

Vegetables – Commercial

Residues	<p>Federal laws prohibit the sale of food products that contain 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.</p> <p>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.</p>
Application checklist	<p>To obtain satisfactory control of vegetable insects:</p> <ol style="list-style-type: none"> 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. <p>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.</p>
Dosages and formulations	<p>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.</p> <p>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.</p> <p>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.</p> <p>Some insecticides are marketed as a flowable. This formulation is generally less toxic to foliage than the standard EC.</p> <p>Whenever possible, the formulations of emulsifiable concentrates have been quoted in pounds of active ingredient per gallon (example: 5 pounds 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 pounds EC yet may be formulated anywhere from 55%-57% of active material.</p>
Precautions	<p>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.</p> <p>Note: Take special precautions when mixing Methomyl. Wear a recommended respirator. Do not inhale the dust or powder.</p> <p>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.</p> <p>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.</p> <p>Spreader Stickers: Needed on waxy leaf plants. May be used on most crops. Overdose will burn foliage.</p>

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ARTICHOKE				
Leaf hoppers, Psyllids	Bifenthrin (Capture 2EC)	6.4 ounces	5	Observe label.
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	1	Observe label.
	Permethrin (Ambush, Pounce) 25W	6.4-19.2 ounces	0	Observe label.
	Thiamethoxam (Platinum)	5.0-8.0 ounces	30	Observe label.
BEANS (LIMA AND SNAP)				
Aphids	Bifenthrin (Brigade 2EC)	1.6-6.4 fluid ounces	3	Observe label.
	Imidicloprid (Admire Pro)	7-10 fl. ounces	21	Observe label.
	Lambda-cyhalothrin (Warrior II)	1.28 to 1.92 oz/A	3	Observe label.
	Malathion 5EC	1.0 pint	1	Observe label.
	Malathion 25WP	2.5 pounds	1	Observe label.
	Naled (Dibrom 8EC)	0.5 pint	1	Do not feed treated vines to livestock.
Bean leaf beetles, flea beetles, leaf hoppers	Carbaryl (Sevin) 50WP	2.0 pounds	None	Observe label.
	Carbaryl (Sevin) 80S	1.0 pound	None	Observe label.
	At pod set: begin weekly applications when longest pods are 1 inch long and continue throughout harvest for maximum pod protection. Add an insecticide for control of mites or leafminers as needed.			
Cucumber beetles, Mexican bean beetles	Bifenthrin (Capture 2EC)	2.1-6.4 ounces	3	Observe label.
	Carbaryl (Sevin) 50WP	2.0 pound	None	Observe label.
	Carbaryl (Sevin) 80S	1.25 pound	None	Observe label.
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	3	Observe label.
	Malathion 5EC	1.0 pint	1	Observe label.
	Malathion 25WP	2.5 pounds	1	Observe label.
	Zeta-cypermethrin (various)	1.4-4.3 ounces		Observe label.
Bean leaf beetles, cucumber beetles, earworms, leafhoppers, lima	Bifenthrin (Brigade, Capture 2EC)	2.1-6.4 fluid ounces	3	Observe label.

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bean pod borers, stink bugs				
	Carbaryl (Sevin) 50WP	2.0 pounds	None	Observe label.
	Carbaryl (Sevin) 80S	1.25 pounds	None	Observe label.
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	3	Observe label.
	Zeta-cypermethrin (various)	1.4-4.3 ounces		Observe label.
Mites	Bifenazate (Acramite)	16-24 fluid ounces	3	Observe label.
	Bifenthrin (Capture 2EC)	2.1-6.4 ounces	3	Observe label.
Leafminers	Naled (Dibrom 8EC)	0.5 pint	1	Do not feed treated vines to meat or dairy animals.
	Spinetoram (Radiant SC)	C4-8 fluid ounces	3(succulent) 28(dried)	Observe label.
BEET				
Aphids	Imidicloprid (Admire Pro 4.6F soil)	4.4-10.5 ounces	21	Must be applied to soil. May be applied to direct-seeded crops in-furrow at seed or transplant depth. Do not exceed 12 ounces/acre/season.
Armyworms, beet webworms	Spinetoram (Radiant SC)	5-10 fluid ounces	1	Observe label.
Flea beetles or webworms	Carbaryl (Sevin) 80S	0.6 pound	3 (14 if tops are used for food)	Observe label.
	Methomyl (Lannate LV)	0.75-3.0 pints	0 roots, 10 tops	Observe label.
	Methomyl (Lannate SP)	0.25-1.0 pound	0 roots, 10 tops	Observe label.
Leafminers	Spinetoram (Radiant SC)	6.0-10.0 ounces	7	Observe label.
Vegetable weevils	Carbaryl (Sevin) 50WP	0.5 pound	3	Observe label.
	Malathion 5EC	1.0 pint	7	Observe label.
	Malathion 25WP	2.5 pounds	7	Observe label.
BRUSSELS SPROUTS				
Aphids	Acetamiprid (Assail 3OSG)	2-3 ounces	7	Observe label.
	Pymetrozine (Fulfill)	2.75 ounces	7	Observe label.
	Imidicloprid (Admire Pro 4.6F)	4.4-10.5 ounces	21	Observe label.
Diamondback moths, imported cabbage worms, loopers	<i>Bacillus thuringiensis</i>			Use maximum rate recommended by manufacturer.
	Bifenthrin (Capture 2EC)	2.1-6.4 ounces	7	Observe label.
	Emamectin benzoate (Proclaim)	2.4-4.8 ounces	7	Observe label.
	Indoxacarb (Avaunt)	3.5 ounces	3	Observe label.

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	Methomyl (Lannate LV)	1.5-3.0 pints	3	Observe label.	
	Methomyl (Lannate SP)	0.25-1.0 pound	3	Do not use in home plantings.	
	Permethrin (Ambush 2EC)	3.26-4.0 ounces	1	Do not apply more than eight applications per season.	
	Permethrin (Ambush 25WP)	3.2-6.4 ounces	1	Observe label.	
	Permethrin (Pounce 3.2 EC)	2.0-4.0 ounces	1	Observe label.	
	Novaluraon (Rimon 0.83EC)	6.0-12.0 fluid ounces	7	Observe label.	
	Spinetoram (Radiant SC)	5-10 fl. ounces	1	Observe label.	
	<p>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 <i>Bacillus thuringiensis</i> to sprays to increase control.</p>				
	Tebufenozide (Confirm 2F)	6.0-8.0 ounces	7	Observe label.	
	Zeta-cypermethrin (various)	2.4-4.3 ounces		Observe label	
<p>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 <i>Bacillus thuringiensis</i> to sprays to increase control.</p>					
Whiteflies	Acetamiprid (Assail 30SG)	2.5-4.0 ounces	7	Observe label.	
	Dinotefuran (Venom 70SG)	1.0-4.0 ounces (foliar)	1	Do not apply more than 6 ounces per season foliar.	
		5.0-6.0 ounces (soil)	21		
	Pymetrozine (Fulfill)	2.75 ounces	7	Observe label.	
	Spiromesifen (Oberon 2SC)	7-8.5 fluid ounces	21	Observe label.	

