

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
ASPARAGUS	Asparagus beetle	carbaryl		1.0-4.0	When damage occurs.		1
		Sevin XLR	1-4 qt				
		Sevin 4F	1-4 qt				
		chlorpyrifos		1.0			
		Lorsban 4E	2 pt				
		malathion		1.25			
		Malathion 57% EC	2 pt				
	methomyl (R)		0.45-0.9				
	Lannate 2.4 LV	1.5-3 pt					
	Lannate 90 SP	1/2-1 lb					
permethrin (R)		0.05-0.1					
Pounce 3.2 EC	2-4 oz						
Ambush 25 WP							
spinosad		0.062-0.094		For protection of ferns only.	60		
(SpinTor) 2 SC	4-6 oz						
Beet armyworm	methomyl (R)		0.45-0.9	When damage occurs.	1		
	Lannate 2.4 LV	1 1/2-3 pt					
	Lannate 90 SP	1/2-1 lb					
	chlorantraniliprole		0.045-0.065	Do not use an adjuvant with Coragen.	1		
Coragen 1.67 SC	3.5-7.5 oz						
<i>Bacillus thuringiensis</i>	See label for rates.			0			
	Biobit, Dipel, Javelin, etc.						
BEANS (snap or lima)	Seedcorn maggot	Commercial seed protectant (Lorsban)		Use according to label.	Seed treatment only. Maggot damage can be reduced by early spring plowing that reduces plant residue prior to planting.		
		phorate (R)		7.6	Distribute 4.5-7.0 oz of the granules evenly in 1,000 row feet to the side of the seed at planting time (30-in. row min).	Do not feed foliage of treated beans within 60 days of treatment. Do not place Thimet in contact with seed.	
	Thimet 20G						
	Bean leaf beetle, Mexican bean beetle	acephate		0.5	Do not feed treated vines.	14 (snap) 0 (lima)	
		Orthene 75S	2/3 lb				
		bifenthrin (R)		0.04-0.1		3	
		Brigade 2 EC	2.6-6.4 fl oz				
		carbaryl		0.5-1	When damage occurs.	0	
	Sevin XLR	1/2-1 qt					
	Sevin 4F	1/2-1 qt					
chlorantraniliprole + λ-cyhalothrin (R)				7			
Voliam Xpress	6-9 fl oz						
esfenvalerate (R)		0.015-0.03	Asana is not registered on lima beans.	3			
Asana XL 0.66 EC	2.9-5.8 oz						

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BEANS (snap or lima)	Bean leaf beetle, Mexican bean beetle	γ-cyhalothrin Proaxis 0.5EC	1.92-3.2 oz	0.0075- 0.0125			7
		λ-cyhalothrin Karate Z	1.28-1.92 oz	0.02-0.03			7
		malathion Malathion 57% EC	2 pt	1.25			1
		methomyl (R) Lannate 90 SP	0.5 lb	0.45			1
		thiamethoxam Actara 25 WDG					Follow label directions.
		ζ-cypermethrin (R) Mustang Max 0.8 EC	3.2-4.0 oz	0.02-0.025	32-40		
		Corn earworm	acephate Orthene 75S	1-1 1/3 lb	0.75-1.0	Not effective when bean pods are larger than 3 inches.	In spring planted snap bean, scouting (300 sweeps per 50 acres) can be used to reduce insecticide applications.
		bifenthrin (R) Brigade 2 EC	2.6-6.4 fl oz	0.04-0.1			
		carbaryl Sevin 5% D	40 lb	2.0	When first pods are 1 inch long and weekly thereafter.	Fall planted snap bean will generally require corn earworm management.	0
		chlorantraniliprole Coragen 1.67 SC	3.5-5 oz	0.045-0.065			1
		chlorantraniliprole + λ-cyhalothrin (R) Voliam Xpress	6-9 fl oz				7
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05		Do not feed treated vines. Asana not registered on lima beans.	3
		flubendiamide Belt SC	2-3 oz				1 (green/edible beans) 14 (dry beans)
		γ-cyhalothrin Proaxis 0.5EC	2.56-3.84 oz	0.01-0.015			7
		λ-cyhalothrin Karate Z	1.28-1.92 oz	0.02-0.03			7
	methomyl (R) Lannate 90 SP Lannate 2.4 LV	0.5 lb 1 1/2 pt	0.45			1	
	spinetoram Radiant 1 SC	4-8 oz	0.03-0.063			3	
	ζ-cypermethrin (R) Mustang Max 0.8 EC	3.2-4.0 oz	0.02-0.025	32-40		1	
	ζ-cypermethrin + bifenthrin Hero	10.3 oz	0.1			3	

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BEANS (snap or lima) (cont.)	Cabbage looper	<i>Bacillus thuringiensis</i> Agree WG		2		Loopers rarely require management on Arkansas snap bean.			
		acephate Orthene 75S	1-1 1/3 lb	0.75-1.0	When damage occurs.				
		chlorantraniliprole + λ-cyhalothrin (R) Voliam Xpress	6-9 fl oz				7		
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05			14 (snap) 0 (lima)		
		flubendiamide Belt SC	2-3 oz				1 (green/edible beans) 14 (dry beans)		
		methomyl (R) Lannate 90 SP Lannate 2.4 LV	0.5-1 lb 1 1/2-3 pt	0.45-0.9			3 (succulent beans) 0 (lima)		
		European corn borer	acephate Orthene 75S	1-1 1/3 lb	0.75-1.0			Corn borers rarely require management on Arkansas snap bean.	7 (snap) 3
			chlorantraniliprole Coragen 1.67 SC	3.5-5 oz	0.045-0.065				1
			flubendiamide Belt SC	2-3 oz					1 (green/edible beans) 14 (dry beans)
			ζ-cypermethrin + bifenthrin Hero	10.3 oz	0.1				
Mite	bifenthrin (R) Brigade 2 EC	2.6-6.4 fl oz	0.04-0.1			3			
	dicofol Dicofol 4E	1-3 pt	0.5-1.5			7			
	dimethoate Dimethoate 400 Dimethoate 4EC	1 pt 1 pt	0.5			0			
Stink bug	bifenthrin (R) Brigade 2 EC	2.6-6.4 fl oz	0.04-0.1						
	λ-cyhalothrin Karate Z	1.28-1.92 oz	0.02-0.03			7			
	ζ-cypermethrin (R) Mustang Max 0.8 EC	3.2-4.0 oz	0.02-0.025	32-40					
	ζ-cypermethrin + bifenthrin Hero	10.3 oz	0.1						

