

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest		
ASPARAGUS	Asparagus beetle	carbaryl		1.0	When damage occurs.	DO NOT apply during bloom.	1		
		Sevin XLR	1 qt						
		Sevin 4F	1 qt						
		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 25 WP	3.2-6.4 oz							
spinosad		0.062-0.094		For protection of ferns only.	60				
	SpinTor 2 SC	4-6 oz							
Beet armyworm	methomyl (R)	Lannate 2.4 LV	1 1/2-3 pt	0.45-0.9	When damage occurs.		1		
		Lannate 90 SP	1/2-1 lb						
	chlorantraniliprole		0.045-0.065		DO NOT use an adjuvant with Coragen.	1			
	Coragen 1.67 SC	3.5-5 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) Thimet 20G		7.6	Distribute 4.5-7.0 oz of the granules evenly in 1,000 row feet over the top of the row at planting time (30-inch row minimum).	DO NOT feed foliage of treated beans. DO NOT place Thimet in contact with seed.			
	Bean leaf beetle, Mexican bean beetle	bifenthrin (R) Brigade 2 EC	2.6-6.4 fl oz	0.04-0.1				3	
		carbaryl		0.5-1	When damage occurs.	DO NOT apply during bloom.	3		
		Sevin XLR	1/2-1 qt						
		Sevin 4F	1/2-1 qt						
		esfenvalerate (R) Asana XL 0.66 EC	2.9-5.8 oz	0.015-0.03				Asana is not registered on lima beans.	3
		gamma-cyhalothrin Proaxis 0.5EC	2.56-3.84 oz	0.01-0.015					7
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 oz	0.02-0.03					7
		methomyl (R) Lannate 90 SP	0.5 lb	0.45					1
zeta-cypermethrin (R) Mustang Maxx 0.8 EC	3.2-4.0 oz	0.02-0.025		1					

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BEANS (snap or lima) (cont.)	Corn earworm	bifenthrin (R) Brigade 2 EC	2.6-6.4 fl oz	0.04-0.1		In spring planted snap bean, scouting (300 sweeps per 50 acres) can be used to reduce insecticide applications.	3	
		carbaryl Sevin 5% D	40 lb	2.0	When first pods are 1 inch long and weekly thereafter.	Fall-planted snap beans will generally require corn earworm management. DO NOT apply during bloom.	3	
		chlorantraniliprole Coragen 1.67 SC	3.5-5 oz	0.045-0.065			1	
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05		DO NOT feed treated vines. Asana is not registered on lima beans.	3	
		flubendiamide Belt SC	2-3 oz	0.0625-0.094			1 (green/edible beans) 14 (dry beans)	
		gamma-cyhalothrin Proaxis 0.5EC	2.56-3.84 oz	0.01-0.015			7	
		lambda-cyhalothrin (R) 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	
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	3.2-4.0 oz	0.02-0.025			1	
		zeta-cypermethrin + bifenthrin Hero	10.3 oz	0.1			3	
		Cabbage looper	<i>Bacillus thuringiensis</i> Agree WG		2		Loopers rarely require management on Arkansas snap bean.	
			esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05		Asana is not registered on lima beans.	3
			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		

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BEANS (snap or lima)	European corn borer	chlorantraniliprole Coragen 1.67 SC	3.5-5 oz	0.045-0.065		Corn borers rarely require management on Arkansas snap bean.	1
		flubendiamide Belt SC	2-3 oz	0.0625-0.094			1 (green/edible beans) 14 (dry beans)
		zeta-cypermethrin + bifenthrin Hero	10.3 oz	0.1			3
	Mite	abamectin Agri-Mek SC	1.75-3.5 fl oz	0.01-0.05	For control of spider mites.		7
		bifenthrin (R) Brigade 2 EC	6.4 fl oz	0.1			3
		dicofol Dicofol 4E	1-3 pt	0.5-1.5		DO NOT apply more than once per season.	21
		dimethoate Dimethoate 4EC	1 pt	0.5			0
	Stink bug	bifenthrin (R) Brigade 2 EC	2.6-6.4 fl oz	0.04-0.1			3
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 oz	0.02-0.03			7
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	3.2-4.0 oz	0.02-0.025			1
zeta-cypermethrin + bifenthrin Hero		10.3 oz	0.1			3	
BEETS	Flea beetle, webworm	carbaryl Sevin 4F Sevin XLR Plus	1 qt 1 qt	1.0	When insects appear in damaging numbers.	DO NOT apply during bloom.	7
		imidacloprid Prey 1.6 F	3.5 oz	0.044			7
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	1.8-4.0 oz	0.011-0.025			1
CARROTS	Flea beetle, celery worm, leafhopper	beta-cyfluthrin + imidacloprid Leverage 360	2.8 oz	0.066			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. DO NOT apply during bloom.	7
		imidacloprid Prey 1.6 F	3.5 oz	0.044			7