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CABBAGE AND BROCCOLI				
Diamondback moths, imported cabbage worms, loopers,	Bifenthrin (Capture 2EC)	2.1-6.4 ounces	7	Observe label.
	Emamectin benzoate (Proclaim)	2.4-4.8 ounces	7	Observe label.
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	3	Observe label.
	Indoxacarb (Avaunt)	3.5 ounces	3	Observe label.
	Methomyl (Lannate LV)	1.5-3.0 pints	3	Observe label.
	Methomyl (Lannate SP)	0.25-1.0 pound	3	Do not use in plantings.
	Permethrin (Ambush 2EC)	3.2-6.4 ounces	1	Observe label.
	Permethrin (Ambush 25WP)	3.2-6.4 ounces	1	Observe label.
	Permethrin (Pounce 3.2 EC)	2.0-4.0 ounces	1	Observe label.
	Tebufenozide (Confirm 2F)	6.0-8.0 ounces	7	Observe label.
	Zeta-cypermethrin (various)	2.4-4.3 ounces		Observe label
		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.		
Leafminers, thrips	Spinosad (SpinTor 2SC)	3.0-10.0 ounces	1	Observe label.
Root aphids, root maggots	Diazinon AG500	2.0-3.0 quarts	7-broccoli 21-cabbage	Broadcast just before planting and immediately incorporate into the top 3-4 inches of soil.
Whiteflies	Acetamiprid (Assail 3OSG)	2.5-4 ounces	7	Use spreader stick to improve control.
	Dinotefuran (Venom 70SG)	1-4 ounces (foliar)	1	Observe label.
	Spiromesifen (Oberon 2SC)	7.0-8.5 fluid ounces	7	Do not exceed 25.5 fluid ounces per acre per season.
Wireworms	Diazinon AG500	3.0-4.0 quarts	14	
CANTALOUPE				
Aphids	Bifenthrin (Various) 2EC	2.6-6.4 ounce	3	Limit 2 applications after bloom.
	Fonicamide (Beleaf 50SG)	2-2.8 ounce	0	

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	Pymetrozine (Fulfill 50WDG)	2.7 ounce	0	Apply before aphids reach damage level. Do not exceed 5.5 ounces per season per acre.
Cucumber beetles, melon worms, pickleworms, squash bugs, squash vine borers	Bifenthrin (Capture 2EC)	5.12-6.4 ounces	3	Observe label.
	Carbaryl (Sevin) 50WP	1.0 pound	None	Observe label.
	Carbaryl (Sevin) 80S	0.6 pound	None	Observe label.
	Esfenvalerate (Asana XL)	5.6-9.8 ounces	3	Observe label.
	Permethrin (Ambush 25W)	6.4-12.8 ounces	3	Observe label.
Cutworms	Diazinon AG500	2.0-4.0 quarts	3	Observe label.
Leafminers	Naled (Dibrom 8EC)	0.25-0.5 pint	1	Observe label.
	Oxamyl (Vydate 10G)	40-60 pounds (broadcast)		Apply within one week of planting.
	Oxamyl (Vydate L) 2EC	2.0-4.0 pints	1	Observe label.
	Permethrin (Pounce 2.5WP)	12.8 ounces	1	Observe label.
	Permethrin (Pounce 3.2EC)	8.0 ounces	1	Observe label.
	Spinetoram (Radiant SC)	5-10 fluid ounces	3	Observe label.
Spider mites	Bifenazate (Acramite 50WS)	.75 – 1.0 pound	3	Observe label.
	Bifenthrin (Capture 2EC)	5.12-6.4 ounces	3	Observe label.
	Permethrin (Ambush 25W)	6.4-12.8 ounces	0	Observe label.
	Abimectin (Agri-Mek) 0.15EC	8-16 ounces	7	Observe label.
	Spiromesifen (Oberon 2 SG)	7-8.5 fl. ounces	7	Observe label.
Wireworms	Diazinon AG500	3.0-4.0 quarts	3	Observe label.
CARROT				
Aphids	Thiamethoxam (Actara 25 WPG)	1.5-3 ounces	7	Observe label.
Armyworms flea beetles, leafhoppers,	Beta-cyfluthrin (Baythroid 2EC)	1.6-2.8 ounces	0	Observe label.
	Carbaryl (Sevin) 50WP	0.5 pound	None	Observe label.
	Carbaryl (Sevin) 80S	0.6 pound	None	Observe label.
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	7	Observe label.
	Malathion 5EC	1.0-1.5 pints	7	Observe label.
	Methomyl (Lannate LV)	1.0-3.0 pints	1	Observe label.
	Methomyl (Lannate SP)	0.33-1.0 pound	1	Observe label.

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	Spinetoram (Radiant SC)	3.0-6.0 fluid ounces	3	Radiant will not control leafhoppers; no more than 4 applications per year.
Vegetables weevils	Malathion 5EC	1.0 pint	7	Observe label.
Wireworms	Diazinon AG500	3.0-4.0 quarts	14	Observe label.
CAULIFLOWER				
Aphids	Imidicloprid (Provado 1.6FL)	3.75 ounces	7	Observe label.
	Pymetrozine (Fulfill)	2.75 ounces	7	Observe label.
Diamondback moths, flea beetles, loopers	Esfenvalerate (Asana 1.9EC)	1.7-3.4 ounces	1	Observe label.
	Permethrin (Ambush 2EC)	3.2-6.4 ounces	1	Observe label.
	Permethrin (Ambush 25WP)	3.2-6.4 ounces	1	Observe label.
	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 <i>Bacillus thuringiensis</i> to sprays to increase control.			
Imported cabbage worms	<i>Bacillus thuringiensis</i>			Use maximum amount recommended by manufacturer.
	Bifenthrin (Capture 2EC)	2.1-6.4 ounces	7	Observe label.
	Emamectin benzoate (Proclaim)	2.4-4.8 ounces	7	Observe label.
	Indoxacarb (Avaunt)	3.5 ounces	1	Observe label.
	Methomyl (Lannate LV)	0.75-3.0 pints	3	Do not use in home plantings.
	Methomyl (Lannate SP)	0.25-1.0 pound	3	Do not use in home plantings.
	Permethrin (Pounce 2.5WP)	3.2-6.4 ounces	1	Observe label.
	Permethrin (Pounce 3.2EC)	24.0 ounces	1	Observe label.
	Spinetoram (Radiant SC)	5-10 fluid ounces	1	Observe label.
	Tebufenozide (Confirm 2F)	6.0-8.0 ounces	7	Observe label.
	Zeta-cypermethrin (various)	2.4-4.3 ounces		Observe label.
Mole crickets	Diazinon AG500	1.0 quart	7	Observe label.
Root maggots	Diazinon AG500	2.0-3.0 pints	7	Observe label.
Whiteflies	Acetamiprid (Assail 30SG)	2.5-4 ounces	7	Observe label.