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BEETS	Flea beetle, webworm	β-cyfluthrin Baythroid XL	see label	see label			0
		carbaryl Sevin 4F Sevin XLR Plus	1 qt 1 qt	1.0	When insects appear in damaging numbers.		3
		imidacloprid Provado 1.6 F	3.75 oz	0.047			7
		ζ-cypermethrin (R) Mustang Max 0.8 EC	1.8-4.0 oz	0.011-0.025			1
CARROTS	Flea beetle, celery worm leafhopper	β-cyfluthrin + imidacloprid Leverage 360	2.8 oz				7
		carbaryl Sevin 4F Sevin XLR Plus	1 qt 1 qt	1.0	When insects appear in damaging numbers.	Avoid application when foliage is wet.	0
		imidacloprid Provado 1.6 F	3.75 oz	0.047			7
		malathion Malathion 57% EC	2.5 pt	1.56	Use only for leafhoppers.		7
		ζ-cypermethrin (R) Mustang Max 0.8 EC	1.8-4.0 oz	0.011-0.025			1
COLE CROPS (Broccoli, Brussels sprouts, cabbage, cauliflower)	Cutworm	β-cyfluthrin Baythroid XL	0.8-1.6 oz				0
		bifenthrin (R) Brigade 2 EC				Follow label directions.	3
		cypermethrin Ammo 2.5 EC				Follow label directions.	
		diazinon (R) Diazinon AG500 Diazinon AG600 WBC	2-4 qt 51-102 fl oz	2.0-4.0	Broadcast just before planting and incorporate.		
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05	Apply at base of plants.	Use as needed.	
		ζ-cypermethrin (R) Mustang Max 0.8 EC	3.2-4.0 oz	0.02-0.025			1
	Caterpillars (cabbage looper, diamondback, imported and cross-striped cabbage worm)	<i>Bacillus thuringiensis</i> (Dipel, Javelin, Agree)	2.1-6.4 fl oz	0.033-0.01	Check label.	Slow acting but works well.	0
		β-cyfluthrin + imidacloprid Leverage 360 bifenthrin (R) Brigade 2 EC	3 oz 2.6-6.4 fl oz	0.04-0.1		Follow label directions.	7

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COLE CROPS (Broccoli, Brussels sprouts, cabbage, cauliflower) (cont.)	Caterpillars (cabbage looper, diamondback, imported and cross-striped cabbage worm)	chlorantraniliprole Coragen 1.67 SC	3.5-5.0 fl oz	0.045-0.065	When insects appear.		3		
		endosulfan Thionex 3 EC	1-1 1/3 qt	0.75-1.0			7 (broccoli) 7 (cabbage)		
		Thionex 50 WP	1 1/2-2 lb				14 (Brussels sprouts & cauliflower)		
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05		Do not feed treated plants to livestock.	3		
		flubendiamide Synapse WG	2 oz				1		
		λ-cyhalothrin (R) Karate Z	2.56-3.84 fl oz	0.02-0.03			1		
		methomyl (R) Lannate 2.4 LV Lannate SP	1/2-3 pt 1/2-1 lb	0.45-0.9	Apply when cabbage loopers are small.		1 (cabbage) 3 (broccoli, Brussels sprouts & cauliflower)		
		methoxyfenozide Intrepid 2F	4-8 oz	0.06-0.12			1		
		permethrin (R) Ambush 25 W Ambush 2.0 EC Pounce 3.2 EC Pounce 25 WP	3.2-12.8 oz 3.2-12.8 oz 2-8 oz 3.2-12.8 oz	0.2-0.5			1		
		spinosad SpinTor 2 SC	1.5-10 fl oz	0.023-0.156					
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12					
		ζ-cypermethrin (R) Mustang Max 0.8 EC	2.24-4.0 oz	0.014-0.025			1		
		ζ-cypermethrin + bifenthrin Hero	10.3 oz	0.1			7		
		Harlequin bug, stink bug		bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.038-0.10			3
				β-cyfluthrin + imidacloprid Leverage 360	3 oz				7
carbaryl Sevin XLR Plus Sevin 4F						Follow label directions.			
endosulfan Thionex 50 WP Thionex 3 EC						Follow label directions.			

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COLE CROPS (Broccoli, Brussels sprouts, cabbage, cauliflower)	Aphids	β-cyfluthrin + imidacloprid Leverage 360	3 oz				7
		bifenthrin (R) Brigade 2 EC	2.6-6.4 fl oz	0.04-0.1			7
		chlorpyrifos Lorsban 50 W	2 lb	1.0			28 (cauliflower) 35 (cabbage) 21 (broccoli)
		disulfoton (R) Di-Syston 8	1 pt	1.0		Apply at planting time.	42
		endosulfan Thionex 3 EC Thionex 50 WP	1-1 1/3 qt 1 1/2-2 lb	0.75-1.0		When needed.	2
		imidacloprid Provado 1.6 F	3.75 oz	0.047			7
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			
		ξ-cypermethrin (R) Mustang Max 0.8 EC	2.24-4.0 oz	0.014-0.025			1
		ξ-cypermethrin + bifenthrin Hero	10.3 oz	0.1			3
CUCURBITS (Cantaloupe, pumpkin, squash and watermelon)	Cucumber beetle, darkling beetle	β-cyfluthrin Baythroid XL	2.4-2.8 oz				0
		bifenthrin (R) Brigade 2 EC	2.6-6.4 fl oz	0.04-0.1			3
		carbaryl Sevin XLR Plus Sevin 4F	1 qt 1 qt	1.0	When insects first appear.	Sevin is highly toxic to honeybees. Avoid excessive applications. Do not apply when foliage is wet.	0
		imidacloprid Admire 2 F	16-24 fl oz	0.25-0.375		Admire applied into soil is highly effective against cucumber beetles and can reduce seedling loss.	21
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			
		methomyl (R) Lannate 2.4 LV Lannate SP	1 1/2-3 pt 1/2-1 lb	0.45-0.9		Use on cucumbers and squash only. No more than 3 applications/season.	1 (lower rate) 3 (higher rate)
		ξ-cypermethrin (R) Mustang Max 0.8 EC	3.28-4.0 oz	0.0175-0.025			
		ξ-cypermethrin + bifenthrin Hero	10.3 oz	0.1			