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CARROTS (cont.)	Flea beetle, celery worm, leafhopper	malathion Malathion 57% EC	2 pt	1.25	Use only for leafhoppers.		7		
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	1.8-4.0 oz	0.011-0.025			1		
COLE CROPS (Broccoli, Brussels sprouts, cabbage and cauliflower)	Cutworm	beta-cyfluthrin Baythroid XL	0.8-1.6 oz	0.007-0.013			0		
		bifenthrin (R) Brigade 2 EC	2.1-6.4	0.033-0.01			Follow label directions.	7	
		cypermethrin Ammo 2.5 EC	2.5-5 oz	0.05-0.01			Follow label directions.	1	
		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.	3
		zeta-cypermethrin (R) Mustang Maxx 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)				Check label.	Slow acting but works well.	0	
		beta-cyfluthrin + imidacloprid Leverage 360	3 oz	0.07				7	
		bifenthrin (R) Brigade 2 EC	2.6-6.4 fl oz	0.04-0.1		Follow label directions.		7	
		chlorantraniliprole Coragen 1.67 SC Exirel 0.83	3.5-5.0 fl oz 7-12.8 fl oz	0.045-0.065				3	
		chlorantraniliprole + lambda-cyhalothrin (R) Voliam Xpress	6-9 oz	0.06-0.09				3	
		endosulfan Thionex 3 EC Thionex 50 WP	1-1 1/3 qt 1 1/2-2 lb	0.75-1.0		When insects appear.	DO NOT use on broccoli, Brussels sprouts or cauliflower.	17 (cabbage)	
	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 Belt SC Synapse WG	2-2.4 oz 3-5 oz	0.0625-0.075			8 1			

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COLE CROPS (Broccoli, Brussels sprouts, cabbage and cauliflower)	Caterpillars (cabbage looper, diamondback, imported and cross-striped cabbage worm)	lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03	Apply when cabbage loopers are small.		1	
		methomyl (R) Lannate 2.4 LV Lannate SP	1/2-3 pt 1/2-1 lb	0.45-0.9			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 25 WP	3.2-6.4 oz 3.2-12.8 oz 3.2-6.4 oz	0.05-0.1			1	
		spinosad SpinTor 2 SC	1.5-10 fl oz	0.023-0.156			1	
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12			7	
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.24-4.0 oz	0.014-0.025			1	
		zeta-cypermethrin + bifenthrin Hero	10.3 oz	0.1			7	
		Harlequin bug, stink bug	bifenthrin (R) Brigade 2 EC	2.1-6.4 oz			0.033-0.10	7
			beta-cyfluthrin + imidacloprid Leverage 360	3 oz			0.07	7
carbaryl Sevin XLR Plus Sevin 4F	1-2 qt 1-2 qt		1.2	Follow label directions. DO NOT apply during bloom.	14			
endosulfan Thionex 50 WP Thionex 3 EC	1 1/2-2 lb 1-1 1/3 qt		0.75-1.0	Follow label directions. DO NOT use on broccoli, Brussels sprouts or cauliflower.	17			
Aphids	beta-cyfluthrin + imidacloprid Leverage 360	3 oz	0.07	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	21				
	endosulfan Thionex 3 EC Thionex 50 WP	1-1 1/3 qt 1 1/2-2 lb	0.75-1.0	When needed.	2			

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COLE CROPS (Broccoli, Brussels sprouts, cabbage and cauliflower) (cont.)	Aphids	imidacloprid Prey 1.6 F	3.75 oz	0.047			7	
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			1	
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.24-4.0 oz	0.014-0.025			1	
		zeta-cypermethrin + bifenthrin Hero	10.3 oz	0.1			3	
CUCURBITS (Cantaloupe, pumpkin, squash and watermelon)	Cucumber beetle, darkling beetle	beta-cyfluthrin Baythroid XL	2.4-2.8 oz	0.019-0.022			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. DO NOT apply during bloom.	3	
		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	
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			1	
		malathion Malathion 5 EC	1.5-2.75 pt	0.94-1.7		Use no more than 1.5 pints on winter squash or pumpkins or 2 pints on watermelons.	1	
		methomyl (R) Lannate 2.4 LV Lannate SP	1 1/2-3 pt 1/2-1 lb	0.45-0.9		DO NOT use Lannate on pumpkins.	1 (lower rate) 3 (higher rate)	
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.8-4.0 oz	0.0175-0.025			1	
		zeta-cypermethrin + bifenthrin Hero	10.3 oz	0.1			3	
		Pickleworm, squash bug	beta-cyfluthrin Baythroid XL	1.6-2.4 oz	0.013-0.019			0
			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.	3
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. DO NOT apply during bloom.	3		