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	Spiromesifen (Oberon 2SC)	7-8.5 ounces		Observe label.
Wireworms	Diazinon AG500	3.0-4.0 quarts	7	Observe label.
COLLARDS AND GREENS				
Aphids	Acetamiprid (Assail 30SG)	2.0-3.0 ounces	7	Observe label.
	Imidicloprid (Admire Pro)	4.4-10.5 ounces	21	Observe label. Will also control flea beetles.
	Malathion 5EC	1.0 pint	7	Observe label.
	Malathion 25WP	2.5 pounds	7	Observe label.
	Pymetrozine (Fulfill)	2.75 ounces	7	Observe label.
	Spirotetramat (Movento 25C)	4.0-5.0 fluid ounces	1	Do not exceed 10 fluid ounces/season.
Caterpillars, loopers	<i>Bacillus thuringiensis</i>		0	Use maximum rate recommended by manufacturer. On foliage every 7 days. Apply to both sides of leaves when larvae are small.
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	7	Collards only.
	Emamectin benzoate (Proclaim 5WDG)	2.4-4.8 ounces	14	Observe label.
	Indoxacarb (Avaunt 30WDG)	2.5-3.5 ounces	3	Observe label.
	Permethrin (Ambush 25W)	3.2-6.4 ounces	1	Observe label.
	Permethrin (Pounce 25WP)	3.2-6.4 ounces	1	Observe label.
	Spinetoram (Radiant SC)	5-10 fluid ounces	1	
	Zeta-cypermethrin (various))	2.24-4.0 ounces	1	Observe label.
Flea beetles	Carbaryl (Sevin) 50WP	3.0 pounds	14	Observe label.
Stinkbugs	Acetamiprid (Assail 30SG)	3.0-4.0 ounces	7	Observe label.
	Clothianidin (Belay 2.13SC)	3.4 ounces (foliar) 9.0-12.0 oz. (soil)	21 (foliar)	Soil application at plant only.
Whiteflies	Acetamiprid (Assail 30SG)	2.5-4.0 ounces	7	Observe label.
	Spiromesifen (Oberon 2SC)	7.0-8.5 fluid ounces	7	Observe label.
	Spirotetramat (Movento 25C)	4.0-5.0 fluid ounces	1	Do not exceed 10 fluid ounces/season.
CUCUMBER				
Aphids	Acetamiprid (Assail 30SG)	2.5-4 ounces	0	Observe label.
	Flonicamide (Beleaf 50SG)	2-2.8 ounces	0	Observe label.
	Pymetrozine (Fulfill)	2.75 ounces	14	Observe label.
	Thiamethoxam (Actara)	2.0-3.0 ounces	None	Observe label.

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	Thiamethoxam (Platinum)	5.0-8.0 ounces	30	Observe label.
Cucumber beetles, vegetable weevils	Malathion 5EC	1.0 pint	7	Observe label.
	Methomyl (Lannate LV)	1.5-3.0 pints	1.5 (1-day) > 1.5 (3-days)	Observe label.
	Methomyl (Lannate SP)	0.5-1.0 pound	0.5 (1-day) > 0.5 (3-days)	Observe label.
Leafminers	Abimectin (Agri-Mek) 0.15EC	8.0-16.0 ounces	7	Observe label.
	Naled (Dibrom 8EC)	0.5-0.75 pint	None	Observe label.
	Permethrin (Pounce 3.2 EC)	4.0-8.0 ounces	To harvest	Not more than 1.6 pounds/A.I./acre per season.
	Permethrin (Pounce 25 WP)	6.4-12.8 ounces	To harvest	
	Rynaxypyr (Coragen 1.6SC)	5-7.5 fluid ounces	1	Soil, foliar or drip chemigation.
	Spinetoram (Radiant SC)	6-8 ounces	1	Observe label.
Melon worms, pickleworms, squash bugs, squash vine borers	Bifenthrin (various)	2.6-6.4 ounces	3	Observe label. Limit 19.2 fluid ounces per acre per season; allow 7 days between applications.
	Carbaryl (Sevin) 50WP	1.0 pound	None	Observe label.
	Carbaryl (Sevin) 80S	0.6 pound	None	Observe label.
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	3	Observe label.
	Permethrin (Ambush 25W)	0.1-0.2 pound	None	Observe label.
	Permethrin (Pounce 3.2 EC)	4.0-8.0 ounces	To harvest	Not more than 1.6 pounds
	Permethrin (Pounce 25 WP)	6.4-12.8 ounces	To harvest	Observe label.
	Rynaxypyr (Coragen 1.67SC)	3.5-5 fluid ounces	1	Foliar or drip.
	Spinetoram (Radiant SC)	5.0-10.0 fluid ounces	1	Observe label.
Spider mites	Abimectin (Agri-Mek) 0.15EC	5-16 ounces	7	On foliage as needed; no more than 2 applications.
	Bifenazate (Acramite 50WS)	.75-1 pound	3	Do not exceed 1 application/season.
	Bifenthrin (Brigade) 2EC	2.6-6.4 ounces	7	Observe label.
	Fenpropathrin (Danitol 2.4EC)	10.66 ounces	7	
	Spiromesifen (Oberon 25G)	7-8.5 fluid ounces	7	
EGGPLANT				
Aphids	Imidicloprid (Admire Pro)	1.3-2.2 fluid ounces	0	Observe label. Foliar treatment.
	Malathion 5EC	1.0 pint	3	Observe label.

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	Malathion 25WP	3.5 pounds	3	Observe label.
	Naled (Dibrom 8EC)	0.5 pint	1	Observe label.
	Thiamethoxam (Actara)	2.0-4.0 ounces	None	Observe label.
Colorado potato beetles, flea beetles, horn worms, thrips, tomato fruitworms	Bifenthrin (Capture 2EC)	2.1-6.4 ounces	7	Observe label.
	Carbaryl (Sevin) 50WP	2.0 pounds	None	Observe label.
	Carbaryl (Sevin) 80S	1.5 pounds	None	Observe label.
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	1	Observe label.
	Imidicloprid (Admire 2F)	10.0-24.0 ounces		
	Indoxacarb (Avaunt)	3.5 ounces	3	Observe label.
	Permethrin (Ambush 25WP)	0.1-0.2 pound	3	Observe label.
	Permethrin (Pounce 3.2 EC)	8.0 ounces	3	Observe label.
	Rynaxypyr (Coragen 1.67SC)	3.5-5.0 fluid ounces	1	Foliar or drip chemigation.
	Tebufozide (Confirm 2F)	6.0-8.0 ounces	7	Observe label.
	Zeta-cypermethrin (various)	2.4-4.3 ounces		Observe label
Spider mites	Abimectin (Agri-Mek 0.15EC)	8.0-16.0 fluid ounces	7	Observe label.
	Bifenazate (Acramite 50WS)	.75-1.0 pound	3	Observe label.
	Fenbutatin-oxide (Vendex 50WP)	2.0-3.0 pounds	3	Observe label.
	Fenpyroximate (Portal 0.4EC)	2 pints	3	Observe label.
	Spiromesifen (Oberon 2SG)	7.0-8.5 fluid ounces	7	Observe label.
Whiteflies	Thiamethoxam (Platinum)	5.0-8.0 ounces	30	Observe label.
	Thiamethoxam (Actara)	2.0-4.0 ounces	0	Observe label.
	Acetamiprid (Assail 30SG)	2.5-4.0 ounces	7	No more than one every 7 days. Do not exceed four applications per season or 7ounces/season.
	Spiromesifen (Oberon 2EC)	7.0-8.5 SC	7	Do not exceed three apps/season
ENGLISH PEA				
Aphids, cabbage loopers, cutworm	Bifenthrin (Capture 2EC)	1.6-6.4 ounces	3	Observe label.
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	1	Observe label.
	Imidicloprid (Admire Pro 4.6F)	1.2 fluid ounces	7	Observe label.

