire 2F	10.0-24.0 ozs	21	Soil application.
	Provado 1.6 FL	3.75 ozs	7	Observe label.
	Diazinon AG500	0.5-1.0 pt	14	Observe label.

SPINACH (cont'd)

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Loopers	Spray on 5- 7-day schedule or as needed. Apply sufficient spray to cover foliage completely.			
Caterpillars	Pounce 3.2 EC	4.0 ozs	1	Observe label.
Flea beetles	Pounce 25WP	6.4 ozs	1	Observe label.
	Ambush 2EC	6.4 ozs	1	Observe label.
	Ambush 25WP	6.4 ozs	1	Observe label.
	Avaunt 30SG	2.5-3.5 ozs	3	Observe label.
	Lannate 90SP	0.5 lb	7	Observe label.
	SpinTor 2SC	1.5-10.0 ozs	1	Observe label.
	Confirm 2E	6.0-8.0 ozs	7	Observe label.
	Larvin 3.2 F	16.0-30.0 ozs	14	Observe label.
Wireworms	Diazinon AG500	3.0-4.0 qts	14	Observe label.
Leafminers	Trigard 75WP	2.66 ozs	7	Observe label.
Bacillus thuringiensis-use maximum rate recommended by manufacturer (Javelin-Biobit-Cutlass-Dipel).				

SQUASH (SUMMER AND WINTER)

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Leafminers	Dibrom 8EC	0.5-1.0 pt	None (summer)	1 day (winter)
	Pounce 3.2 EC	4.0-8.0 ozs	To harvest	Not more than 1.6 lbs/A.I./acre per season.
	Pounce 25WP	6.4-12.8 ozs	To harvest	
	Trigard 75WP	2.66 ozs	7	Observe label.
	SpinTor 2SC	4.0-8.0 ozs	3	Observe label.
	Capture 2EC	5.12-6.4 ozs	3	Observe label.
	Vydate L	2.0-4.0 pts	1	Leafminers only.
Whiteflies	Platinum	5.0-8.0 ozs	30	Observe label.
	Fulfill	2.75 ozs	7	Observe label.
	Admire 2F	16.0-24.0 ozs	21	Soil application.
Cucumber beetles	Make applications for cucumber beetle control when seedlings first crack soil; repeat as needed.			
Pickleworms	Carbaryl 80S	0.6 lb	None	Observe label.
Melon worms	Carbaryl 50WP	1.0 lb	None	Observe label.
Squash bugs	Thiodan/Phaser 3EC	1.0 pt	None	Observe label.
Squash vine borers	Thiodan/Phaser 50WP	0.5 lb	None	Observe label.
	Pounce 3.2EC	4.0-8.0 ozs	To harvest	Not more than 1.6 lbs/A.I./acre per season.
	Pounce 25WP	6.4-12.8 ozs	To harvest	
	Capture 2EC	5.12-6.4 ozs	3	Observe label.
	SpinTor 2SC	4.0-8.0 ozs	3	Observe label.
	Lannate LV	1.5-3.0 pts	3	Observe label.
	Lannate SP	0.5-1.0 lbs	3	Observe label.
	Asana XL	1.7-3.4 ozs	3	Observe label.
	Spider mites	Capture 2EC	5.12-6.4 ozs	7
Kelthane 50WSP		1.25 lb	2	Observe label.

SWEET CORN

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Fall armyworms	For best control apply to silks when silks first appear on 2-day schedule until silks wilt.			
	Pounce 3.2 EC	4.0-8.0 ozs	1	Observe label.
	Pounce 25WP	6.4-12.8 ozs	1	Observe label.
	Ambush 25WP	6.4-12.8 ozs	1	Observe label.
	SpinTor 2EC	1.5-6.0 ozs	1	Observe label.
	Brigade 2EC	2.1-6.4 ozs	1	Observe label.
	Fury 2EC	2.4-4.3 ozs	3	Observe label.
	Asana XL	5.8-9.6 ozs	1	Observe label.
	Larvin 3.2F	20.0-30.0 ozs		Observe label.

SWEET CORN (cont'd)

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Fall armyworms	Carbaryl 80S	2.5 lbs	None	Observe label.
	Carbaryl 50WP	4.0 lbs	None	Observe label.
Seed corn maggots	Diazinon AG500	2.0-4.0 qts	7	Observe label.
Wireworms	Diazinon AG500	3.0-4.0 qts	7	Observe label.
Corn rootworms (adult)	Diazinon AG500	0.5-1.0 pt	7	Observe label.
Cutworms	Brigade 2EC	2.1-6.4 fl ozs	1	Observe label.
	Baythroid XL	0.8-1.6 fl ozs	0	Observe label.
	Asana XL	4.8 ozs	1	Observe label.

