

INSECT CONTROL FOR HOME USE
INSECT CONTROL FOR THE HOME VEGETABLE GARDEN
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For dusts, refer to the specific pesticide label for rates, application techniques, etc. Be sure to manage insects year-round, and incorporate several methods of control for best results. In recent years, the number of generic products has increased dramatically. For brevity, not all generic products are listed after each insecticide name. Those trade names listed are intended to aid in identification of products and are not intended to promote the use of specific trade names or to discourage use of generic products.

TABLE 5-21. INSECT CONTROL FOR THE HOME VEGETABLE GARDEN

Commodity	Insect	Insecticide and Formulation	Amount of Formulation Per Gallon of Spray	Minimum Interval (Days) Between Last Application and Harvest	Precautions and Remarks
ASPARAGUS	Asparagus beetle, Japanese beetle, grasshopper, and aphid	permethrin (various brands) 2.5% EC	1.5 oz	3	
		pyrethrin EC	1 to 2 tsp	0	
BEAN	Aphid	malathion (various) 50%	2 tsp	1	
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	
	Corn earworm	carbaryl (Sevin) 50 WP	2 tbsp	0	
		spinosad (Naturalyte) 0.5% F	4 tbsp	3	
	Mexican bean beetle, bean leaf beetle, flea beetle, Japanese beetle, and cucumber beetle	carbaryl (Sevin) 50 WP	2 tbsp	3	On foliage as needed. Use low rate of carbaryl on small plants.
		5 D	—	—	
	pyrethrin EC	1 to 2 tsp	0		
		Potato leafhopper, fleahopper, lygus, and stink bug	malathion (various) 50% EC	2 tsp	1
	pyrethrin EC	1 to 2 tsp	0		
		Spider mite	difocol (Kelthane) 4 EC	1 tbsp	7
	malathion 50% EC		2 tbsp	1	
	pyrethrin EC		1 to 2 tsp	0	
soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	Apply treatment at first sign of mites and speckled plants.		
Thrips and leafminer	pyrethrin EC	1 to 2 tsp	0	On foliage as needed. Do not feed treated vines to livestock.	
Whitefly	<i>Beauveria bassiana</i> (Mycotrol WP)	1/4 lb/20 gal water	0		
	pyrethrin EC	1 to 2 tsp	0	Apply when whiteflies observed. Repeat in 4- to 5-day intervals.	
	soap (insecticidal, M-Pede) 49 EC	2 tbsp	0		
BEET	Flea beetle, beet webworm, and blister beetle	carbaryl (Sevin) 50 WP	3 tbsp	3 (14)	On foliage as needed. Fourteen days if tops used; 3 days if tops not used.
BROCCOLI, CAULIFLOWER, BRUSSELS SPROUTS, RUTABAGA	Aphid and flea beetle	malathion (various) 50% EC	1 to 2 tsp	7	On foliage as needed.
		pyrethrin EC	1 to 2 tsp	0	On foliage as needed.
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	On foliage as needed.
	Cabbage looper, diamondback moth, and imported cabbageworm	<i>Bacillus thuringiensis</i> (DiPel) 2 X	1 tbsp	0	On foliage as needed.
		4 L	2 tsp		
		(Javelin) WG	2 tsp		
		esfenvalerate (Ortho) 0.425% EC	2 tbsp	3	On foliage as needed.
spinosad (Naturalyte) 0.5%	4 tbsp	1	On foliage as needed.		
Harlequin bug	malathion (various) 50% EC	1 to 2 tsp	7	On foliage as needed.	
CABBAGE	Aphid	dimethoate (Cygon) 2 EC	1.5 tsp	3	
		malathion (various) 50% EC	1 to 2 tsp	7	
		pyrethrin EC	1 to 2 tsp	0	
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	

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CABBAGE (continued)	Cabbage looper, imported cabbageworm, diamondback moth, and cutworm	<i>Bacillus thuringiensis</i> (DiPel) 2X 4 L (Javelin) WG	1 tbsp 2 tsp 2 tsp	0	Start control program when worms are small, and treat foliage every 5 to 7 days.