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	Malathion 5EC	1.0 pint	3	Observe label.
	Pymetrozine (Fulfill 50WPG)	2.75 ounces	14	Observe label.
IRISH POTATO				
Aphids, caterpillars, Colorado potato beetles, cucumber beetles, flea beetles, flea hoppers, leafhoppers, plant bugs, psyllids	Abimectin (Agri-Mek 0.15EC)	8.0-16.0 ounces	14	Observe label.
	Acetamiprid (Assail 30SG)	1.5-4.0 ounces	7	Observe label.
	Carbaryl (Sevin) 80S	0.6 pound	None	Foliage applications only.
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	1	Observe label.
	Imidicloprid (Admire Pro 4.6F)	1.2 fluid ounces	7	Observe label. Foliar treatment.
	Indoxacarb (Avaunt)	3.5-6.0 ounces	7	Observe label.
	Permethrin (Ambush 25W)	0.05-0.2 pound	7	Observe label.
	Permethrin (Pounce 3.2 EC)	4.0-8.0 ounces	7	Observe label.
	Pymetrozine (Fulfill)	2.75 ounces	14	Observe label.
	Spinetoram (Radiant SC)	6.0-8.0 fluid ounces	7	Observe label.
	Spinosad (Blackhawk 36WG)	1.7-3.3 ounces	3	Observe label.
	Thiamethoxam (Actara)	1.5 ounces	14	Observe label.
	Thiamethoxam (Platinum)	5.0-8.0 ounces	30	Observe label.
Caterpillars	Methomyl (Lannate LV)	0.75-3.0 pints	10	Do not use in home plantings.
	Methomyl (Lannate SP)	0.25-1.0 pound	14	Observe label.
Mites	Abimectin (Agri-Mek 0.15EC)	8.0-16.0 ounces	14	Observe label.
Whiteflies	Imidicloprid (Provado 1.6 F)	3.25 ounces	7	Observe label.
	Pymetrozine (Fulfill)	2.75 ounces	14	Observe label.
	Thiamethoxam (Actara)	1.5 ounces	14	Observe label.
	Thiamethoxam (Platinum)	5.0-8.0 ounces	30	Observe label.
Wireworms	Ethoprop (Mocap 15G)	1.4 pounds per 1,000 ft. row	90	Observe label.
	Fipronil (Regent 4SC)	3.2 fluid ounces	90	In-furrow at planting.

Vegetables – Commercial

Insects	Insecticide and Formulations	Rate/A	Cutoff Date	Remarks, Restrictions or Limitations
LETTUCE				
Aphids	Acetamiprid (Assail 30SG)	2-4 ounces	7	Do not apply more than 1 every 7 days; do not exceed 4 apps./year.
	Imidicloprid (Admire Pro 4.6F)	1.0-3.0 fluid ounces	7	
	Malathion 5EC	1.0-2.0 pints	7 (head) 14 (leaf)	Observe label.
	Pymetrozine (Fulfill)	2.75 ounces	7	Observe label.
	Spinosad (SpinTor 2SC)	1.5-3.0 ounces	1	Observe label.
	Spirotetramat (Movento 2SC)	4.0-5.0 fluid ounces	3	Do not exceed 10 fluid ounces/season.
Caterpillars	<i>Bacillus thuringiensis</i>			Use maximum rate recommended by manufacturer.
	Bifenthrin (Capture 2EC)	2.1-6.4 ounces	7	Observe label.
	Emamectin benzoate (Proclaim)	2.4-4.8 ounces	7	Observe label.
	Indoxacarb (Avaunt)	2.5-3.5 ounces	3	Observe label.
	Permethrin (Ambush 25W)	0.1-0.2 pounds	1	Do not feed refuse leaves to livestock. On leaf lettuce, do not use more than 2 applications per season; head lettuce only.
	Permethrin (Pounce 3.2 EC)	4.0-8.0 ounces	7	
	Permethrin (Pounce 25WP)	6.4-12.8 ounces	1	
	Spinosad (SpinTor 2SC)	1.5-3.0 ounces	1	Observe label.
	Tebufenozide (Confirm)	6.0-8.0 ounces	7	Observe label.
	Zeta-cypermethrin (various)	2.4-4.3 ounces		Observe label
Leafhoppers, leafminers	Abimectin (Agri-Mek 0.15EC)	8.0-16.0 ounces	7	Observe label.
	Bifenthrin (various)	2.6-6.4 ounces	7	
	Imidicloprid (Provado 1.6F)	3.75 fluid ounces	7	Check label for plant-back restrictions.
	Malathion 25WP	2.0-5.0 pounds	7 (head) 14 (leaf)	Observe label.
Wireworms	Diazinon AG500	3.0-4.0 quarts	14	Observe label.
OKRA				
Aphids	Imidicloprid (Admire Pro 4.6F)	1.3-2.2 fluid ounces	0	Observe label.
	Malathion 5EC	1.0 pint	1	Observe label.
	Malathion 25WP	2.5 pounds	1	Observe label.
Beetles, leaf-footed bugs stink bugs	Bifenthrin (Brigade 2EC)	2.6-6.4 ounces	7	Observe label.
	Buprofezine (Courier 40SC)	9-13.6 ounces	1	Observe label.
	Carbaryl (Sevin) 50WP	2.0 pounds	None	Observe label.

Vegetables – Commercial

Insects	Insecticide and Formulations	Rate/A	Cutoff Date	Remarks, Restrictions or Limitations
	Carbaryl (Sevin) 80S	1.25 pounds	None	Observe label. Sevin will not control stinkbugs.
	Zeta-cypermethrin (various)	2.24-4 ounces	1	Observe label.
Corn earworms	Carbaryl (Sevin) 50WP	2.0 pounds	None	Observe label.
	Carbaryl (Sevin) 80S	1.25 pounds	None	Observe label.
	Spinosad (SpinTor 2SC)	1.5-8.0 ounces	1	Observe label.
ONION, SHALLOT				
Onion thrips, thrips	Acetamiprid (Assail 70WP)	2.1 – 3.4 ounces	7	Observe label.
	Malathion 5EC	0.6 pint	3	Observe label.
	Malathion 25WP	1.5 pounds	3	Observe label.
	Permethrin (Ambush 25W)	9.6-19.2 ounces	1	Observe label.
	Permethrin (Pounce 25WP)	9.6-19.2 ounces	1	Observe label.
	Spinetoram (Radiant SC)	6-8 fluid ounces	1	Observe label.
	Zeta-cypermethrin (various)	2.4-4.3 ounces		Observe label
Onion maggots	Chlorpyrifos (Lorsban 15G)	3.7 ounces/1,000 ft.		Observe label.
		1.1 ounces/1,000 ft.		Observe label.
	Diazinon AG500	2.0-4.0 quarts	14	Observe label.
PARSLEY				
Aphids	Imidicloprid (Admire 4.6F)	7-10 ounces	21	Soil application.
	Imidicloprid (Provado 1.6F)	3.75 ounces	0	Observe label.
	Malathion 5EC	1.0 pint	21	Observe label.
	Pymetrozine (Fulfill)	2.75 ounces	7	Observe label.
Caterpillars, loopers	<i>Bacillus thuringiensis</i>		None	Observe label.
	Permethrin (Ambush 25W)	0.4-0.8 pound	1	Observe label.
Flea beetles	Carbaryl (Sevin) 50W	2.0-4.0 pounds	14	Observe label.
	Malathion 5EC	1.0-2.0 pints	21	Observe label.
	Methomyl (Lannate LV)	1.5-3.0 pints	10	Observe label.
	Methomyl (Lannate SP)	0.5-1.0 pounds	10	Observe label.
	Tebufenozide (Confirm 2F)	6.0-8.0 ounces	7	Observe label.
PEPPERS				
Aphids	Imidicloprid (Admire Pro)	7.0-14.0 ounces	21	Soil or foliar application.
	Methomyl (Lannate LV)	1.5-3.0 pints	3	Observe label.