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CUCURBITS (Cantaloupe, pumpkin, squash and watermelon)	Pickleworm, squash bug	endosulfan Thionex 50 WP Thionex 3 EC	1-2 lb 2/3-1 1/3 pt	0.5-1.0	When feeding is noticed.		4 (melons, summer squash) 11 (pumpkins, winter squash)
		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 Belt SC Synapse WG	1.5 oz 3 oz	0.047		Belt and Synapse will not control squash bug.	1
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 oz	0.02-0.03			1
		permethrin (R) Ambush 2.0 EC Pounce 3.2 EC	6.4-12.8 oz 4-8 oz	0.1-0.2	When insects or damage first appear.		0
		spinosad SpinTor 2 SC	4-8 oz	0.062-0.125		Follow label directions. SpinTor does not control squash bug.	3
		zeta-cypermethrin + bifenthrin Hero	10.3 oz	0.1			3
		Aphids	endosulfan Thionex 3 EC Thionex 50 WP	2/3-1 1/3 pt 1-2 lb	0.5-1.0		4 (melons, summer squash) 11 (pumpkins, winter squash)
			flonicamid Beleaf 50 SC	2-2.8 oz	0.062-0.089		0
			thiamethoxam Actara 25 WDG	1.5-3 oz	0.02-0.047		0
	Mite	abamectin (R) Agri-Mek 0.7 SC	1.75-3.5 fl oz	0.0094- 0.01875	When mites first appear.	DO NOT apply unless plants are dry. Pumpkins 3 days before harvest.	7
		etoxazole Zeal 2.88 SC	4-6 fl oz	0.09-0.135		DO NOT make more than 1 application per season.	7
		spiromesifen Oberon 2 SC	7-8.5 oz	0.11-0.13			7
CUCURBITS (Melons, cucumbers and summer squash)	Flea beetle, tobacco budworm, beet armyworm	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. DO NOT apply to pumpkins.	1-3
		spinosad SpinTor 2 SC	4-8 fl oz	0.0625-0.125		Not labeled for flea beetle.	3

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CUCURBITS (Melons, cucumbers and summer squash) (cont.)	Whitefly	bifenthrin (R) Brigade 2 EC	5.12-6.4	0.08-0.1	Follow label directions.	Insecticide use will not effectively reduce high populations of whiteflies. Removal of alternate host plants (weeds) along with field plowing immediately after harvest aids in population suppression.	3	
		chlorantraniliprole Coragen 1.67 SC	5-7 fl oz	0.065-0.09	Use on nymphs only.		1	
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			1	
		thiomethoxam Actara 25 WDG	3-5.5 oz	0.047-0.086	Follow label directions.		0	
CUCUMBERS	Aphids	bifenthrin (R) Brigade 2 EC	2.6-6.4 fl oz	0.04-0.1			3	
		endosulfan Thionex 3 EC Thionex 50 WP	2/3-1 1/3 pt 1-2 lb	0.5-1.0			11	
		flonicamid Beleaf 50 SG	2.0-2.8 oz	0.062-0.089			0	
		thiamethoxam Actara 25 WDG	1.5-3.0 oz	0.02-0.047			0	
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	3.2-4.0	0.02-0.025			1	
		zeta-cypermethrin + bifenthrin Hero	10.3 oz	0.1			3	
		Cucumber beetle, blister beetle	beta-cyfluthrin Baythroid XL	2.4-2.8 oz	0.019-0.022			0
	esfenvalerate (R) Asana XL 0.66 EC		5.8-9.6 oz	0.03-0.05	Apply when needed.		3	
	lambda-cyhalothrin (R) Karate Z		1.28-1.92 fl oz	0.02-0.03			1	
	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.		1-3	
	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			DO NOT apply during bloom.	0