FIELD TOMATOES

Stage to Begin Treatment	Pest to Control	Material and Formulations	Rate/A	Cutoff Day		
Following transplanting or as needed	Leafminers	Agri-Mek 0.15 EC	8.0-16.0 ozs	7		
		Dibrom 8EC	0.25 pt	1		
		Guthion 2L	1.5-3.0 pts	14		
		Guthion 50WP	0.75-3.0 lbs	14		
		Vydate L	2.0-4.0 pts	3		
Following transplanting or as needed	Whiteflies	Admire 2F	16.0-24.0 ozs (not more than 24 fl ozs per acre per year as a single soil application)	21-soil applications		
		Platinum	5.0-8.0 ozs (not more than 8.0 fl ozs Platinum-0.125 lb a.i.-per acre during each growing season)	30		
		Actara	2.0-4.0 ozs	0		
		Fulfill	2.75 ozs	7		
		Liriomyza leafminers	Agri-Mek 0.15 EC	8-16 fl ozs	7	
Do not exceed 48 ozs/acre						
(Fresh market only)	Vegetable weevils	Aphids, Thrips	Dibrom 8EC	0.25 pt	1	
		Malathion 5EC	1.0 pt	1		
		Admire 2F	16.0-24.0 ozs	21-soil applications		
		Fulfill	2.75 ozs	7		
		Platinum	5.0-8.0 ozs	30		
		Provado 1.6 FL	3.75 ozs	5-foliar applications		
		Actara	2.0-4.0 ozs	0		
		Malathion 25WP	2.0 lbs	1		
		Ambush 25WP	6.4-12.8 ozs	1		
		Thionex/Phaser 3EC	1.0 qt	1		
Thionex/Phaser 50WP	1.0 lb	1				
Fury 2EC	2.4-4.3 ozs	1				
From first blossom through harvest at weekly intervals.	Fruitworms Hornworms Pinworms	Lannate LV	1.5-3.0 pts	1		
		Lannate SP	0.5-1.0 lb	1		
		Thionex/Phaser 3EC	1.0 qt	1		
		Thionex/Phaser 50WP	1.0 lb	1		
		Confirm 2F	6.0-8.0 ozs	7		
		SpinTor 2SC	1.5-8.0 ozs	1		
		Fury 2EC	2.4-4.3 ozs	1		
		Ambush 25W	6.4-12.8 ozs	1		
		Don't feed residues to meat or dairy animals.	Spider mites	Agri-Mek 0.15 EC	8.0-16.0 fl ozs	7
				KelthaneMF	0.75-1.5 pts	2

FIELD TOMATOES (cont'd)

Stage to Begin Treatment	Pest to Control	Material and Formulations	Rate/A	Cutoff Day
	Fruitworms	Guthion 2L	1.5-3.0 pts	14
	Hornworms	Guthion 50WP	0.75-3.0 lbs	14
		Carbaryl 80S	1.25 lbs	None
			5 1/3-10 2/3 ozs	7
		Brigade	2.6-6.4 fl ozs	1
		Lannate 2.4LV	1.5-3.0 pts	1
		Avaunt	2.5-3.5 ozs	3
		Asana XL	5.8-9.6 ozs	1
	(Fresh market only)	Ambush W	3.2-12.8 ozs	1
	Stinkbugs	Carbaryl 80S	1.25 lbs	None
		Thionex/Phaser 3EC	1.0 qt	1
		Thionex/Phaser 50WP	1.0 lb	1
		Brigade 2EC	2.6-6.4 fl ozs	1
		Warrior	2.56-3.84 fl ozs	5
		Actara 25WDG	3.0-5.5 ozs	0
		Guthion 2L	1.5-3.0 pts	1
		Guthion 50WP	0.75-3.0 lbs	1
	Pinworms	Agri-Mek 0.15 EC	16 fl ozs	7
			Do not exceed 48 ozs/acre	
		Thionex 3EC	1 qt	2
		Avaunt 30DG	2.5-3.5 ozs	3
		SpinTor SC	1.5-8.0 ozs	1
		Lannate LV	1.5-3.0 pts	1
		Lannate SP	0.5-1.0 lb	1
		Asana XL	1.7-3.4 ozs	1
	(Fresh market only)	Ambush 25W	3.2-12.8 ozs	1
	Colorado potato beetles	Platinum	5.0-8.0 ozs	30
		Actara	2.0-4.0 ozs	0
		Agri-Mek 0.15 EC	8.0-16.0 ozs	7
	Cutworms	Asana XL	4.8-9.6 ozs	1
	Mole crickets	Diazinon AG500	1 qt	1
	Wireworms	Diazinon AG500	3.0-4.0	1
	Armyworms	Avaunt 30DG	3.5 ozs	3
		Spintor 2SC	1.5-6.0 ozs	1
		Intrepid 2F	4.0-10.0 ozs	1