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CUCURBITS (Cantaloupe, pumpkin, squash and watermelon) (cont.)	Pickleworm, squash bug	bifenthrin (R) Brigade 2 EC	2.6-6.4 fl oz	0.04-0.1		Bifenthrin is the only registered insecticide that provides moderate control of squash bug.		
		β-cyfluthrin Baythroid XL	1.6-2.4 oz				0	
		carbaryl Sevin XLR Plus Sevin 4F	1 qt 1 qt	1.0	When insects or damage first appears.	Avoid excessive applications. Do not apply when foliage is wet.	0	
		endosulfan Thionex 50 WP Thionex 3 EC	1-2 lb 1 1/3-2 2/3 pt	0.5-1.0	When feeding is noticed.		2	
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05		Asana may cause some phytotoxicity to zucchini squash.	3	
		flubendiamide Synapse WG	2-3 oz				1	
		λ-cyhalothrin (R) Karate Z	1.28-1.92 oz	0.02-0.03				
		permethrin (R) Ambush 2.0 Pounce 3.2	6.4-12.8 oz 4-8 oz	0.1-0.2	When insects or damage first appear.		0	
		spinosad SpinTor 2 SC	4-6 oz	0.062-0.094		Follow label directions.		
		ζ-cypermethrin + bifenthrin Hero	10.3 oz	0.1				
		Aphids	endosulfan Thionex 3 EC Thionex 50 WP	1 1/3-2 2/3 pt 1-2 lb	0.5-1.0			Aphid
			malathion Malathion 57% EC 5 lb/gal	1 1/2 pt	1.0	When insects first appear.	Do not apply unless plants are dry. Pumpkins 3 days before harvest.	
Mite	abamectin Agri-Mek 0.15EC	8-16 oz	0.0094- 0.01875	When mites first appear	Do not apply unless plants are dry. Pumpkins 3 days before harvest.	7		
	diazinon (R) Diazinon AG500 Diazinon AG600	1-1 1/2 pt 12 3/4-19 oz	0.5-0.75	When mites first appear.	Do not apply to melons or winter squash within 3 days or summer squash within 7 days of harvest. Do not use higher rates (above 0.5 lb ai/ac) on cucumber.	3-7		
	dicofol Dicofol 4E	3/4 pt	0.375					
	spiromesifen Oberon 2 SC	7-8.5 oz				7		

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CUCURBITS (Melons, cucumbers and summer squash)	Flea beetle, tobacco budworm, beet armyworm	β-cyfluthrin Baythroid XL	1.6-2.4 oz 2.4-2.8 oz		tobacco budworm armyworm		0 0	
		methomyl (R) Lannate 2.4 LV Lannate SP	1 1/2-3 pt 1/2-1 lb	0.45-0.9	When insects first appear.	One day up to 2 pt, over 2 pt 3 days.	1-3	
		spinosad SpinTor 2 SC	4-8 fl oz					
		Whitefly	bifenthrin (R) Brigade 2 EC			Follow label directions.	Insecticide use will not effectively reduce high populations of whiteflies. Use of imidacloprid against low numbers has proven effective. Removal of alternate host plants (weeds) along with field plowing immediately after harvest aids in population suppression.	1
		chlorantraniliprole Coragen 1.67 SC	5-7 fl oz	0.065-0.09				
		imidacloprid Provado 1.6 F			Follow label directions.			
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz					
			thiomethoxam Actara 25 WDG			Follow label directions.		
	CUCUMBERS	Aphid	bifenthrin (R) Brigade 2 EC	2.6-6.4 fl oz	0.04-0.1			
			endosulfan Thionex 3 EC Thionex 50 WP	2/3-1 1/3 pt 1-2 lb	0.5-1.0			2
flonicamid Beleaf 50 SG			2.0-2.8 oz	0.026-0.69			0	
malathion Malathion 57% EC			1 1/2 pt	0.5	Apply when needed.		1	
ζ-cypermethrin (R) Mustang Max 0.8 EC			3.2-4.0	0.02-0.025			1	
ζ-cypermethrin + bifenthrin Hero			10.3 oz	0.1			3	
Cucumber beetle, blister beetle			β-cyfluthrin Baythroid XL	2.4-2.8 oz				0
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05	Apply when needed.		3	
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz					
		methomyl (R) Lannate 2.4 LV Lannate SP	1 1/2-3 pt 1/2-1 lb	0.45-0.9	1 day for 0.45 lb ai; 3 days if over 0.45 lb ai.		3	

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CUCUMBERS (cont.)	Squash bug	bifenthrin (R) Brigade 2 EC	2.6-6.4 fl oz	0.04-0.1		Bifenthrin is the only registered insecticide that provides moderate but effective control of squash bug.	3	
		carbaryl Sevin XLR Plus Sevin 4F	1 qt 1 qt	1.0			0	
		endosulfan Thionex 3 EC Thionex 50 WP	1 1/3-2 2/3 pt 1-2 lb	0.5-1.0			2	
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05			3	
	Pickleworm	β-cyfluthrin Baythroid XL	1-6-2.4 oz					0
		bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1				3
		carbaryl Sevin XLR Plus Sevin 4F	1 qt 1 lb	1.0		Apply to foliage as needed.		0
		endosulfan Thionex 3 EC Thionex 50 WP	1 1/3-2 2/3 pt 1-2 lb	0.5-1.0				2
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05				3
		flubendiamide Synapse WG	2-3 oz					1
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz					
		methomyl (R) Lannate 2.4 LV Lannate SP	1 1/2-3 pt 1/2-1 lb	0.45-0.9				3
		spinosad SpinTor 2 SC	4-6 oz	0.062-0.094			Follow label directions.	
		Mite	bifenthrin (R) Brigade 2 EC	6.4 oz	0.1			
	dicofol Dicofol 4E		3/4 pt	0.375				2
	spiromesifen Oberon 2 SC		7-8.5 oz					7

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EGGPLANT	Flea beetle, Colorado potato beetle	β-cyfluthrin Baythroid XL	see label				7
		β-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz				7
		bifenthrin (R) Brigade 2 EC	2.1-6.4 fl oz	0.033-0.1			7
		carbaryl Sevin XLR Plus Sevin 4F	1/2-2 qt 1/2-2 qt	0.5-2.0			
		esfenvalerate (R) Asana XL 0.66 EC	4.8-9.6 oz	0.025-0.05			0
		imidacloprid Admire Pro 4.6 F	7-10.5 oz	0.25-0.375	Soil application.		
		imidacloprid Provado 1.6 F	3.75 oz	0.047	Foliar application		7
		ζ-cypermethrin (R) Mustang Max 0.8 EC	2.24-4.0 oz	0.014-0.025			1
	Earworm, blister beetle, aphid	β-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz				7
		bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1			7
		endosulfan Thionex 3 EC Thionex 50 WP	2/3-1 1/3 qt 1-2 lb	0.5-1.0	When insects first appear.	Coverage of upper and lower leaf surface is essential.	
		imidacloprid Provado 1.6 F	3.75 oz	0.047			7
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz				
		spinosad SpinTor 2 SC	3-8 fl oz	0.047-0.125			
		ζ-cypermethrin (R) Mustang Max 0.8 EC	2.24-4.0 oz	0.014-0.025		Aphid control may be variable depending on species present.	1
Mite	spiromesifen Oberon 2 SC	7-8.5 oz				7	
	Vendex 50 WP (R)	2-3 lb	1.0-1.5				
Leafminer	permethrin (R) Ambush 2.0 EC Pounce 3.2 EC	6-12 oz 4-8 oz	0.1-0.2				
	spinosad SpinTor 2 SC	6-8 oz			Follow label directions.		