		carbaryl (Sevin) 50 WP	4 tbsp	3	On foliage as needed. Sevin will not control cabbage looper. Sevin is suggested for cutworm.
		esfenvalerate (Ortho) 0.425% EC	2 tbsp	3	
		lambda-cyhalothrin (Triazide) 0.5% EC	1 tbsp	1	
		spinosad (Naturalyte) 0.5% F	4 tbsp	1	
	Flea beetle and thrips	carbaryl (Sevin) 50 WP	2 tbsp	3	
		malathion 50% EC (various)	1 to 2 tsp	7	
		pyrethrin EC	1 to 2 tsp	0	
	Harlequin bug	lambda-cyhalothrin (Triazide) 0.5% EC	1 tbsp	1	On foliage as needed.
		malathion (various) 50% EC	2 tsp	7	On foliage as needed.
CANTALOUPE	Aphid and thrips	malathion (various) 50% EC	1 to 2 tsp	1	
		pyrethrin EC	1 to 2 tsp	0	On foliage as needed.
	soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	On foliage as needed.	
	Cucumber beetle (spotted and striped), pickleworm, squash bug, and squash vine borer	esfenvalerate (Ortho) 0.425% EC	2 tbsp	3	
	Spider mite	dicofol (Kelthane) 50 WP	2 tbsp	2	On foliage as needed.
	soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	On foliage as needed.	
CARROT	Armyworm, leafminer, and leafhopper	<i>Bacillus thuringiensis</i> (DiPel) 2X 4 L (Javelin) WG	1 tbsp 2 tsp 2 tsp	0	<i>B.t.</i> will not control leafhoppers.
		carbaryl (Sevin) 50 WP	4 tbsp	0	On foliage as needed.
		cyfluthrin (Bayer Advanced) 0.75%	1 tbsp	0	
		pyrethrin EC	1 to 2 tsp	0	
CELERY	Aphid, flea beetle, leafminer, and flea hopper	malathion (various) 50% EC	1 to 2 tsp	7	On foliage as needed.
		permethrin (various brands) 2.5% EC	1.5 fl oz	3	On foliage as needed.
COLLARD	Aphid and flea beetle	malathion (various) 50% EC	2 tsp	7	On foliage as needed.
		pyrethrin EC	1 to 2 tsp	0	On foliage as needed.
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	On foliage as needed.
	Cabbage looper, diamondback moth, and imported cabbageworm	<i>Bacillus thuringiensis</i> (DiPel) 2X (DiPel) 4L (Javelin) WG	1 tbsp 2 tsp 2 tsp	0	Begin foliage treatments early and repeat as necessary. Include a spreader/sticker.
		pyrethrin EC	1 to 2 tsp	0	
		spinosad (Naturalyte) 0.5% F	4 tbsp	1	
Harlequin bug	malathion (various) 50% EC	1 to 2 tsp	7		
CORN (SWEET)	Aphid	pyrethrin EC	1 to 2 tsp	0	
	Corn earworm, sap beetle, flea beetle, and Japanese beetle	esfenvalerate (Ortho) 0.425% EC	2 tbsp	1	
		pyrethrin EC	1 to 2 tsp	0	
	Corn earworm, European corn borer, and fall armyworm	<i>Bacillus thuringiensis</i> (various)	2 tsp	0	Consult specific label. <i>B.t.</i> is effective while worms are feeding on the foliage.
		cyfluthrin (Bayer Advanced) 0.75%	1 tbsp	0	
		esfenvalerate (Ortho) 0.425% EC	4 tbsp	1	
		lambda-cyhalothrin (Triazicide) 0.5% EC	1 tbsp	1	
		permethrin (various brands) 2.5% EC	1.5 fl oz	3	
	spinosad (Naturalyte) 0.5% F	2 tbsp	1		

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CUCUMBER	Cucumber beetle (spotted and striped), pickleworm, and squash bug	esfenvalerate (Ortho) 0.425% EC	2 tbsp	3	
		pyrellin EC	1 to 2 tsp	0	
	Spider mite	dicofol (Kelthane) 50 WP	2 tbsp	2	On foliage as needed.
		pyrellin EC	1 to 2 tsp	0	On foliage as needed.
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	On foliage as needed.