TURNIPS

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Provado 2F	3.75 ozs	7	Greens only.
	Admire 2F	10.0-24.0 ozs	21	Greens only.
	Fulfill	7.75 ozs	7	Greens only.
	Dibrom 8EC	0.5 pt	1	Observe label.
	Malathion 5EC	1.0 pt	7	Observe label.
	Malathion 25WP	2.5 lbs	3	Observe label.
Flea beetles	Spray on 5-to 7-day schedule. Apply sufficient spray to cover foliage completely.			
Loopers	Dibrom 8EC	0.51 pt	1	Observe label.
Caterpillars	Confirm 2F	6.0-8.0 ozs	7	Observe label.
	Ambush 25W	3.2-6.4 ozs	1	Observe label.
	SpinTor 2SC	1.5-10.0 ozs	1	Observe label.
	Bacillus thuringiensis-use maximum rate recommended by manufacturer.			
Root maggots	Lorsban 15G	4.6-9.2 ozs/1,000 ft row		
	Lorsban 4E	1.0 oz/1,000 ft row		
Cabbage looper	Avaunt 30WG	2.5-3.5 ozs	3	Observe label.
Diamondback moth	Asana XL	5.8-9.6 fl ozs	7	Observe label.

* Use sufficient volume to obtain runoff. ** Apply in minimum of 100 gals water per acre.

WATERMELONS

Insects	Insecticide and Formulations	Rate/A	Cutoff Day	Restrictions or Limitations
Aphids	Admire 2F	16.0-24.0 ozs	21	Soil application.
	Brigade 2EC	2.6-6.4 fl ozs	3	Observe label.
	Diazinon AG500	1.0 qt	3	Observe label.
	Fulfill	2.75 ozs	7	Observe label.
	Thiodan/Phaser 3EC	1.0 pt	None	Observe label.
	Thiodan/Phaser 50WP	0.5 lb	None	Observe label.
	Actara	2.0-4.0 ozs	0	Observe label.
	Dibrom 8EC	0.25-0.5 pt	1	Observe label.
Whiteflies	Fulfill	2.75 ozs	7	Observe label.
	Actara	2.0-4.0 ozs	0	Observe label.
Leafminers	Pounce 3.2EC	4.0-8.0 ozs	None	A.I./acre/season.
	Pounce 25WP	6.4-12.8 ozs	None	Observe label.
	Guthion 2L	1.5-2.0 pts	7	Observe label.
	Guthion 50WP	0.75-1.0 lb	7	Observe label.
Spider mites	Kelthane WSP	1.25-2.0 lbs	2	Observe label.
	Brigade 2EC	2.6-6.4 ozs	3	Observe label.
	Oberon 2SG	7.0-8.5 fl ozs	7	Observe label.
	Acramite 50WG	0.75-1.0 lb	3	Observe label.
	Danitol 2.4EC	10.6-16.0 fl ozs	7	Observe label.
Cucumber beetles	Make first applications for cucumber beetle control when seedlings first crack soil and repeat as needed.			
Pickleworms	Carbaryl 80S	0.6 lb	None	Observe label.
Melon worms	Carbaryl 50WP	1.0 lb	None	Observe label.
Squash bugs	Thiodan/Phaser 3EC	1.0 pt	None	Observe label.
Squash vine borers	Thiodan/Phaser 50WP	0.5 lb	None	Observe label.
Cucumber beetles	Pounce 3.2 EC	4.0-8.0 ozs	None	Not more than 1.6 lbs/A.I./acre per season.
	Pounce 25WP	6.4-12.8 ozs	None	
	Capture 2EC	5.12-6.4 ozs	3	Observe label.
	Vydate L	2.0-4.0 pts	1	Observe label.
	Guthion 2L	1.5-2.0 pts	7	Observe label.
	Guthion 50WP	2.0 pts	7	Observe label.
	Asana XL	5.8-9.6 ozs	1	Observe label.
	Whiteflies	Fulfill	2.75 ozs	7
Oberon 70SC		7.0-8.5 fl ozs	7	Observe label.
Courier 40SC		9.0-12.5 fl ozs	7	Observe label.
Actara		2.0-4.0 ozs	0	Observe label.
Cutworms	Diazinon AG500	2.0-4.0 qts	3	Observe label.
Wireworms	Diazinon AG500	3.0-4.0 qts	3	Observe label.