Vegetables – Commercial

Insects	Insecticide and Formulations	Rate/A	Cutoff Date	Remarks, Restrictions or Limitations
	Methomyl (Lannate SP)	0.5-1.0 pound	3	Observe label.
	Naled (Dibrom 8EC)	0.5 pint	1	Observe label.
	Oxamyl (Vydate L)	2.0-4.0 pints	7-14	Observe label.
	Thiamethoxam (Actara)	2.0-4.0 ounces	0	Observe label.
	Thiamethoxam (Platinum)	5.0-8.0 ounces	30	Observe label.
Flea beetles, hornworms, leaf-footed bugs, tomato fruitworms, yellow-striped armyworms	Bifenthrin (Capture 2EC)	2.1-6.4 ounces	7	Observe label.
	Carbaryl (Sevin) 50WP	2.0 pounds	None	Observe label.
	Carbaryl (Sevin) 80S	1.25 pounds	None	Observe label.
	Methomyl (Lannate LV)	1.5-3.0 pints	3	Observe label.
	Methomyl (Lannate SP)	0.5-1.0 pound	3	Observe label.
	Permethrin (Pounce 3.2 EC)	4.0-8.0 ounces	3	Observe label.
	Spinosad (SpinTor 2SC)	1.5-8.0 ounces	1	Observe label.
	Tebufenozide (Confirm 2F)	6.0-8.0 ounces	7	Observe label.
Zeta-cypermethrin (various)	2.4-4.3 ounces		Observe label	
Leafminers	Abimectin (Agri-Mek) 0.15EC	8.0-16.0 ounces	7	Observe label.
	Cyromazine (Trigard 75WP)	2.66 ounces	0	Observe label.
	Oxamyl (Vydate L)	2.0-4.0 pints	7-14	Observe label.
	Permethrin (Pounce 3.2EC)	4.0-8.0 ounces	3	Observe label.
	Spinosad (SpinTor 2SC)	1.5-8.0 ounces	1	Observe label.
	Zeta-cypermethrin (various)	2.4-4.3 ounces		Observe label
Pepper weevils	Acephate (Orthene) 75S	0.66 pound	7	Do not use on bell peppers. Use in conjunction with pyrethroids.
	Acetamiprid (Assail 30SG)	4.0 ounces	7	
	Bifenthrin (Capture 2EC)	2.1-6.4 ounces	7	Observe label.
	Carbaryl (Sevin) 80S	2.5 pounds	None	Observe label.
	Esfenvalerate (Asana XL)	5.8-9.7 ounces	7	Observe label.
	Permethrin (Ambush 25WP)	6.4-12.8 ounces	3	Bell peppers only.
	Permethrin (Pounce 3.2EC/25WP)	4.0-8.0 ounces	3	Bell peppers only.

Vegetables – Commercial

Insects	Insecticide and Formulations	Rate/A	Cutoff Date	Remarks, Restrictions or Limitations
	Zeta-cypermethrin (Fury 2EC)	2.4-4.3 ounces		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.			
Spider mites	Abimectin (Agri-Mek 0.15EC)	8.0-16.0 ounces	7	Observe label.
	Bifenazate (Acramite 50WS)	.75-1.0 pound	3	No more than 1 app./season; will not control broad mite.
	Bifenthrin (Capture 2EC)	2.1-6.4 ounces	7	Observe label.
	Fenpyroximate (Portal .4EC)	2 pints	3	
	Spiromesifen (Oberon)	7.0-8.5 fluid ounces	7	Do not exceed 3 applications/season.
Vegetable weevils, thrips	Malathion 57EC	1.0 pint	7	Late afternoon and evening spraying is best. Clearing or treating dead lands and ditch banks is effective.
	Imidicloprid (Admire Pro 4.6F)	7.0-14.0 ounces	21	
	Abimectin (Agri-Mek 0.15EC)	8.0-16.0 ounces	7	
	Spinetoram (Radiant SC)	4.0-8.0 ounces	1	Observe label.
Whiteflies	Imidicloprid (Admire 2F)	16.0-32.0 ounces	21	Soil application.
	Imidicloprid (Admire Pro)	1.3-2.2 ounces	0	Foliar application. Minimum interval between foliar applications: 5 days. Do not use more than 6.7 fluid ounces/acre per crop season.
	Pymetrozine (Fulfill)	2.75 ounces	7	Observe label.
	Thiamethoxam (Actara)	2.0-4.0 ounces	None	Observe label.
	Thiamethoxam (Platinum)	5.0-8.0 ounces	30	Observe label.
PUMPKIN				
Aphids, whiteflies	Pymetrozine (Fulfill)	2.75 ounces	7	Observe label.
	Bifenthrin (Brigade 2EC)	2.6-6.4 fluid ounces	3	Observe label.
	Imidicloprid (Admire 2F)	16.0-24.0 ounces	21	Soil application.
	Thiamethoxam (Actara)	2.0-4.0 ounces	None	Observe label.
Cucumber beetles, melon worms, pickleworms, squash bugs, squash vine borers	Carbaryl (Sevin) 50WP	1.0 pound	None	Observe label.
	Carbaryl (Sevin) 80S	0.6 pound	None	Observe label.

Vegetables – Commercial

Insects	Insecticide and Formulations	Rate/A	Cutoff Date	Remarks, Restrictions or Limitations
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	3	Observe label.
	Permethrin (Pounce 3.2 EC)	8.0 ounces	1	Observe label.
	Permethrin (Ambush 25WP)	6.4-12.8 ounces		Observe label.
	Permethrin (Pounce 25WP)	12.8 ounces	1	Observe label.
	Spinosad (SpinTor 2SC)	4.0-8.0 ounces	3	Observe label.
	Make first application for cucumber beetle when seedlings first crack soil; repeat as needed.			
Spider mites	Abimectin (Agri-Mek 0.15EC)	8.0-16.0 ounces	7	Observe label.
	Bifenazate (Acramite 50WS)	.75-1.0 pound	3	No more than 1 application/season
	Spiromesifen (Oberon 2SG)	7-8.5 ounces	7	No more than 3 applications/season.
RADISHES				
Aphids, dipterous leafminers, flea beetles,	Beta-cyfluthrin (Baythroid)	1.6-2.8 ounces	None	Observe label.
	Carbaryl (Sevin) 50WP	1.0 pound	3	Observe label.
	Carbaryl (Sevin) 80S	0.6 pound	3	Observe label.
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	7	Observe label.
	Imidicloprid (Admire Pro)	1.2 fluid ounces	7	Observe label. Foliar treatment.
	Spinosad (SpinTor 2SC)	3.0-6.0 ounces	7	Observe label.
Root aphids, root maggots	Chlorpyrifos (Lorsban 15G)	3.3 ounces/1,000 linear feet		Observe label.
Wireworms	Chlorpyrifos (Lorsban 4E)	1 fluid ounce/1,000 linear feet		Use a minimum of 40 gallons of water/ app. Water based in-furrow planting.
	Diazinon AG500	3.0-4.0 quarts	14	Observe label.
SOUTHERN PEA				
Aphids	Imidicloprid (Admire Pro)	7.0-10.5 fluid ounces	21	Soil or foliar application.
	Malathion 5EC	1.0 pint	1	Observe label.
	Malathion 25WP	2.5 pounds	1	Observe label.
Corn earworms, cowpea curculios, stinkbugs	Bifenthrin (Capture 2EC) Capture 2EC	2.1-6.4 ounces	3	Observe label.
	Carbaryl (Sevin) 50WP	2.0 pounds	None	
	Carbaryl (Sevin) 80S	1.25 pounds	None	Carbaryl should be applied as a spray rather than a dust. Will not control stinkbugs.