	Whitefly	pyrellin EC	1 to 2 tsp	0	On foliage as needed.
soap (insecticidal, M-Pede) 49 EC		2 tbsp	0	On foliage as needed.	
EGGPLANT	Aphid and thrips	malathion (various) 50% EC	1 tsp	3	On foliage as needed.
		pyrellin EC	1 to 2 tsp	0	On foliage as needed.
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	On foliage as needed.
	Colorado potato beetle, hornworm, and corn earworm	<i>Bacillus thuringiensis</i> var. <i>tennebrionus</i> (Trident II)	2 to 4 tbsp	0	For Colorado potato beetle only. Treat when small larvae are present. Not effective against adults or large larvae.
		carbaryl (Sevin) 50 WP 5 D	2 tbsp —	3	Treat when most Colorado potato beetle eggs have hatched.
		spinosad (Naturalyte) 0.5% F	4 tbs	1	
	Flea beetle	carbaryl (Sevin) 50 WP 5 D	2 tbsp —	3	On foliage as needed. Flea beetles are most serious on small plants.
		malathion (various) 50% EC	2 tsp	3	
	Lace bug, spider mite, and white fly	malathion (various) 50% EC	2 tsp	3	On foliage as needed.
		pyrellin EC	1 to 2 tsp	0	On foliage as needed.
soap (insecticidal, M-Pede) 49 EC		2 tbsp	0	On foliage as needed.	
LETTUCE	Aphid	malathion (various) 57 EC	2 tsp	14 leaf, 7 head	On foliage as needed.
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	On foliage as needed.
		pyrellin EC	1 to 2 tsp	0	On foliage as needed.
	Cabbage looper, corn earworm, and leafhopper	<i>Bacillus thuringiensis</i> (DiPel) 2X (Javelin) WG	1 tbsp 1 tsp	0	On foliage as needed.
		pyrellin EC	1 to 2 tsp	0	On foliage as needed.
		spinosad (Naturalyte) 0.5% F	4 tbsp	1	On foliage as needed.
	Leafhopper	malathion (various) 57 EC	2 tsp	14 leaf, 7 head	On foliage as needed.
MUSTARD GREENS	Aphid, Flea beetle	malathion (various) 57 EC	2 tsp	7	On foliage as needed.
		pyrellin EC	1 to 2 tsp	0	On foliage as needed.
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	On foliage as needed.
	Cabbage looper, diamondback moth, and imported cabbageworm	<i>Bacillus thuringiensis</i> (DiPel) 2X (Javelin) WG	1 tbsp 2 tsp	0	Begin foliage treatments early and repeat as necessary.
		pyrellin EC	1 to 2 tsp	0	
		spinosad (Naturalyte) 0.5% F	4 tbsp	1	
Vegetable weevil	pyrellin EC	1 to 2 tsp	0	On foliage as needed.	
OKRA	Aphid and leafminer	pyrellin EC	1 to 2 tsp	0	
	Corn earworm, European corn borer, flea beetle, and stink bug	carbaryl (Sevin) 50 WP	4 tbsp	1	
		malathion (various) 50% EC	2 tsp	1	
ONION	Onion thrips	pyrellin EC	1 to 2 tsp	0	
		lambda-cyhalothrin (Triazicide) 0.5% EC	1 tbsp	14	
		malathion (various) 50% EC	1 to 2 tsp	3 (Green)	
		pyrellin EC	1 to 2 tsp	0	
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	
PEAS	Aphid and leafminer	pyrellin EC	1 to 2 tsp	0	
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	
	Cowpea curculio	endosulfan (Thiodan) 50 WP	2 tbsp	3	Treat at first bloom and at 5-day intervals as needed. Three applications of Thiodan per season.