GENERAL PESTS

Pest	Insecticide	Rate	Restrictions and Limitations
Snails Slugs	Metaldehyde bait	10 lbs of 25% bait	Apply to soil around plants. Do not contaminate edible parts.
Blister beetles	Carbaryl	1.0 lb A.I./acre	Apply as spot treatment as needed.
	Malathion	1.0 lb A.I./acre	Apply as spot treatment as needed.

* Observe label

Common Chemical Name	Trade Name(s)	Manufacturer/brand
Bacillus thuringiensis (B.t.)	Dipel dust	Fertilome
	Dipel dust	Hi-Yield
	BT Worm Killer	Greenlight
	Thuricide	Bonide
	Thuricider HPC	Southern Ag
Bifenthrin	Ortho Bug-B-Gone Max Lawn & Garden Insect Killer	Ortho
Carbaryl	Bayer Complete Insect Killer for Gardens	Bayer Advanced
	Sevin	Spectracide
	Bug B Gone	Ortho
	Sevin	Garden Tech
	Sevin-10	Garden Tech
	Liquid Carbaryl Garden Spray	Ferti-Lome
	5% Carbaryl Garden & Pet Dust	Hi-Yield
Cyfluthrin	Bayer Advanced Garden PowerForce Multi-Insect Killer, Concentrate	Bayer
	Bayer Advanced Lawn and Garden Multi Insect Killer	Bayer
Dimethoate	Cygon	Bonide
	Cygon 2E	Hi-Yield
Dicofol	Kelthane	Hi- Yield
Endosulfan	Thiodan Hi-Yield Insect Spray	Hi-Yield
	Thionex 50W	MANA
	Thionex 3EC	MANA
Malathion	50% Malathion	Greenlight
	Malathion Plus Insect spray Concentrate	Ortho
	Malathion	Ace
	50% Malathion	Martin's
	Malathion Insect spray	Hi-Yield
	Malathion 50%E.C.	Southern Ag
Oil	Sun-spray Ultra Fine Oil	Security Products
	Parafine Horticultural Oil	Southern Ag
Permethrin	Bayer Complete Insect Dust for Gardens	Bayer Advanced
	Permethrin Insect Control	Spectracide
	Bug-B-Gone	Ortho
	Permethrin 10%	Martin's
	Indoor/Outdoor MultiPurpose Insect Spray	Ferti-Lome
	Vegetable Fruit and Flower Spray	Bonide
	Multi Purpose Garden Insect Killer	KGRO
	Vegetable Plus	Martins
Pyrethrin	Tomato and Vegetable	Safer
	Tomato Vegetable Insect Spray	Spectracide
Spinosad	Lawn and Garden Spray with Spinosad	Greenlight
Neem	Greenlight Neem Concentrate	Greenlight
	Triple Action Neem Oil	Southern Ag

Common Chemical Name	Trade Name(s)	Manufacturer/brand
Insecticidal Soaps	M-Pede	Dow Agro Sciences
	Insecticidal Soap	Safer
	Insecticidal Soap	Garden Safe
	Tomato Vegetable Insect Killer	Safer

Disclaimer Statement: The pesticides recommended in this publication were registered for the prescribed uses at time of publication. Pesticide registrations are continuously being reviewed. Should registration of a recommended pesticide be canceled, it would no longer be recommended by the LSU AgCenter.

The use of brand or trade names in this publication is for clarity and information. It does not imply approval of the product to the exclusion of others which may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The above list is not a complete list.

CONTROL OF GREENHOUSE TOMATO PESTS

Certain cultural practices play a significant role in reducing or eliminating many insect problems in greenhouses. The following cultural practices will aid in the control of insect pests:

1. Maintain a clean, closely mowed area adjacent to the greenhouse.
2. Dispose of any trash, boards, or old plant debris in the area.
3. Keep doors, screens, and ventilation fan screens in good repair.
4. Use clean sterile soils, tools, flats, and other equipment.
5. At the conclusion of the season remove all plants and any plant debris, clean greenhouse thoroughly, and fumigate. (See Insecticide Use Suggestions)

“An ounce of prevention is worth a pound of cure.”