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EGGPLANT (cont.)	Lep. larvae	β-cyfluthrin Baythroid XL	see label				7
		β-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz				7
		chlorantraniliprole Coragen 1.67 SC	3.5-5.0 fl oz	0.045-0.065			1
		flubendiamide Synapse WG	2-3 oz				1
		methoxyfenozide Intrepid 2F	4-16 fl oz	0.06-0.25			1
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12			
GREENS (collards)	Caterpillars	<i>Bacillus thuringiensis</i>					
		β-cyfluthrin Baythroid XL	see label				0
		β-cyfluthrin + imidacloprid Leverage 360	3 oz				7
		chlorantraniliprole Coragen 1.67 SC	3.5-5.0 fl oz	0.045-0.065			3
		esfenvalerate (R) Asana XL 0.66EC	5.8-9.6 oz	0.03-0.05			
		flubendiamide Synapse WG	2 oz				1
		indoxacarb Avaunt 30 WDG	2.5-3.5 oz	0.047-0.065			3
		permethrin (R) Ambush 2.0 EC Pounce 3.2 EC	3.2-6.4 oz 2-4 oz	0.05-0.1			1
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12			
		ζ-cypermethrin (R) Mustang Max 0.8 EC	2.24-4.0 oz	0.014-0.025			1
		GREENS (kale and mustard)	Caterpillars	<i>Bacillus thuringiensis</i>			
β-cyfluthrin Baythroid XL	see label						0
β-cyfluthrin + imidacloprid Leverage 360	3 oz						7
chlorantraniliprole Coragen 1.67 SC	3.5-5.0 fl oz			0.045-0.065			1

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
GREENS (kale and mustard)	Caterpillars	cypermethrin Ammo 2.5 EC	2.5-5.0 oz	0.05-0.1			
		flubendiamide Synapse WG	2 oz				1
		methoxyfenozide Intrepid 2F	4-8 fl oz	0.06-0.125			1
		spinosad SpinTor 2 SC	3-6 oz	0.047-0.094			1
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12			
		ξ-cypermethrin (R) Mustang Max 0.8 EC	2.24-4.0 oz	0.014-0.025			1
		GREENS (turnips)	Caterpillars	<i>Bacillus thuringiensis</i>			
β-cyfluthrin Baythroid XL	see label						7
β-cyfluthrin + imidacloprid Leverage 360	3 oz						1
flubendiamide Synapse WG	2 oz						
permethrin (R) Pounce 3.2 EC	2-4 oz			0.05-0.1			
spinosad SpinTor 2 SC	3-6 oz			0.047-0.094			
tebufenozide Confirm 2F	6-8 fl oz			0.09-0.12			
ξ-cypermethrin (R) Mustang Max 0.8 EC	3.2-4.0 oz			0.02-0.025			1
OKRA	Aphids			malathion Malathion 57% EC 5 lb/gal	1 1/2 pt	0.9	
		imidacloprid Provado 1.6 F	3.75 oz	0.047			7
		Corn earworm	bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1		
		flubendiamide Synapse WG	2-3 oz				1
		spinosad SpinTor 2 SC	3-6 oz	0.047-0.094			1

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
ONIONS	Thrips	encapsulated methyl parathion (R) PennCap-M	2 pt	0.5		Do not apply when onions are blooming to avoid injury to bees.	15
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz				
		malathion Malathion 57% EC	1 1/2 pt	0.9		Highly toxic to honeybees.	3
		ξ-cypermethrin (R) Mustang Max 0.8 EC	2.24-4.0 oz	0.014-0.025			7
PEAS (Garden or English)	Aphids	esfenvalerate (R) Asana XL 0.66 EC	2.9-5.8 oz	0.03-0.05			3
		imidacloprid Provado 1.6 F	3.75 oz	0.047			7
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz				
		malathion Malathion 57% EC 5 lb/gal	1 1/2-2 pt	0.9-1.25	When insects appear.	Seven days if forage is to be fed to livestock.	3
PEPPERS	Cutworm	bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1			7
		diazinon (R) Diazinon AG600 Diazinon 50 WP Diazinon AG500	51-102 oz 4-8 lb 2-4 qt	2.0-4.0	When damage appears. Broadcast prior to planting and work into soil 3-6 inches.		
		flubendiamide Synapse WG	2-3 oz				1
		λ-cyhalothrin (R) Karate Z	0.96-1.6 fl oz				
		ξ-cypermethrin (R) Mustang Max 0.8 EC	1.28-4.0 oz	0.008-0.025			1
		ξ-cypermethrin + bifenthrin Hero	10.3 oz	0.1			7
		Flea beetle, Colorado potato beetle, earworm, European corn borer, hornworm	acephate Orthene 75S	1-1 1/3 lb	0.75-1.0	Bell only.	
		β-cyfluthrin Baythroid XL	1.6-2.8 oz				7
		β-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz				7
		bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1			7

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
PEPPERS	Flea beetle, Colorado potato beetle, earworm, European corn borer, hornworm	carbaryl		0.5-2.0	When insects appear.	Harvest within 1 day if 1 1/3 pt 3 EC or 1 lb 50 WP per acre is used.	0
		Sevin 4F	1/2-2 qt				
		Sevin XLR Plus	1/2-2 qt				
		chlorantraniliprole		0.045-0.065			1
		Coragen 1.67 SC	3.5-5.0 fl oz				
		endosulfan		0.5-1.0			4
		Thionex 3 EC	2/3-1 1/3 qt				
		Thionex 50 WP	1-2 lb				
		esfenvalerate (R)		0.03-0.05			7
		Asana XL 0.66 EC	5.8-9.6				
		λ-cyhalothrin (R)					
		Karate Z	1.28-1.92 fl oz				
	permethrin (R)		0.1-0.2	3			
	Pounce 3.2 EC	4-8 oz					
	spinosad		0.047-0.125				
	SpinTor 2 SC	3-8 fl oz					
	ζ-cypermethrin (R)		0.014-0.025	1			
	Mustang Max 0.8 EC	2.24-4.0 oz					
ζ-cypermethrin + bifenthrin		0.04-0.1	7				
Hero	4.0-10.3 oz						
Aphids		acephate		0.5-1.0	Use low rate on non-bell peppers.		7
		Orthene 75S	2/3-1 1/3 lb				
		β-cyfluthrin + imidacloprid					7
		Leverage 360	3.8-4.1 oz				
		dimethoate		0.25-0.33			0
		Dimethoate 400	1/2-2/3 pt				
		Dimethoate 4EC	1/2-2/3 pt				
		Dimethoate 5 lb	6.4-8.4 oz				
		flonicamid		0.026-0.69			0
		Beleaf 50 SG	2.0-2.8 oz				
		imidacloprid		0.047			7
		Provado 1.6 F	3.75 oz				
methomyl (R)		0.45	3				
Lannate 2.4 LV	1 1/2 pt						
Lannate SP	1/2 lb						
ζ-cypermethrin (R)		0.02-0.025	Aphid control may be variable.	1			
Mustang Max 0.8 EC	3.2-4.0 oz						
ζ-cypermethrin + bifenthrin		0.1					
Hero	10.3 oz						