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CUCUMBERS (cont.)	Squash bug	endosulfan Thionex 3 EC Thionex 50 WP	2/3-1 1/3 pt 1-2 lb	0.5-1.0			11
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05			3
	Pickleworm	beta-cyfluthrin Baythroid XL	1-6-2.4 oz	0.013-0.019			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.	DO NOT apply during bloom.	0
		endosulfan Thionex 3 EC Thionex 50 WP	2/3-1 1/3 pt 1-2 lb	0.5-1.0			11
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05			3
		flubendiamide Belt SC Synapse WG	1.5 oz 3 oz	0.047			1
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			1
		methomyl (R) Lannate 2.4 LV Lannate SP	1 1/2-3 pt 1/2-1 lb	0.45-0.9			1-3
		spinosad SpinTor 2 SC	4-8 oz	0.062-0.125		Follow label directions.	1
		Mite	bifenthrin (R) Brigade 2 EC	6.4 oz	0.1		
	dicofol Dicofol 4E		1 1/4 pt	0.625		No more than 1 application per season.	2
	etoxazole Zeal 2.88 SC		4-6 fl oz	0.09-0.135		No more than 1 application per season.	7
	spiromesifen Oberon 2 SC		7-8.5 oz	0.11-0.13			7
EGGPLANT	Flea beetle, Colorado potato beetle	beta-cyfluthrin Baythroid XL	2.8 oz	0.022			7
		beta-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz	0.89-0.096			7

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EGGPLANT (cont.)	Flea beetle, Colorado potato beetle	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		DO NOT apply during bloom. Use higher rates for Colorado potato beetle.	3
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05			7
		imidacloprid Admire Pro 4.6 F	1.3-2.2 fl oz	0.05-0.08			0
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.24-4.0 oz	0.014-0.025			1
		Aphids	beta-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz	0.89-0.096		
		flonicamid Beleaf 50 SG	2.8-4.28 oz	0.089-0.133			0
		imidacloprid Admire Pro 4.6 F	1.3-2.2 fl oz	0.05-0.08			0
		thiamethoxam Actara 25 WDG	2-3 oz	0.03-0.047			0
	Mite	abamectin Agri-Mek 0.7 SC	1.75-3.5 fl oz	0.01-0.019		Must be mixed with an adjuvant.	7
		spiromesifen Oberon 2 SC	7-8.5 oz	0.11-0.13			1
		fenbutatin-oxide (R) Vendex 50 WP	2-3 lb	1.0-1.5			3
	Leafminer	permethrin (R) Ambush 2.0 EC Pounce 25 WP	6-12 oz 6.4-9.6 oz	0.1-0.2			3
		spinosad SpinTor 2 SC	6-8 oz	0.094-0.125		Follow label directions.	1
	Lep. larvae	beta-cyfluthrin Baythroid XL	1.6-2.8 oz	0.013-0.022		Use higher rates for loopers, pinworms and armyworms.	7
	beta-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz	0.89-0.096			7	
	chlorantraniliprole Coragen 1.67 SC Exirel 0.83	3.5-5.0 fl oz 7-12.8 fl oz	0.045-0.065			1	
	chlorantraniliprole + lambda-cyhalothrin (R) Voliam Xpress	6-9 oz	0.06-0.09			5	

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EGGPLANT	Lep. larvae	flubendiamide Belt SC Synapse WG	1.5 oz 3 oz	0.047			1
		methoxyfenozide Intrepid 2F	4-16 fl oz	0.06-0.25			1
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12			7
GREENS (collards)	Caterpillars	<i>Bacillus thuringiensis</i>					
		beta-cyfluthrin Baythroid XL	1.6-3.2 oz	0.013-0.025		Use higher rates for earworms, armyworms and European corn borers.	0
		beta-cyfluthrin + imidacloprid Leverage 360	3 oz	0.07			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			7
		flubendiamide Belt SC Synapse WG	1.5 oz 3 oz	0.047			1
		indoxacarb Avaunt 30 WDG	2.5-3.5 oz	0.045-0.065			3
		permethrin (R) Ambush 2.0 EC Pounce 25 WP	3.2-6.4 oz 3.2-9.6 oz	0.05-0.1			1
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12			7
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.24-4.0 oz	0.014-0.025			1
GREENS (kale and mustard)	Caterpillars	<i>Bacillus thuringiensis</i>					
		beta-cyfluthrin Baythroid XL	16-3.2 oz	0.013-0.025		Use higher rates for earworms and armyworms.	0
		beta-cyfluthrin + imidacloprid Leverage 360	3 oz	0.07			7
		chlorantraniliprole Coragen 1.67 SC	3.5-5.0 fl oz	0.045-0.065			3
		cypermethrin Ammo 2.5 EC	2.5-5.0 oz	0.05-0.1			1