Vegetables – Commercial

Insects	Insecticide and Formulations	Rate/A	Cutoff Date	Remarks, Restrictions or Limitations
	Methomyl (Lannate LV)	0.75-3.0 pints	3	Do not graze or feed treated forage to livestock.
	Methomyl (Lannate SP)	0.25-1.0 pound	3	
	Spinosad (SpinTor 2SC)	3.0-6.0 ounces	3	Observe label.
	Zeta-cypermethrin (various)	2.4-4.3 ounces		Observe label
SPINACH				
Aphids	Acetamiprid (Assail SG)	2.0-4.0 ounces	7	Do not apply more than once every 7 days; do not exceed 5 apps/season.
	Fonicamide (Beleaf 50SG)	2.0-2.8 ounces	0	Observe label.
	Imidicloprid (Admire Pro)	4.4-10.5 fluid ounces	21	Soil or foliar application.
	Malathion 5EC	1.0 pint	7	Observe label.
	Spirotetramat (Movento 2SC)	4.0-5.0 fluid ounces	3	Do not exceed 10 fluid ounces/ season.
Caterpillars, flea beetles, loopers	Indoxacarb (Avaunt 30SG)	2.5-3.5 ounces	3	Observe label.
	Methomyl (Lannate 90SP)	0.5 pound	7	Observe label.
	Permethrin (Pounce 3.2 EC)	4.0 ounces	1	Observe label.
	Permethrin (Ambush 25WP, Pounce 25WP)	6.4 ounces	1	Observe label.
	Spinosad (SpinTor 2SC)	1.5-10.0 ounces	1	Observe label.
	Tebufenozide (Confirm 2E)	6.0-8.0 ounces	7	Observe label.
	Spray on 5- to 7-day schedule or as needed. Apply sufficient spray to cover foliage completely.			
Leafminers	Cyromazine (Trigard 75WP)	2.66 ounces	7	Observe label.
	Spinetoram (Radiant SC)	6.0-10.0 ounces	1	Observe label.
SQUASH (SUMMER AND WINTER)				
Aphids	Acetamiprid (Assail 30SG)	2.5-4.0 ounces	0	
	Bifenthrin (Capture 2EC)	2.6-6.4 fluid ounces	3	Limit 19.22 fluid ounces/season –2 applications post bloom; allow 7 days between applications.
	Pymetrozine (Fulfill 50WDG)	2.75 ounces	0	
Cucumber beetles	Bifenthrin 2EC	2.6-6.4 fluid ounces	3	Limit 19.22 fluid ounces/season – 2 applications post bloom; allow 7 days between applications.
	Imidicloprid (Admire Pro 4.6F)	7.0-10.5 fluid ounces	21	

Vegetables – Commercial

Insects	Insecticide and Formulations	Rate/A	Cutoff Date	Remarks, Restrictions or Limitations
	Dinotefuran (Venom 70SG)	3.0-4.0 oz. (foliar) 5.0-6.0 oz. (soil)	1 21	
Leafminers	Bifenthrin (Capture 2EC)	5.12-6.4 ounces	3	Observe label.
	Cyromazine (Trigard 75WP)	2.66 ounces	7	Observe label.
	Naled (Dibrom 8EC)	0.5-1.0 pint	None (summer) 1 day (winter)	
	Oxamyl (Vydate L)	2.0-4.0 pints	1	Leafminers only.
	Permethrin (Pounce 3.2 EC)	4.0-8.0 ounces	To harvest	Not more than 1.6 pounds/A.l./acre per season.
	Permethrin (Pounce 25WP)	6.4-12.8 ounces	To harvest	
	Spinetoram (Radiant SC)	6.0-10.0 ounce	1	Observe label.
	Spinosad (SpinTor 2SC)	4.0-8.0 ounces	3	Observe label.
Melon worms, pickleworms, squash bugs, squash vine borers	Carbaryl (Sevin) 50WP	1.0 pound	None	Observe label.
	Permethrin (Pounce 3.2EC)	4.0-8.0 ounces	To harvest	Not more than 1.6 pounds/A.l./acre per season.
	Permethrin (Pounce 25WP)	6.4-12.8 ounces	To harvest	
	Acetamiprid (Assail 30WG)	5.3 ounces	0	Observe label.
	Bifenthrin (Capture 2EC)	5.12-6.4 ounces	3	Observe label.
	Spinosad (SpinTor 2SC)	4.0-8.0 ounces	3	Observe label.
	Methomyl (Lannate LV)	1.5-3.0 pints	3	Observe label.
	Methomyl (Lannate SP)	0.5-1.0 pound	3	Observe label.
	Esfenvalerate (Asana XL)	1.7-3.4 ounces	3	Observe label.
Spider mites	Bifenthrin (Capture 2EC)	5.12-6.4 ounces	7	Observe label.
Whiteflies	Imidicloprid (Admire 2F)	16.0-24.0 ounces	21	Soil application.
	Pymetrozine (Fulfill)	2.75 ounces	7	Observe label.
	Spiromesifen (Oberon 2SC)	7.0-8.5 fluid ounces	7	Do not apply more than 3 apps/season
	Thiamethoxam (Platinum)	5.0-8.0 ounces	30	Observe label.
SWEET CORN				
Corn rootworms, wireworms	Bifenthrin(various)	0.4-8.0 oz./1,000 linear feet/row	0	Apply as 5-7 in T-band over open seed furrow.
	Chlorpyrifos (Lorsban 4E)	4 pints	0	Preplant incorporation treatment.
Cutworms	Beta-cyfluthrin (Baythroid XL)	0.8-1.6 fluid ounces	0	Observe label.
	Bifenthrin (Brigade 2EC)	2.1-6.4 fluid ounces	1	Observe label.
	Esfenvalerate (Asana XL)	4.8 ounces	1	Observe label.

Vegetables – Commercial

Insects	Insecticide and Formulations	Rate/A	Cutoff Date	Remarks, Restrictions or Limitations
European corn borers, fall armyworms	Bifenthrin(Various)	0.4-8.0 oz./1,000 linear feet/row	0	Apply as 5-7 in T-band over open seed furrow.
	Carbaryl (Sevin) 50WP	4.0 pounds	None	Observe label.
	Carbaryl (Sevin) 80S	2.5 pounds	None	Observe label.
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	1	Observe label.
	Flubendiamide (Belt 4SC)	2.0-3.0 ounces		
	Indoxacarb (Avaunt 30DG)	2.5-3.5 ounces	3	For control of European corn borer in whorl stage only. Do not apply more than 14 ounces per acre per crop.
	Permethrin (Ambush 25WP)	6.4-12.8 ounces	1	Observe label.
	Permethrin (Pounce 3.2 EC)	4.0-8.0 ounces	1	Observe label.
	Permethrin (Pounce 25WP)	6.4-12.8 ounces	1	Observe label.
	Rynaxypyr (Coragen 1.67SC)	3.5-5.0 fluid ounces		
	Spinetoram (Radiant SC)	3.0-6.0 ounces	1	Do not apply more than 36 ounces per acre per season.
	Spinosad (SpinTor 2EC)	1.5-6.0 ounces	1	Observe label.
	Zeta-cypermethrin (Fury 2EC)	2.4-4.3 ounces	3	Observe label.
	For best control apply to silks when silks first appear on 2-day schedule until silks wilt.			
Seed corn maggots	Diazinon AG500	2.0-4.0 quarts	7	Observe label.
FIELD TOMATO				
Aphids, flea beetles	Acetamiprid (Assail 30SG)	2.0-4.0 ounces	7	Do not apply more than once every 7 days. Do not exceed 5 apps/season.
	Dimethoate 4EC	0.5-1.0 pint	7	Do not exceed rate as leaf damage may occur.
	Fonicamide (Beleaf 50SG)	2.0-2.8 ounces	0	Will not control flea beetles.
	Imidicloprid (Admire Pro 4.6F)	7.0 fluid ounces	21	Short-term protection at planting. May also be applied to transplants in the planting house.
	Pymetrozine (Fulfill 50WDG)	2.75 ounce	0	For aphids only.
	Spirotetramat (Movento 2SC)	4.0-5.0 fluid ounces	1	Do not exceed 10 fl. ounces/ season.
	Thiamethoxam (Platinum 2SC)	5.0-11.0 ounces	30	May be applied to direct-seeded crops. Do not exceed 11 ounces/ A/season. Check label for plant-back restrictions for a number of crops.
	Thiamethoxam (Actara 25 WDG)	2.0-3.0 ounces	0	For foliar applications.
Armyworms	Bacillus thuringiensis (Crymax WDG)	0.5-1.5 pounds	0	Start application when larvae are small and continue at 5- to 7-day intervals during periods of infestation.
	Bacillus thuringiensis (Dipel 2X)	0.5-1 pound	0	
	Bacillus thuringiensis (XenTari)	0.5-1 pound	0	