PEPPER	Aphid and thrips	esfenvalerate (Ortho) 0.425% EC	2 tbsp	1	
		malathion (various) 50% EC	1 tbsp	3	
		pyrellin EC	1 to 2 tsp	0	
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	

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PEPPER (continued)	European corn borer, flea beetle, tomato fruitworm, hornworm, and stink bug	carbaryl (Sevin) 50 WP 5 D	4 tbsp —	3	
		cyfluthrin (Bayer Advanced) 0.75%	1 tbsp	7	
		esfenvalerate (Ortho) 0.425%	2 tbsp	1	
		permethrin (various brands) 2.5% EC	2 fl oz	3	
		spinosad (Naturalyte) 0.5% F	4 tbsp	1	
POTATO, Irish	Aphid	diazinon (Spectracide) 25 EC	1 tsp	35	On foliage as needed.
		malathion (various) 50% EC	1 tsp	0	
		pyrellin EC	1 to 2 tsp	0	
	European corn borer	carbaryl (Sevin) 50 WP 5 D	2 tbsp —	0	Apply when eggs begin to hatch and every 5 days as needed.
		esfenvalerate (Ortho) 0.425% EC	2 tbsp	1	
	Potato leafhopper, potato flea beetle, Colorado potato beetle, blister beetle, and stink bug	<i>Bacillus thuringiensis</i> var. <i>san diego</i> (M-Trak) var. <i>tennebrionus</i> (Trident II)	1.5 to 3 tbsp 2 to 4 tbsp	0	For Colorado potato beetle only. Treat when small larvae are present. Not effective against adults or large larvae.
		carbaryl (Sevin) 50 WP 80 S XLR Plus 5 D	2 tbsp 1.25 tbsp 2 tsp —	0	On foliage as needed. Treat when most Colorado potato beetle eggs have hatched.
		phosmet (Imidan) 50 WP	2 tbsp	7	
	Potato tuberworm	<i>Bacillus thuringiensis</i> (DiPel) 2X 4L	1 tbsp 2 tsp	0	
carbaryl (Sevin) 50 WP 80 S XLR Plus 5 D		3 tbsp 2 tbsp 2 tsp —	0	Treat 10 and 3 days before harvest or when foliage or tuber damage is noted. Do not leave dug potatoes exposed in the field over night. Practice sanitation in storage.	
esfenvalerate (Ortho) 0.425% EC		2 tbsp	1		
PUMPKIN	See SQUASH AND PUMPKIN				
RADISH	Aphid	malathion (various) 50% EC	2 tsp	7	On foliage as needed.
		pyrellin EC	1 to 2 tsp	0	On foliage as needed.
	Flea beetle and imported cabbageworm	cyfluthrin (Bayer Advanced) 0.75%	1 tbsp	0	
SPINACH	Aphid, thrips, and leafminer	pyrellin EC	1 to 2 tsp	0	On foliage as needed.
		soap (insecticidal, M-Pede) 49 EC	2 tsp	0	On foliage as needed.
	Corn earworm and loopers	<i>Bacillus thuringiensis</i> (Dipel) 2X 4L	1 tbsp 2 tbsp	0	
		spinosad (Naturalyte) 0.5%	4 tbsp	1	
SQUASH PUMPKIN	Aphid	pyrellin EC	1 to 2 tsp	0	
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	
	Cucumber beetle (spotted and striped), flea beetle, and leafhopper	esfenvalerate (Ortho) 0.425%	2 tbsp	3	
		pyrellin EC	1 to 2 tsp	0	
	Leafminer	diazinon (Spectracide) 25 EC	2 tsp	7 summer 3 winter	
	Pickleworm	esfenvalerate (Ortho) 0.425%	2 tbsp	3	
		spinosad (Naturalyte) 0.5% F	4 tbsp	3	
	Squash bug	malathion (various) 50% EC	2 tsp	1	
pyrellin EC		1 to 2 tsp	0		
Squash vine borer	pyrellin EC	1 to 2 tsp	0		

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TOMATO	Aphid	malathion (various) 50% EC	2 tsp	1		
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0		
		pyrethrin EC	1 to 2 tsp	0		
	Cutworm (surface type)	esfenvalerate (Ortho) 0.425% EC	2 tbsp	1		
	Flea beetle and Colorado potato beetle	<i>Bacillus thuringiensis</i> var. <i>san diego</i> (M-Trak) var. <i>tennebrionus</i> (Trident II)	1.5 to 3 tbsp 2 to 4 tbsp	0		For Colorado potato beetle only. Treat when small larvae are present. Not effective against adults or large larvae.
		carbaryl (Sevin) 50 WP 5 D	2 tbsp —	3		On foliage as needed.
		spinosad (Naturalyte) 0.5%	4 tbsp	1		
	Spider mite	dicofol (Kelthane) 4 EC	1 to 1.5	2		
		malathion (various) 50% EC	2 tsp	1		On foliage as needed.
		soap (insecticidal, M-Pede)49 EC	2 tbsp	0		On foliage as needed.
		pyrethrin EC	1 to 2 tsp	0		On foliage as needed.