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
GREENS (kale and mustard) (cont.)	Caterpillars	flubendiamide Synapse WG	2 oz	0.03			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			7
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.24-4.0 oz	0.014-0.025			1
GREENS (turnips)	Caterpillars	<i>Bacillus thuringiensis</i>					
		beta-cyfluthrin Baythroid XL	1.6-3.2 oz	0.013-0.025		Use higher rates for corn earworms and armyworms.	0
		beta-cyfluthrin + imidacloprid Leverage 360	3 oz	0.07			7
		flubendiamide Belt SC Synapse WG	1.5 oz 3 oz	0.047			1
		permethrin (R) Pounce 3.2 EC	2-4 oz	0.05-0.1			1
		spinosad SpinTor 2 SC	3-8 oz	0.047-0.125			1
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12			7
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	3.2-4.0 oz	0.02-0.025			1
OKRA	Aphids	flonicamid Beleaf 50 SC	2.8-4.28 oz	0.089-0.133			0
		imidacloprid Admire Pro 4.6 F	1.3-2.2 fl oz	0.05-0.08			0
	Corn earworm	bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1			7
		flubendiamide Belt SC Synapse WG	1.5 oz 3 oz	0.047			1
		spinosad SpinTor 2 SC	3-6 oz	0.047-0.094			1

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
ONION	Thrips	lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			14
		malathion Malathion 57% EC	1 1/2 pt	0.9		Highly toxic to honeybees.	3
		zeta-cypermethrin (R) Mustang Maxx 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	0.015-0.05			3
		imidacloprid Admire Pro 4.6F	1.2 fl oz	0.05			7
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			7
		malathion Malathion 57% EC 5 lb/gal	1 1/2 pt	0.9	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
		flubendiamide Belt SC Synapse WG	1.5 oz 3 oz	0.047			1
		lambda-cyhalothrin (R) Karate Z	0.96-1.6 fl oz	0.015-0.025			5
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	1.28-4.0 oz	0.008-0.025			1
		zeta-cypermethrin + bifenthrin Hero	10.3 oz	0.1			7
	Flea beetle, Colorado potato beetle, earworm, European corn borer, hornworm	beta-cyfluthrin Baythroid XL	1.6-2.8 oz	0.013-0.022			7
		beta-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz	0.89-0.096			7
		bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1			7
		carbaryl Sevin 4F Sevin XLR Plus	1-2 qt 1-2 qt	1.0-2.0	When insects appear.	DO NOT apply during bloom.	3
		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 Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
PEPPERS (cont.)	Flea beetle, Colorado potato beetle, earworm, European corn borer, hornworm	endosulfan Thionex 3 EC	2/3-1 1/3 qt	0.5-1.0			4
		Thionex 50 WP	1-2 lb				
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6	0.03-0.05			7
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			5
		permethrin (R) Pounce 25 WP	6.4-12.8 oz	0.1-0.2			3
		spinetoram Radiant 1 SC	5-10 fl oz	0.04-0.078			1
		spinosad SpinTor 2 SC	3-8 fl oz	0.047-0.125			1
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.24-4.0 oz	0.014-0.025			1
	zeta-cypermethrin + bifenthrin Hero	4.0-10.3 oz	0.04-0.1			7	
	Aphids	beta-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz	0.89-0.096			7
		flonicamid Beleaf 50 SG	2.0-2.8 oz	0.026-0.69			0
		imidacloprid Admire Pro 4.6F	1.2 fl oz	0.047			0
		methomyl (R) Lannate 2.4 LV Lannate SP	1 1/2 pt 1/2 lb	0.45			3
		thiamethoxam Actara 25 WDG	2-3 oz	0.033-0.047			0
	Lep. larvae	bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1			7
beta-cyfluthrin Baythroid XL		1.6-2.8 oz	0.013-0.022			7	
beta-cyfluthrin + imidacloprid Leverage 360		3.8-4.1 oz	0.89-0.096			7	
chlorantraniliprole + lambda-cyhalothrin (R) Voliam Xpress		6-9 oz	0.06-0.09			5	

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
PEPPERS (cont.)	Lep. larvae	flubendiamide Belt SC	1.5 oz	0.047			1
		Synapse WG	3 oz				
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			5
		methomyl (R) Lannate 2.4 LV Lannate 90 SP	1 1/2 pt 1/2 lb	0.45			3
		methoxyfenozide Intrepid 2F	4-16 fl oz	0.06-0.25			1
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12			7
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.24-4.0 oz	0.014-0.025			1
		zeta-cypermethrin + bifenthrin Hero	4.0-10.3 oz	0.4-0.1			7
	Mite	abamectin (R) Agri-Mek 0.7 SC	1.75-3.5 fl oz	0.0094- 0.01875		Use only two times per season.	7
		spiromesifen Oberon 2 SC	7-8.5 oz	0.11-0.13			1
POTATOES (white or Irish)	Colorado potato beetle, potato leafhopper, flea beetle	beta-cyfluthrin Baythroid XL	1.6-2.8 oz	0.013-0.022			0
		beta-cyfluthrin + imidacloprid Leverage 360	2.8 oz	0.066			7
		carbaryl Sevin 4F Sevin XLR Plus	1/2-2 qt 1/2-2 qt	0.5-2.0	When insects first appear.	DO NOT apply during bloom. Use higher rates on Colorado potato beetle.	7
		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			7
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			7
		permethrin (R) Ambush 25 WP Ambush 2.0 EC Pounce 25 WP	3.2-12.8 oz 3.2-12.8 oz 6.4-12.8 oz	0.05-0.2 0.05-0.2 0.1-0.2		Apply no more than 12 applications. DO NOT graze or feed foliage.	7