Vegetables – Commercial

Insects	Insecticide and Formulations	Rate/A	Cutoff Date	Remarks, Restrictions or Limitations
	Emamectin benzoate (Proclaim 5WDG)	2.4-4.8 ounces	7	Apply when larvae are first observed.
	Flubendiamide (Synapse 24% WG)	2.0-3.0 ounces	1	
	Indoxacarb (Avaunt 30DG)	3.5 ounces	3	Do not apply more than 14 oz/A/crop. Minimum interval b/w sprays is 5 days.
	Methoxyfenozide (Intrepid 2F)	4.0-10.0 ounces	1	Use low rates for early-season applications; 6-10 ounces for mid- to late-season applications.
	Rynaxypyr (Coragen 1.67SC)	3.5-5.0 fluid ounces	1	Foliar or drip chemigation. Observe label.
	Spinetoram (RadiantSC)	5.0-10.0 ounces	1	
Cabbage loopers, hornworms, pinworms, tomato fruitworms	Bacillus thuringiensis (Crymax WDG)	0.5-1.5 pound	0	Do not tank-mix <i>Bacillus thuringiensis</i> formulations with Dyrene.
	Bacillus thuringiensis (Dipel 2X)	0.5-1 pound	0	
	Beta-cyfluthrin (Baythroid XL)	1.6-2.8 fluid ounces	0	Do not exceed 16.8 fluid ounces per acre per season.
	Bifenthrin (various)	2.6-6.4 fluid ounces	1	
	Emamectin benzoate (Proclaim 5WDG)	2.4 - 4.8 ounces	7	
	Esfenvalerate (Asana XL 0.66 EC)	4.8-9.6 ounces	1	
	Fenpropathrin (Danitol 2.4 EC)	10.667 fluid ounces	3	Use a spray volume of 25-120 gallons per acre. Do not exceed 2.667 pints (42.667 fluid oz.) per acre per season.
	Flubendiamide (Synapse 24% WG)	2.0-3.0 ounces	1	
	Gamma-cyhalothrin (Proaxis 0.5EC)	2.56-3.84 fluid oz.	5	
	Indoxacarb (Avaunt 30DG)	2.5-3.5 ounces	3	Do not apply more than 14oz./A/crop. Minimum interval b/w sprays is 5 days.
	Lambda-cyhalothrin (Warrrior II)	1.28-1.92 ounces	5	Do not exceed 2.88 pints/A/season. Do not use on cherry tomatoes.
	Methomyl (Lannate 2.4LV)	1.5-3.0 pints	1	Methomyl may cause leafminer infest.
	Methoxyfenozide (Intrepid 2F)	4.0-10.0 ounces	1	Use low rates for early-season applications; 6-10 ounces for mid- to late-season applications.
	Rynaxypyr (Coragen 1.67SC)	3.5-5 fluid ounces	1	Foliar or drip chemigation, observe label. Must be applied uniformly to root zone.
	Spinetoram (Radiant SC)	5.0-10.0 ounces	1	
Zeta-cypermethrin + bifenthrin (Mustang Max .8EC)	2.24-4.0 ounces	1		
Colorado potato beetles	Acetamiprid (Assail 30SG)	1.5-2.5 ounces	7	For soil, foliar or transplant drench treatment.
	Imidicloprid (Admire Pro 4.6F)	7.0 fluid ounces	21	Foliar or drip chemigation. Observe label.
	Rynaxypyr (Coragen 1.67SC)	3.5-5.0 fluid ounces	1	
	Spinetoram (Radiant SC)	5.0-10.0 ounces	1	
	Thiamethoxam (Actara 25 WDG)	2.0-3.0 ounce	0	For foliar applications.

Vegetables – Commercial

Insects	Insecticide and Formulations	Rate/A	Cutoff Date	Remarks, Restrictions or Limitations
	Thiamethoxam (Platinum 2SC)	5.0-11.0 ounces	30	May be applied to direct-seeded crops. Do not exceed 11 ounces/ A/season. Check label for plant-back restrictions for a number of crops.
Cutworms	Beta-cyfluthrin (Baythroid XL)	1.6-2.8 fluid ounces	0	Do not exceed 16.8 fluid ounces per acre per season.
	Esfenvalerate (Asana XL 0.66 EC)	4.8-9.6 ounces	1	
	Gamma-cyhalothrin (Proaxis 0.5EC)	2.56-3.84 fl.oz.	5	
	Lamda-cyhalothrin (Warrior II)	1.28-1.92 ounces	5	Do not exceed 2.88 pints/A/season. Do not use on cherry tomatoes.
	Zeta-cypermethrin (various)	3.2-4.0 ounce	1	
Leafminers	Abimectin (Agri-Mek 0.15EC)	8.0-16.0 ounces	7	Do not exceed 48 fluid ounces per acre per season or more than 2 sequential applications.
	Cyromazine (Trigard 75WP)	2.66 ounce	0	See label for plant-back restrictions.
	Spinetoram (Radiant SC)	6.0-8.0 ounces	1	Do not exceed 29 fluid ounces per acre per season.
Spider mites	Abimectin (Agri-Mek 0.15EC)	8.0-16.0 ounces	7	Do not exceed 48 fluid ounces per acre per season or more than 2 sequential applications.
	Bifenazate (Acramite 50WS)	0.75-1.0 pound	3	Do not make more than 1 application per season.
	Spiromesifen (Oberon 2SG)	7.0-8.5 fluid ounces	7	Do not exceed 3 applications per season.
Stinkbugs	Bifenthrin (various)	2.6-6.4 fluid ounces	1	
	Fenpropathrin (Danitol 2.4 EC)	10.667 fluid ounces	3	Use a spray volume of 25-120 gallons per A. Do not exceed 2.667 pints (42.667 fl. oz.) per acre per season.
	Gamma-cyhalothrin (Proaxis 0.5EC)	2.56-3.84 fluid ounces	5	
	Lamda-cyhalothrin (Warrior II)	1.28-1.92 ounces	5	
	Thiamethoxam (Actara 25 WDG)	3.0-5.5 ounces	0	Do not exceed 11 oz. /A/season.
	Zeta-cypermethrin + bifenthrin (Mustang Max .8EC)	3.2-4.0 ounces	1	
Thrips	Dimethoate 4EC	0.5-1 pint	7	
	Dinotefuran (Venom 70SG)	1.0-4.0 oz. foliar	1	See comments under Whitefly for app. instructions and restrictions.
		5.0-6.0 ounces soil	21	
	Methomyl (Lannate 2.4LV)	1.5-3 pints	1	On foliage as needed.
	Spinetoram (Radiant SC)	6.0-10.0 ounces	1	Controls thrips on foliage, not in flowers.
Whiteflies	Acetamiprid (Assail 30SG)	2.5-4.0 ounces	7	Do not apply more than once every 7 days. Do not exceed 5 apps./ season.
	Buprofezine (Courier 40 SC)	9.0-13.6 fluid ounces	7	Use sufficient water to ensure good coverage. Do not apply more than 2 per crop cycle; allow 28 days between applications.
	Dinotefuran (Venom 70SG)	1-4oz foliar	1	Do not follow soil apps with apps of other neonicotinoid insecticides (Actara or Venom) Use only one app. method. May also control stink bugs.
		5-6 ounce soil	21	