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest			
PEPPERS (cont.)	Lep. larvae	bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1			7			
		β-cyfluthrin Baythroid XL	1.6-2.8 oz				7			
		β-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz	7						
		flubendiamide Synapse WG	2-3 oz	1						
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.06-0.25			1			
		methoxyfenozide Intrepid 2F	4-16 fl oz							
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12			1			
		ζ-cypermethrin (R) Mustang Max 0.8 EC	2.24-4.0 oz	0.014-0.025						
		ζ-cypermethrin + bifenthrin Hero	4.0-10.3 oz	0.4-0.1						
		Mite	Agri-Mek 0.15EC (R)	8-16 oz			0.0094- 0.01875		Use only two times per season. Only on bell peppers.	7
			spiromesifen Oberon 2 SC	7-8.5 oz						
	POTATOES (white or Irish)	Colorado potato beetle, potato leaf hopper, flea beetle	β-cyfluthrin Baythroid XL	1.6-2.8 oz				0		
β-cyfluthrin + imidacloprid Leverage 360			2.8 oz	7						
carbaryl Sevin 4F Sevin XLR Plus			1/2-2 qt 1/2-2 qt	0.5-2.0				When insects first appear.	0	
endosulfan Thionex 3 EC Thionex 50 WP			2/3-1 1/3 qt 1-2 lb	0.5-1.0				When feeding is noticed.	7	
esfenvalerate (R) Asana XL 0.66 EC			5.8-9.6 oz	0.03-0.05						
imidacloprid Provado 1.6 F			3.75 oz	0.047				7		
λ-cyhalothrin (R) Karate Z			1.28-1.92 fl oz	0.75-1.0				14		
methamidophos (R) Monitor 4 EC			1 1/2-2 pt							

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
POTATOES (white or Irish)	Colorado potato beetle, potato leaf hopper, flea beetle	permethrin (R)				Apply no more than 12 applications. Do not graze or feed foliage.	7
		Ambush 25 WP	3.2-12.8 oz	0.05-0.2			
		Ambush 2.0 EC	3.2-12.8 oz	0.05-0.2			
		Pounce 3.2 EC	4-8 oz	0.1-0.2			
		spinosad		0.047			
		SpinTor 2 SC	3-6 fl oz				
		ζ-cypermethrin (R)			0.02-0.025		1
		Mustang Max 0.8 EC	3.2-4.0 oz				
	Aphids	β-cyfluthrin + imidacloprid					7
		Leverage 360	2.8 oz				
		endosulfan			0.5-1.0		0
		Thionex 3 EC	2/3-1 1/3 qt				
		Thionex 50 WP	1-2 lb				
		flonicamid			0.026-0.69		7
		Beleaf 50 SG	2.0-2.8 oz				
imidacloprid				0.047		7	
Provado 1.6 F	3.75 oz						
malathion	Malathion 57% EC	1-1 1/2 pt		0.6-0.9		0	
	ζ-cypermethrin (R)			0.02-0.025		1	
	Mustang Max 0.8 EC	3.2-4.0 oz					
Wireworm	bifenthrin (R)				See label directions.		
	Capture LFR						
	diazinon (R)			2-4	Broadcast just before planting and work into soil 4-8 inches.		
	Diazinon 50 W	4-8 lb					
Diazinon AG600	51-102 oz						
Diazinon AG500	2-4 qt						
phorate (R)	Thimet 20G	11.0-17.7 lb		2.0-3.0	Distribute granules evenly in furrow or band on each side of row at planting or sidedress postemergence. Sandy soils use low rate.	90	
RADISHES	Flea beetle	β-cyfluthrin					0
		Baythroid XL	1.6-2.8 oz				
		β-cyfluthrin + imidacloprid					7
		Leverage 360	2.4-2.8 oz				
		carbaryl			0.5-1.0	When insects appear in damaging numbers.	3
		Sevin 4F	1/2-1 qt				
Sevin XLR Plus	1/2-1 qt						
esfenvalerate (R)	Asana XL 0.66 EC	5.8-9.6 oz		0.03-0.05		7	
	imidacloprid			0.047		7	
	Provado 1.6 F	3.75 oz					

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
RADISHES (cont.)	Aphids	β-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz				7	
		imidacloprid Provado 1.6 F	3.75 oz	0.047			7	
		malathion Malathion 57% EC	1-2 pt	0.6-1.25	When insects appear in damaging numbers.		7	
SOUTHERN PEAS	Cowpea aphid	β-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz				7	
		bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.03-0.1			3	
		imidacloprid Admire Pro 4.6 F	7.0-10.5 fl oz	0.25-0.37		Soil application	21	
		imidacloprid Provado 1.6 F	3.75 oz	0.047			7	
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz					
		malathion Malathion 57% EC 5 lb/gal	1 1/2-2 pt	0.9-1.25			3 (picking) 7 (vines)	
		methomyl (R) Lannate 1.8 LV Lannate SP	1 1/3-3 pt 1/2-1 pt	0.4-0.9		Do not apply more than 4.5 lb ai/acre/crop.	3	
		ζ-cypermethrin (R) Mustang Max 0.8 EC	3.2-4.0 oz	0.02-0.025		Aphid control may be variable.	1	
		Bean leaf beetle	β-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz				7
			bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1			3
carbaryl Sevin 4F Sevin XLR Plus	1/2-1 qt 1/2-1 qt		0.5-1.0	Plant early. Apply treatment to prevent defoliation.		0		
λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz							
ζ-cypermethrin (R) Mustang Max 0.8 EC	2.24-4.0 oz		0.014-0.025			1		
Corn earworm	β-cyfluthrin Baythroid XL	1.6-2.1 oz				3		
	β-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz				7		
	bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1			3		