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
POTATOES (white or Irish) (cont.)	Colorado potato beetle, potato leafhopper, flea beetle	spinosad SpinTor 2 SC	3-6 fl oz	0.047-0.094			7	
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	3.2-4.0 oz	0.02-0.025			1	
	Aphids	beta-cyfluthrin + imidacloprid Leverage 360	2.8 oz	0.066				7
		endosulfan Thionex 3 EC Thionex 50 WP	2/3-1 1/3 qt 1-2 lb	0.5-1.0				7
		flonicamid Beleaf 50 SG	2.0-2.8 oz	0.026-0.69				7
		thiamethoxam Actara 25 WDG	3 oz	0.047				14
	Wireworm	bifenthrin (R) Capture LFR				See label directions.		
		phorate (R) Thimet 20G	8.5-17.3 lb			Distribute granules evenly in furrow or band on each side of row at planting or sidedress postemer-gence. Sandy soils use low rate.		90
	RADISHES	Flea beetle	beta-cyfluthrin Baythroid XL	1.6-2.8 oz	0.013-0.022			0
			beta-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz	0.056-0.066			
carbaryl Sevin 4F Sevin XLR Plus			1/2-1 qt 1/2-1 qt	0.5-1.0		When insects appear in damaging numbers.	DO NOT apply during bloom.	3
esfenvalerate (R) Asana XL 0.66 EC			5.8-9.6 oz	0.03-0.05				7
imidacloprid Admire Pro 4.6F			1.3 fl oz	0.044				7
Aphids		beta-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz	0.056-0.066				7
		imidacloprid Admire Pro 4.6F	1.3 fl oz	0.044				7
		malathion Malathion 57% EC	1 1/2 pt	1		When insects appear in damaging numbers.		7

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest		
SOUTHERN PEAS	Cowpea aphid	beta-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz	0.056-0.066			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 Admire Pro 4.6F	1.3 fl oz	0.044		Foliar application	7		
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			7		
		malathion Malathion 57% EC 5 lb/gal	1 1/2 pt	1			3		
		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 per acre per crop.	1	
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	3.2-4.0 oz	0.02-0.025			Aphid control may be variable.	1	
		Bean leaf beetle	beta-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz	0.056-0.066				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.	DO NOT apply during bloom. DO NOT use on succulent shelled peas (Group 6B).	3		
lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz		0.02-0.03				7		
zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.24-4.0 oz		0.014-0.025				1		
Corn earworm	beta-cyfluthrin Baythroid XL	1.6-2.1 oz	0.013-0.017				3		
	beta-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz	0.056-0.066				7		
	bifenthrin (R) Brigade 2 EC	2.1-6.4 oz	0.033-0.1				3		
	chlorantraniliprole Coragen 1.67 SC	3.5-5.0 oz	0.045-0.065				1		

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
SOUTHERN PEAS (cont.)	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	0.0625-0.094			14 (dry peas and beans)
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			7
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.24-4.0 oz	0.014-0.025			1
	Cowpea curculio	beta-cyfluthrin Baythroid XL	1.6-2.1 oz	0.013-0.017			3
		beta-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz	0.056-0.066			7
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05			21
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			7
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.24-4.0 oz	0.014-0.025			1
	European corn borer	beta-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz	0.056-0.066			7
		chlorantraniliprole Coragen 1.67 SC	3.5-5.0 oz	0.045-0.065			1
		spinosad SpinTor 2 SC	4-6 fl oz	0.062-0.094			3
	SPINACH	Aphids, plant bug, leafhopper, leafminer	acetamiprid Assail 70WP	0.8-1.2 oz	0.035-0.054		
beta-cyfluthrin + imidacloprid Leverage 360			3 oz	0.07			7
dimethoate Dimethoate 4 EC			1/2 pt	0.25		Effectiveness of dimethoate is reduced when aphid colonies are established.	14
dinotefuran Venom 70 SG			1-3 oz foliar 5-6 oz soil	0.044-0.131 0.219-0.263			7
flonicamid Beleaf 50 SG			2.0-2.8 oz	0.026-0.69			21
						0	