Vegetables – Commercial

Insects	Insecticide and Formulations	Rate/A	Cutoff Date	Remarks, Restrictions or Limitations
	Imidicloprid (Admire Pro)	1.3-2.2 fluid ounces	0	Foliar application. Minimum interval between foliar applications: 5 days. Maximum = 6.7 fluid ounces per acre per crop season.
	Imidicloprid (Admire Pro 4.6F Soil)	7.0-10.5 fluid ounces	21	Do not follow soil apps. with apps. of other neonicotinoid insecticides (Actara, Provado or Venom). Residual activity will increase with increasing rates applied. Use higher rate for late-season or continuous infestations. Trickle irrigation will also control aphids and stink bugs.
	Pyrifoxifen (Knack 0.86EC)	8.0-10.0 ounces	14	Do not apply more than 2 apps. per growing season. Do not make apps. closer than 14 days.
	Spiromesifen (Oberon 2SG)	7.0-8.5 fluid ounces	7	Do not exceed 3 applications per season.
	Spirotetramat (Movento 2SC)	4.0-5.0 fluid ounces	1	Do not exceed 10 fl. ounces /season.
	Thiamethoxam (Actara)	3.0-5.5 ounces	0	Actara is for foliar applications.
	Thiamethoxam (Platinum 2SC)	5.0-11.0 ounces	30	Do not follow soil apps. with apps. of other neonicotinoid insecticides (Actara, Provado or Venom). May be applied to direct-seeded crops. Do not exceed 11 oz per acre per season. Check label for plant-back restrictions for a number of crops.
Wireworms	Diazinon AG 500	2.0-4.0 quart	0	Broadcast before planting and incorporate. Wireworms may be a problem in fields previously in pasture, corn or soybeans.
TURNIP				
Aphids	Imidicloprid (Admire Pro)	4.4-10.5 ounces	21	Greens only.
	Naled (Dibrom 8EC)	0.5 pint	1	Observe label.
	Malathion 5EC	1.0 pint	7	Observe label.
	Malathion 25WP	2.5 pounds	3	Observe label.
	Pymetrozine (Fulfill)	7.75 ounces	7	Greens only.
Cabbage loopers, diamondback moths	Emamectin benzoate (Proclaim 5WDC)	2.4-4.8 ounces	14	For turnip greens only.
	Esfenvalerate (Asana XL)	5.8-9.6 fluid ounces	7	Observe label.
	Indoxacarb (Avaunt 30WDG)	2.5-3.5 ounces	3	Observe label.
	Spinetoram (Radiant SC)	3.0-6.0 fluid ounces	1	
Caterpillars, flea beetles, loopers	<i>Bacillus thuringiensis</i>			Use maximum rate recommended by manufacturer.*
	*Spray on 5- to 7-day schedule. Apply sufficient spray to cover foliage completely.			
	Imidicloprid (Ambush 25W)	3.2-6.4 ounces	1	Observe label.
	Naled (Dibrom 8EC)	0.51 pint	1	Observe label.
	Spinetoram (Radiant IC)	3-6 fl. ounces	1	Observe label.
	Tebufenozide (Confirm 2F)	6.0-8.0 ounces	7	Observe label.
Root maggots	Chlorpyrifos (Lorsban 4E)	1.0 ounce/ 1,000 ft. row		

Vegetables – Commercial

Insects	Insecticide and Formulations	Rate/A	Cutoff Date	Remarks, Restrictions or Limitations
	Chlorpyrifos (Lorsban 15G)	4.6-9.2 ounces/ 1,000 ft. row		
WATERMELON				
Aphids	Bifenthrin (Brigade 2EC)	2.6-6.4 fluid ounces	3	Observe label.
	Imidiclopid (Admire Pro)	7.0-10.5 ounces	21	Soil or foliar application.
	Naled (Dibrom 8EC)	0.25-0.5 pint	1	Observe label.
	Pymetrozine (Fulfill)	2.75 ounces	7	Observe label.
	Thiamethoxam (Actara)	2.0-4.0 ounces	0	Observe label.
Cucumber beetles	Acetamiprid Assail 30SG	2.5-5.3 ounces	0	
	Dinotefuran (Venom 70 SG)	1.0-4.0 ounces (foliar); 5.0-6.0 ounces (soil)	1	
	Imidiclopid (Admire Pro 4.6F)	7.0-10.5 fluid ounces	21	
Cutworms	Esfenvalerate (Asana XL)	4.8-9.6 ounces	3	
	Permethrin (Various) 25W	12.8 ounces	0	
	Permethrin (Various) 3.2EC	8.0 fluid ounces	0	
Leafminers	Abimectin (Agri-Mek 0.15EC)	8.0-16.0 ounces	21	Observe label.
	Cyromazine (Trigard 75WP)	2.66 ounces	0	Observe label.
	Spinetoram (Radiant SC)	8.0 ounces	3	Observe label.
Melon worms, pickleworms	Bifenthrin (Capture 2EC)	5.12-6.4 ounces	3	Observe label.
	Carbaryl (Sevin) 50WP	1.0 pound	None	Observe label.
	Carbaryl (Sevin) 80S	0.6 pound	None	Observe label.
	Esfenvalerate (Asana XL)	5.8-9.6 ounces	1	Observe label.
	Oxamyl (Vydate L)	2.0-4.0 pints	1	Observe label.
	Permethrin (Pounce 3.2EC)	4.0-8.0 ounces	None	Not more than 1.6 pounds active ingredient per acre per season.
	Permethrin (Pounce 25WP)	6.4-12.8 ounces	None	
	Abimectin (Agri-Mek 0.15EC)	8.0-16.0 ounces	7	
	Bifenazate (Acramite 50WG)	0.75-1.0 pound	3	Observe label.
	Bifenthrin (Brigade 2EC)	2.6-6.4 ounces	3	Observe label.
Etoxazole (Zeal 72WP)	2.0-3.0 ounces	7	Observe label.	
Spider mites	Spiromesifen (Oberon 2SG)	7.0-8.5 fluid ounces	7	Observe label.
Whiteflies	Acetamiprid (Assail 30SG)	2.5-5.3 ounces	0	Observe label.
	Buprofezine (Courier 40SC)	9.0-12.5 fluid ounces	7	Observe label.
	Pymetrozine (Fulfill)	2.75 ounces	7	Observe label.

Vegetables – Commercial

Insects	Insecticide and Formulations	Rate/A	Cutoff Date	Remarks, Restrictions or Limitations
	Spiromesifen (Oberon 70SC)	7.0-8.5 fluid ounces	7	Observe label.
	Thiamethoxam (Actara)	2.0-4.0 ounces	0	Observe label.

Vegetables – Commercial

General Pests			
Pest	Insecticide	Rate	Restrictions and Limitations
Blister beetles	Carbaryl	1.0 pound active ingredient per acre	Apply as spot treatment as needed. Observe label.
	Malathion	1.0 pound active ingredient per acre	Apply as spot treatment as needed. Observe label.
Snails, slugs	Metaldehyde bait	10 pounds of 25% bait	Apply to soil around plants. Do not contaminate edible parts. Observe label.