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
SOUTHERN PEAS	Corn earworm	esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05		Do not feed vines.	21	
		flubendiamide Belt SC	2-3 oz				14 (dry peas & beans)	
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz					
		ζ-cypermethrin (R) Mustang Max 0.8 EC	2.24-4.0 oz	0.014-0.025			1	
	Cowpea curculio	β-cyfluthrin Baythroid XL	2-3 oz				3	
		β-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz				7	
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05			21	
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz					
		ζ-cypermethrin (R) Mustang Max 0.8 EC	2.24-4.0 oz	0.014-0.025			1	
	European corn borer	β-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz				7	
spinosad SpinTor 2 SC		4-6 fl oz	0.062-0.094					
SPINACH	Aphids, plant bug, leafhopper, leafminer	acetamiprid Assail 70WP	0.8-1.2 oz	0.035-0.054			7	
		β-cyfluthrin + imidacloprid Leverage 360	3 oz				7	
		dimethoate Dimethoate 400 Dimethoate 4 EC Dimethoate 5 lb	1/2 pt 1/2 pt 6.4 oz	0.25			Effectiveness of dimethoate is reduced when aphid colonies are established.	14
		dinotefuran Venom 70 SG	1-4 oz foliar 5-6 oz soil	0.045-0.179 0.226-0.268				7 21
		endosulfan Thionex 3 EC Thionex 50 WP	1-1 1/3 qt 1 1/2-2 lb	0.75-1.0		When insects appear.	Aphid resurgence may occur within the PHI (21 days).	21
		flonicamid Beleaf 50 SG	2.0-2.8 oz	0.026-0.69				7
		imidacloprid Admire Pro 4.6 F	4.4-10.5 fl oz	0.158-0.337			Soil application	21

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest		
SPINACH (cont.)	Aphids, plant bug, leafhopper, leafminer	imidacloprid Provado 1.6 F	3.75 oz	0.047		Imidacloprid should only be used with an aphid scouting program. Apply only when aphid numbers exceed the threshold.	7		
		ζ-cypermethrin (R) Mustang Max 0.8 EC	3.2-4.0 oz	0.02-0.025			1		
	Lep. larvae	<i>Bacillus thuringiensis</i>	Follow label directions.						
		β-cyfluthrin Baythroid XL	2.4-3.2 oz					0	
		β-cyfluthrin + imidacloprid Leverage 360	3 oz					7	
		bifenthrin (R) Brigade 2 EC	2.1-6.4 oz		0.033-0.1		Pyrethroid use against Leps. can result in increases in aphid populations.	40	
		chlorantraniliprole Coragen 1.67 SC	3.5-5.0 fl oz		0.045-0.065			1	
		flubendiamide Synapse WG	2-3 oz					1	
		methomyl (R) Lannate 2.4 LV Lannate SP	1 1/2-3 pt 1/2-1 lb		0.45-0.9	When insects appear or as needed to keep crop free of insects. Not labeled on corn earworm.		7	
		methoxyfenozide Intrepid 2F	4-8 oz		0.06-0.12			1	
		permethrin (R) Ambush 2.0 EC Ambush 25 WP Pounce 3.2 EC	6.4-12.8 oz 6.4-12.8 oz 4-8 oz		0.1-0.2			7	
		spinosad SpinTor 2 SC	3-6 fl oz		0.047-0.094				
		tebufenozide Confirm 2F	6-8 fl oz		0.09-0.12				
		thiodicarb (R) Larvin 3.2	24-30 oz		0.6-0.75			14	
		ζ-cypermethrin (R) Mustang Max 0.8 EC	3.2-4.0 oz		0.02-0.025			1	
		SUMMER SQUASH	Melonworm, pickleworm	β-cyfluthrin Baythroid XL	1.6-2.4 oz				0
				endosulfan Thionex 3 EC Thionex 50 WP	2/3-1 1/3 qt 1-2 lb		0.5-1.0	When larvae appear.	
				esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz		0.03-0.05		Do not apply to zucchini squash.

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
SUMMER SQUASH	Melonworm, pickleworm	flubendiamide Synapse WG	2-3 oz				1	
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz					
		methomyl (R) Lannate 2.4 LV Lannate SP	1 1/2-3 pt 1/2-1 lb	0.45-0.9			3	
		spinosad SpinTor 2 SC	4-8 fl oz	0.062-0.125				
	Cabbage looper	β-cyfluthrin Baythroid XL	1.6-2.4 oz				0	
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05		Repeat as necessary to maintain control.	3	
		flubendiamide Synapse WG	2-3 oz				1	
		methomyl (R) Lannate 2.4 LV Lannate SP	1 1/2-3 pt 1/2-1 lb	0.45-0.9			3	
	Squash bug	bifenthrin (R) Brigade 2 EC	2.6-6.4 oz		0.04-0.1		Bifenthrin is the only registered insecticide that provides moderate but effective control of squash bug.	3
		endosulfan Thionex 3 EC Thionex 50 WP	1 1/3-2 2/3 pt 1-2 lb		0.5-1.0			0
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz		0.03-0.05		Do not exceed 0.25 lb ai per acre per season. Do not apply to zucchini as injury may result.	3
	Cucumber beetle	β-cyfluthrin Baythroid XL	2.4-2.8 oz					0
imidacloprid Admire Pro 4.6 F		7.0-10.5 oz		0.25-0.375			21	
λ-cyhalothrin (R) Karate Z		1.28-1.92 fl oz						
methomyl (R) Lannate 2.4 LV Lannate SP		1 1/2-3 pt 1/2-1 lb	0.45-0.9		Do not apply before plants start to vine and unless plants are dry.	3		
Squash vine borer	endosulfan Thionex 3 EC Thionex 50 WP	2/3-1 1/3 qt 1-2 lb		0.5-1.0		Preventative measure. Nothing is very effective once borer is in stem.	0	
	esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz		0.03-0.05			3	
	flubendiamide Synapse WG	2-3 oz					1	