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
SPINACH (cont.)	Aphids, plant bug, leafhopper, leafminer	imidacloprid Admire Pro 4.6 F	4.4-10.5 fl oz	0.158-0.337		Soil application	21
		imidacloprid Admire Pro 4.6F	1.3 fl oz	0.047		Imidacloprid should only be used with an aphid scouting program. Apply only when aphid numbers exceed the threshold.	7
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	3.2-4.0 oz	0.02-0.025			1
	Lep. larvae	<i>Bacillus thuringiensis</i>	Follow label directions.				
		beta-cyfluthrin Baythroid XL	2.4-3.2 oz	0.019-0.025			0
		beta-cyfluthrin + imidacloprid Leverage 360	3 oz	0.07			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			3
		flubendiamide Belt SC Synapse WG	1.5 oz 3 oz	0.047			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.	DO NOT apply to seedlings less than 3 inches in diameter.	7
		methoxyfenozide Intrepid 2F	4-8 oz	0.06-0.12			1
		permethrin (R) Ambush 2.0 EC Ambush 25 WP Pounce 25 WP	6.4-12.8 oz 6.4-12.8 oz 6.4-12.8 oz	0.1-0.2			7
		spinosad SpinTor 2 SC	3-6 fl oz	0.047-0.094			1
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12			7
		thiodicarb (R) Larvin 3.2	24-30 oz	0.6-0.75			14
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	3.2-4.0 oz	0.02-0.025			1

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
SUMMER SQUASH	Melonworm, pickleworm	beta-cyfluthrin Baythroid XL	1.6-2.4 oz	0.013-0.019			0
		endosulfan Thionex 3 EC Thionex 50 WP	2/3-1 1/3 qt 1-2 lb	0.5-1.0	When larvae appear.		4
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05		DO NOT apply to zucchini squash.	3
		flubendiamide Belt SC Synapse WG	1.5 oz 3 oz	0.047			1
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			1
		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	beta-cyfluthrin Baythroid XL	1.6-2.4 oz	0.013-0.019			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 Belt SC Synapse WG	1.5 oz 3 oz	0.047			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	2/3-1 1/3 pt 1-2 lb	0.5-1.0			4
		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	beta-cyfluthrin Baythroid XL	2.4-2.8 oz	0.019-0.022			0
		imidacloprid Admire Pro 4.6 F	7.0-10.5 oz	0.25-0.375			21

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
SUMMER SQUASH (cont.)	Cucumber beetle	lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			1
		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.	4
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05			3
		flubendiamide Belt SC Synapse WG	1.5 oz 3 oz	0.047			1
SWEET CORN	Cutworm, rootworm, seed corn maggot, white grub, wireworm	beta-cyfluthrin Baythroid XL	0.8-1.6 oz	0.007-0.013		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 furrow ahead of press wheel. Compatible with liquid fertilizers.		3
		chlorpyrifos Lorsban 15G	8 oz/1,000 sq ft		Banded, T-banded or in furrow		21
		tefluthrin (R) Force 3G	4-5 oz/ 1,000 ft row	0.075-0.165	Banded, T-banded or in furrow		
		zeta-cypermethrin + bifenthrin Hero	2.6-6.1 oz	0.025-0.05			3
	Flea beetle	beta-cyfluthrin Baythroid XL	0.8-1.6 oz	0.007-0.013			0
		carbaryl Sevin 4F Sevin XLR Plus	1-2 qt 1-2 qt	1.0-2.0	When damage appears.	DO NOT apply during bloom. Hand harvesting is prohibited.	2
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05			1
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.8-4.0 oz	0.017-0.025			3
	Corn earworm	beta-cyfluthrin Baythroid XL	1.6-2.8 oz	0.013-0.022			0
bifenthrin (R) Brigade 2 EC		2.1-6.4 fl oz	0.033-0.1	When larvae are found.		1	