	Stink bug	cyfluthrin (Bayer Advanced) 0.75%	1 tbsp	7		Do not make more than 6 applications per season.
		lambda-cyhalothrin (Triazicide) 0.5%	1 tbsp	5		
		malathion (various) 50% EC	2 tsp	1		
		permethrin (various brands) 2.5% EC	1.5 fl oz	7		Do not apply on cherry tomatoes or varieties less than 1 inch in diameter.
		pyrethrin EC	1 to 2 tsp	0		
	Thrips	pyrethrin EC	1 to 2 tsp	0		
		soap (insecticidal, M-Pede)49 EC	2 tbsp	0		
	Tomato fruitworm, cabbage looper, tobacco hornworm	<i>Bacillus thuringiensis</i> (DiPel) 2X 4 L (Javelin) WG (Biobit) FC	1 tbsp 2 tsp 2 tsp 1 to 3 tsp	0		Treat weekly, if necessary. Begin when fruits are 0.5 in. in diameter. Fruitworms are most serious after August 1. Do not tank mix <i>B.t.</i> formulations with Dyrene.
		carbaryl (Sevin) 50 WP 5 D	4 tbsp —	3		
		cyfluthrin (Bayer Advanced) 0.75%	1 tbsp	7		Do not make more than 6 applications per season.
		esfenvalerate (Ortho) 0.425%	2 tbsp	1		
		lambda-cyhalothrin (Triazicide) 0.5%	1 tbsp	5		
permethrin (various brands) 2.5% EC		1.5 fl oz	7		Do not apply on cherry tomatoes or varieties less than 1 inch in diameter.	
spinosad (Naturalyte) 0.5% F		4 tbsp	1			
Whitefly		<i>Beauveria bassiana</i> (Mycotrol WP)	1/4 lb / 20 gal water	0		Apply when whiteflies observed. Repeat in 4- to 5-day intervals.
	malathion (various) 50% EC	2 tsp	1			
	pyrethrin EC	1 to 2 tsp	0			
	pyrethrum products	Follow label	0			
	soap (insecticidal, M-Pede) 49 EC	2 tbsp	0			
TURNIP, TURNIP GREENS	Aphid, flea beetle	pyrethrin EC	1 to 2 tsp	0		
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0		
	Cabbage looper, diamondback moth, imported cabbageworm	<i>Bacillus thuringiensis</i> (DiPel) 2X (Javelin) WG	1 tbsp 2 tsp	0		On foliage as needed.
		spinosad (Naturalyte) 0.5% F	4 tbsp	1		
Harlequin bug	pyrethrin EC	1 to 2 tsp	0		On foliage as needed.	
Vegetable weevil	pyrethrin EC	1 to 2 tsp	0		On foliage as needed.	
WATERMELON	Aphid	pyrethrin EC	1 to 2 tsp	0	On foliage as needed.	
		soap (insecticidal, M-Pede) 49 EC	2 tbsp	0	On foliage as needed.	
	Cucumber beetle (spotted and striped)	esfenvalerate (Ortho) 0.425% EC	2 tbsp	3		
		malathion (various) 50% EC	2 tsp	1		
	Spider mite	dicofol (Kelthane) 4 EC	1 to 1.5 tbsp	2		On foliage as needed.
		pyrethrin EC	1 to 2 tsp	0		
	Thrips	soap (insecticidal, M-Pede) 49 EC	2 tbsp	0		
		carbaryl (Sevin) 50 WP	2 tbsp	3		
		malathion (various) 50% EC	2 tsp	1		
		pyrethrin EC	1 to 2 tsp	0		
soap (insecticidal, M-Pede) 49 EC	2 tbsp	0				