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
SWEET CORN	Cutworm, rootworm, seed corn maggot, white grub, wireworm	β -cyfluthrin Baythroid XL	0.8-1.6 oz			Cutworms only.	0
		bifenthrin (R) Capture LFR	0.39-0.44 oz/ 1,000 ft row	0.08-0.1	Apply in 5- to 7-inch band or in furow ahead of press wheel. Compatible with liquid fertilizers.	3	
		chlorpyrifos Lorsban 15G	6.75-13.5 lb	1.0-2.0	Banded, T-banded or in furrow (8-16 oz/1,000 row ft) at planting. Preplant broadcast (6.75-13.5 lb/A). Postemergence band (3.5-8 oz/1,000 row ft) or postemergence broadcast (5.0-6.5 lb/A).		
		tefluthrin (R) Force 3G	2.5-5.5 lb	0.075-0.165	Banded, T-banded or in furrow at planting (4-5 oz/1,000 row ft) or banded and covered postemergence.		
		ζ -cypermethrin + bifenthrin Hero	2.6-6.1 oz	0.025-0.05		3	
	Flea beetle	β -cyfluthrin Baythroid XL	0.8-1.6 oz				0
		carbaryl Sevin 4F Sevin XLR Plus	1-2 qt 1-2 qt	1.0-2.0	When damage appears.	0	
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05		1	
		ζ -cypermethrin (R) Mustang Max 0.8 EC	2.72-4.0 oz	0.017-0.025		3	
	Corn earworm	β -cyfluthrin Baythroid XL	1.6-2.8 oz				0
bifenthrin (R) Brigade 2 EC		2.1-6.4 fl oz	0.033-0.1	When larvae are found.			
carbaryl Sevin 4F Sevin XLR		1-2 qt 1-2 qt	1.0-2.0		0		
esfenvalerate (R) Asana XL 0.66 EC		5.8-9.6 oz	0.03-0.05		1		
λ -cyhalothrin (R) Karate Z		1.28-1.92 fl oz					
methomyl (R) Lannate 2.4 LV Lannate SP		1-1 1/2 pt 1/3-1/2 lb	0.3-0.45		0 (ears) 3 (forage)		

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest		
SWEET CORN	Corn earworm	permethrin (R) Ambush 2.0 EC	6.4-12.8 oz	0.1-0.2			1		
		Ambush 25 WP	6.4-12.8 oz						
		spinosad SpinTor 2 SC	3-6 fl oz	0.047-0.094					
		thiodicarb (R) Larvin 3.2	20-30 oz	0.5-0.75				0	
		ζ-cypermethrin (R) Mustang Max 0.8 EC	2.24-4.0 oz	0.014-0.025				3	
	Whorl feeder, fall armyworm, corn earworm	β-cyfluthrin Baythroid XL	1.6-2.8 oz					0	
		bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1		Follow label directions.			
		carbaryl Sevin 4F Sevin XLR Plus	1-2 qt 1-2 qt	1.0-2.0	Apply when needed.	Plants will tolerate a great deal of feeding with no yield loss.		0	
		carbofuran Furadan LFR	1 pt	0.5				7	
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05				1	
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz						
		methomyl (R) Lannate 2.4 LV Lannate SP	1-1 1/2 pt 1/3-1/2 pt	0.03-0.45				3	
		spinosad SpinTor 2 SC	6-8 oz			Follow label directions.			
		ζ-cypermethrin (R) Mustang Max 0.8 EC	3.2-4.0 oz	0.02-0.025				3	
		ζ-cypermethrin + bifenthrin Hero	4.0-10.3 oz	0.04-0.1				3	
		European corn borer, southwestern corn borer	carbaryl Sevin 4F Sevin XLR Plus	1 1/2-2 qt 1 1/2-2 qt	1.5-2.0	When 50% of plants show rows of tiny pinholes in leaves (feeding signs).	Use high volume sprays directed into whorls.		0
			esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05				1
			methomyl (R) Lannate 2.4 LV Lannate SP	1/2 lb 1/2 lb	0.45		Lannate not labeled on southwestern corn borer.		0 (ears) 3 (forage)
			spinosad SpinTor 2 SC	1.5-6.0 fl oz	0.023-0.094				
			thiodicarb (R) Larvin 3.2	20-30 oz	0.05-0.75				0

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
SWEET POTATO	Flea beetle, tortoise beetle	β-cyfluthrin Baythroid XL	1.6-2.8 oz				0
		β-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz				7
		bifenthrin (R) Brigade 2 EC	9.6-19.2 fl oz	0.15-0.3		Follow label directions.	21
		carbaryl Sevin 4F Sevin XLR Plus	1-2 qt 1-2 qt	1.0-2.0		When damage occurs on leaves as needed.	0
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz				
		spinosad SpinTor 2 SC	3-6 fl oz	0.047-0.094			
	Wireworm and other soil insects	bifenthrin (R) Capture LFR				See label directions.	
		chlorpyrifos Lorsban 4 EC Lorsban 15G	4 pt 13.5 lb	2.0		Apply broadcast. Preplant and incorporate. Apply Lorsban 15G prior to planting, broadcast and incorporate.	
	Sweet potato weevil	β-cyfluthrin Baythroid XL	1.6-2.8 oz				0
		β-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz				7
		carbaryl Sevin 4F Sevin XLR Plus	2.6 oz/gal 2.6 oz/gal			Use as a preplant dip for sweet potato weevil. Just prior to planting, dip sweet potato cuttings in the suspension.	
		λ-cyhalothrin (R) Karate Z	1.28-1.92 fl oz				
phosmet Imidan 5% dust		2-4 oz/50 lb bu stored			One application.		
TOMATO	Fruitworm, hornworm	<i>Bacillus thuringiensis</i>			Check label.	Recommended for tomato hornworms only. Does not control fruitworms.	
		β-cyfluthrin Baythroid XL	1.6-2.8 oz			0	
		β-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz			0	
		bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1		1	

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
TOMATO	Fruitworm, hornworm	carbaryl		1.0-2.0			0	
		Sevin 4F	1-2 qt					
		Sevin XLR Plus	1-2 qt					
		chlorantraniliprole			0.045-0.065			1
		Coragen 1.67 SC	3.5-5.0 fl oz					
		esfenvalerate (R)			0.03-0.05			1
		Asana XL 0.66 EC	5.8-9.6 oz					
		flubendiamide						1
		Synapse WG	2-3 oz					
		λ-cyhalothrin (R)				Five-day intervals.		5
		Karate Z	1.28-1.92 fl oz					
		methomyl (R)			0.45-0.9		<i>Bacillus thuringiensis</i> 1/2 lb/A may be used in combination with methomyl. Other areas have had good results.	
		Lannate 2.4 LV	1 1/2-3 pt					
		Lannate SP	1/2-1 pt					
methoxyfenozide			0.06-0.25			1		
Intrepid 2F	4-16 oz							
spinosad			0.047-0.125					
SpinTor 2 SC	3-8 fl oz							
tebufenozide			0.09-0.12					
Confirm 2F	6-8 fl oz							
ξ-cypermethrin (R)			0.014-0.025			1		
Mustang Max 0.8 EC	2.24-4.0 oz							
ξ-cypermethrin + bifenthrin			0.04-0.1			1		
Hero	4.0-10.3 oz							
Cabbage looper	<i>Bacillus thuringiensis</i> Dipel, Javelin Biobit Agree			Check label.				
		esfenvalerate (R)		0.03-0.05			2	
		Asana XL 0.66 EC	5.8-9.6 oz					
		flubendiamide					1	
		Synapse WG	2-3 oz					
		methomyl (R)			0.45-0.9	Apply on foliage as needed when loopers are small. Methomyl is preferred treatment.		1
Lannate 2.4 LV	1 1/2-3 pt							
Lannate SP	1/2-1 lb							
tebufenozide			0.09-0.12			1		
Confirm 2F	6-8 fl oz							