CHEMICAL SAFETY IN THE GREENHOUSE

When used as recommended on the labels pesticides are safe and effective. However, all pesticides are poisonous and if misused, they may be hazardous to humans and animals and may also contribute to the pollution of the environment.

Before using any pesticide read the label in its entirety. Note any special precautions such as the necessity of wearing special protective clothing when applying the chemical. Follow all safety precautions set forth on the label. The following suggestions will aid in developing safe pesticide-use practices in greenhouses.

1. Become familiar with the use of a pesticide before using it. Know its toxicity and the necessary precautions for its safe use.
 2. Keep all safety equipment such as facemasks, respirators, and protective clothing on hand and in good working order.
 3. When mixing pesticides use a well-ventilated area or mix outdoors. Avoid contact with skin and do not breathe vapors.
 4. Do not save used pesticide containers. Dispose of old containers properly.
 5. Store all pesticides in a secure place away from pets, children, and unknowledgeable persons. Never store pesticides in unmarked containers.
 6. Post caution signs during fumigation and after treatment of greenhouse to avoid contact with chemicals.
 7. Apply correct dosage of the pesticide. Using less than the correct amount may result in poor control of the pest. Using more than the correct amount may result in excessive residue or damage to plants.
 8. Obey specified time intervals between treatments and cutoff dates before harvest. A failure to observe these restrictions may result in excessive residue or damage to plants.
 9. The use of certain chemicals may be phytotoxic to some varieties of plants. This should be checked before using a chemical.
 10. Special restrictions apply to greenhouses connected to living quarters. Read label restrictions where this applies and follow all restrictions carefully.
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TABLE OF MEASURES

Liquid:

1 level tablespoonful = 3 level teaspoonfuls
1 fluid ounce = 2 tablespoonfuls = 29.57 milliliters
1 cupful = 8 fluid ounces
1 pint = 2 cupfuls = 16 fluid ounces
1 quart = 2 pints = 32 fluid ounces
1 gallon = 4 quarts = 128 fluid ounces

Weight:

1 ounce = 28.3 grams
1 pound = 16 ounces = 454 grams
1 ton = 2,000 pounds

DILUTION TABLES

Wettable Powders

Number of ounces of wettable powder to use in small sprayers when amount per 100 gallons is known:

100 gals	10 gals	5 gals	2 gals	1 gal
0.5 lb	0.8 oz	0.4 oz	0.2 oz	0.1 oz
1.0 lb	1.6 ozs	0.8 oz	0.3 oz	0.2 oz
2.0 lbs	3.2 ozs	1.6 ozs	0.6 oz	0.3 oz
3.0 lbs	4.8 ozs	2.4 ozs	1.0 oz	0.5 oz
4.0 lbs	6.4 ozs	3.2 ozs	1.3 ozs	0.6 oz
5.0 lbs	8.0 ozs	4.0 ozs	1.6 ozs	0.8 oz

Emulsifiable Concentrates

Number of fluid ounces of emulsifiable concentrate to use in small sprayers when amount per 100 gallons is known:

100 gals	10 gals	5 gals	2 gals	1 gal
1 pt	1.6 fl ozs	0.8 fl oz	0.3 fl oz	0.2 fl oz
1 qt	3.2 fl ozs	1.6 fl ozs	0.7 fl ozs	0.3 fl oz
2 qts	6.4 fl ozs	3.2 fl ozs	1.3 fl ozs	0.6 fl oz
1 gal	12.8 fl ozs	6.4 fl ozs	2.6 fl ozs	1.3 fl ozs

Mist Blower

Quantity of emulsifiable concentrate (EC) needed to make a 25X concentrate:

If amount per 100 gals for a high volume spray is:	Use this amount in a mist blower			
	25 gals	10 gals	2 gals	1 gal
1 pt	6.25 pts	2.5 pts	8.0 fl ozs	4.0 fl ozs
1 qt	6.25 qts	5.0 pts	1.0 pt	8.0 fl ozs
2 qts	3.13 gals	5.0 qts	1.0 qt	1.0 pt
1 gal	6.25 gals	2.5 gals	2.0 qts	1.0 qt

YOUR COUNTY AGENT CAN GIVE YOU FURTHER HELP WITH DILUTIONS.