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
TOMATO (cont.)	Colorado potato beetle, flea beetle, stink bug	β-cyfluthrin			2.8 oz for flea beetles		0	
		Baythroid XL	1.6-2.8 oz					
		β-cyfluthrin + imidacloprid						0
		Leverage 360	3.8-4.1 oz					
		bifenthrin (R)			0.033-0.1			1
		Brigade 2 EC	2.1-6.4 oz					
		carbaryl			1.0-2.0	Apply on foliage as needed.		0
		Sevin 4F	1-2 qt					
		Sevin XLR Plus	1-2 qt					
		imidacloprid			0.047			7
	Provado 1.6 F	3.75 oz				Follow label directions.		
	spinosad							
	SpinTor 2 SC	3-6 oz						
	ζ-cypermethrin (R)			0.02-0.025			1	
	Mustang Max 0.8 EC	3.2-4.0 oz						
	ζ-cypermethrin + bifenthrin			0.04-0.1			1	
	Hero	4.0-10.3 oz						
	Leaf miner, aphids	abamectin			0.009-0.019	20 gal of water/acre required.	Mites, leafminers, pinworms, potato beetle.	7
		Agri-Mek 0.15 EC	8-16 oz				Follow label directions.	
		acetamiprid						
Assail 30 SG							0	
β-cyfluthrin + imidacloprid								
Leverage 360		3.8-4.1 oz						
bifenthrin (R)				0.033-0.1			1	
Brigade 2 EC		2.1-6.4 oz						
dimethoate				0.25-0.5			7	
Dimethoate 400		1/2-1 pt						
Dimethoate 4EC	1/2-1 pt							
Dimethoate 5 lb	6.4-12.8 oz							
esfenvalerate (R)			0.05		Use 5.8-9.6 oz of Asana per acre for aphids.	1		
Asana XL 0.66 EC	9.6 oz							
imidacloprid			0.047			7		
Provado 1.6 F	3.75 oz							
malathion					Follow label directions.			
methomyl (R)			0.45-0.9		Aphids only.	0		
Lannate 2.4 LV	1 1/2-3 pt							
Lannate SP	1/2-1 lb							
ζ-cypermethrin (R)			0.02-0.025		Aphid control may be variable.	1		
Mustang Max 0.8 EC	3.2-4.0 oz							
ζ-cypermethrin + bifenthrin			0.04-0.1			1		
Hero	4.0-10.3 oz							

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
TOMATO	Cutworm	β-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz				0
		bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1			1
		bifenthrin (R) Capture LFR	0.29-0.39 oz/ 1,000 ft row or 3.4-6.8 oz/A	0.04-0.08	Apply in 5- to 7-inch band or in furrow ahead of press wheel. Compatible with liquid fertilizers.		30
		carbaryl Sevin 4F Sevin XLR Plus	2 qt 2 qt	2.0	Apply to soil surface 2-3 days prior to transplanting or when damage occurs.		0
		diazinon Diazinon AG500 Diazinon 50 W Diazinon AG600C	2-4 qt 4-8 lb 51-102 oz	2.0-4.0	Broadcast to soil surface just prior to planting. Incorporate into soil 3-6 inches immediately. Mix in a minimum of 5 gal of water per acre.		1
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05	Broadcast prior to planting and work into soil 4-8 inches.		1
		flubendiamide Synapse WG	2-3 oz				1
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12			
		ζ-cypermethrin (R) Mustang Max 0.8 EC	1.28-4.0 oz	0.008-0.025			1
		ζ-cypermethrin + bifenthrin Hero	10.3 oz	0.1			1
	Wireworms	bifenthrin (R) Capture LFR	0.29-0.39 oz/ 1,000 ft row or 3.4-6.8 oz/A	0.04-0.08	Apply in 5- to 7-inch band or in furrow ahead of press wheel. Compatible with liquid fertilizers.		30
		diazinon (R) Diazinon 50W Diazinon AG600 Diazinon AG500	6-8 lb 76 1/2-102 oz 3-4 qt	3.0-4.0	Broadcast prior to planting and immediately work into soil 4-8 inches.		
	Spider mites	abamectin Agri-Mek 0.15 EC	1 1/2 qt	0.0094-0.019	Do not apply Agri-Mek in less than 20 gallons of water per acre.		7
bifenthrin (R) Brigade 2 EC					Follow label directions.	1	
dicofol Dicofol 4E		3/4-1 1/2 pt	0.375-0.75	Spray when damaging numbers are present.		2	
spiromesifen Oberon 2 SC		7-8.5 oz				1	

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation/ Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
TOMATO (cont.)	Pinworm	abamectin (R) Agri-Mek 0.15 EC	1 pt	0.019				
		β-cyfluthrin Baythroid XL	2.1-2.8 oz		2.8 oz for flea beetles.		0	
		β-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz				0	
		esfenvalerate Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05		Do not exceed 0.5 lb ai/acre/season.	1	
		γ-cyhalothrin Proaxis 0.5 EC				Follow label directions.		
		indoxacarb Avaunt 30 DG				Follow label directions.		
		methomyl (R) Lannate LV Lannate SP	1 1/2-3 pt 1/2-1 lb	0.45-0.9		All are alternatives. Check dosage on label.	0	
	No-Mate Spiral Bioinsecticide				Read product label.	Comes in a plastic coil that is wrapped around tomato vines or support stakes.		
	Thrips	β-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz					0
		bifenthrin (R) Brigade 2 EC	2.1-5.2 oz	0.033-0.08				1
imidacloprid Provado 1.6 F						Follow label directions.		
VEGETABLES (See labels for specific crops)	Red Imported Fire Ant	ALL FIRE ANT BAITS – Apply when ants are active and soil temperature is above 60°F. Do not treat if rain is anticipated within 6 hours.						
		S-Methoprene Extinguish	3-5 Tbsp/mound 1.0-1.5 lb/A		Mound-to-mound treatment rate. Broadcast rate.	This product is an insect growth regulator (IGR). Apply 3 to 4 weeks prior to harvest date.		
		pyriproxyfen Esteem	2-4 Tbsp/mound 1.5-2.0 lb/A		Mound-to-mound treatment rate. Broadcast rate.	This product is an insect growth regulator (IGR).		
		spinosad Eliminator Fire Ant Bait Green Light Fire Ant Control Ortho Fire Ant Bait Safer Fire Ant Bait	4-6 Tbsp/mound 2.5-5.0 lb/A		Mound-to-mound treatment rate. Broadcast rate	See label for specific rate and application instructions. Acceptable for organic production.		