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
SWEET CORN (cont.)	Corn earworm	carbaryl		1.0-2.0		DO NOT apply during bloom.	2
		Sevin 4F	1-2 qt				
		Sevin XLR	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				
		lambda-cyhalothrin (R)		0.02-0.03			1
		Karate Z	1.28-1.92 fl oz				
		methomyl (R)		0.3-0.45			0 (ears) 3 (forage)
		Lannate 2.4 LV	1-1 1/2 pt				
		Lannate SP	1/3-1/2 lb				
		permethrin (R)		0.1-0.2			1
		Ambush 2.0 EC	6.4-12.8 oz				
Ambush 25 WP	6.4-12.8 oz						
spinosad		0.047-0.094		1			
SpinTor 2 SC	3-6 fl oz						
thiodicarb (R)		0.5-0.75		0			
Larvin 3.2	20-30 oz						
zeta-cypermethrin (R)		0.014-0.025		3			
Mustang Maxx 0.8 EC	2.24-4.0 oz						
Mite	abamectin		0.01-0.05	For control of spider mites.		7	
	Agri-Mek SC	1.75-3.5 fl oz					
Whorl feeder, fall armyworm, corn earworm		beta-cyfluthrin		0.013-0.022			0
		Baythroid XL	1.6-2.8 oz				
		bifenthrin (R)		0.033-0.1		1	
		Brigade 2 EC	2.1-6.4 oz				
		carbaryl		1.0-2.0	Apply when needed. Hand harvesting is prohibited.	Plants will tolerate a great deal of feeding with no yield loss. DO NOT apply during bloom.	2
		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						
lambda-cyhalothrin (R)		0.02-0.03		1			
Karate Z	1.28-1.92 fl oz						
methomyl (R)		0.03-0.45		3			
Lannate 2.4 LV	1-1 1/2 pt						
Lannate SP	1/3-1/2 pt						
spinosad		0.042-0.094		1			
SpinTor 2 SC	3-6 oz						

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
SWEET CORN (cont.)	Whorl feeder, fall armyworm, corn earworm	zeta-cypermethrin (R) Mustang Maxx 0.8 EC	3.2-4.0 oz	0.02-0.025			3
		zeta-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. DO NOT apply during bloom.	0
		chlorantraniliprole Coragen 1.67 SC	3.5-5.0 fl oz	0.045-0.065			1
		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 1/2 pt 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			1
		thiodicarb (R) Larvin 3.2	20-30 oz	0.05-0.75			0
SWEET POTATO	Flea beetle, tortoise beetle	beta-cyfluthrin Baythroid XL	1.6-2.8 oz	0.013-0.022			0
		beta-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz	0.056-0.066			7
		bifenthrin (R) Brigade 2 EC	2.1-6.4 fl oz	0.033-0.1		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.	DO NOT apply during bloom.	7
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			7
		spinosad SpinTor 2 SC	3-6 fl oz	0.047-0.094		Not labeled for tortoise beetle.	7
	Wireworm, 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.		125

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
SWEET POTATO (cont.)	Sweet potato weevil	beta-cyfluthrin Baythroid XL	1.6-2.8 oz	0.013-0.022			0	
		beta-cyfluthrin + imidacloprid Leverage 360	2.4-2.8 oz	0.056-0.066			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.	DO NOT apply during bloom.	7	
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz	0.02-0.03			7	
		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.		
		beta-cyfluthrin Baythroid XL	1.6-2.8 oz	0.013-0.022			0	
		beta-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz	0.089-0.096			0	
		bifenthrin (R) Brigade 2 EC	2.1-5.2 oz	0.033-0.8			1	
		carbaryl Sevin 4F Sevin XLR Plus	1-2 qt 1-2 qt		1.0-2.0		DO NOT apply during bloom.	3
		chlorantraniliprole Coragen 1.67 SC Exirel 0.83	3.5-5.0 fl oz 7-12.8 fl oz		0.045-0.065			1
		chlorantraniliprole + lambda-cyhalothrin (R) Voliam Xpress	6-9 oz		0.06-0.09			5
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz		0.03-0.05			1
		flubendiamide Belt SC Synapse WG	1.5 oz 3 oz		0.045			1
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz		0.02-0.03	Five-day intervals.		5
		methomyl (R) Lannate 2.4 LV Lannate SP	1 1/2-3 pt 1/2-1 lb		0.45-0.9		<i>Bacillus thuringiensis</i> 1/2 lb/acre may be used in combination with methomyl. Other areas have had good results.	

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
TOMATO (cont.)	Fruitworm, hornworm	methoxyfenozide Intrepid 2F	4-16 oz	0.06-0.25			1	
		spinosad SpinTor 2 SC	3-8 fl oz	0.047-0.125			1	
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12			7	
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.24-4.0 oz	0.014-0.025			1	
		zeta-cypermethrin + bifenthrin Hero	4.0-10.3 oz	0.04-0.1			1	
	Cabbage looper	<i>Bacillus thuringiensis</i> Dipel Javelin Biobit Agree			Check label.			
		chlorantraniliprole + lambda-cyhalothrin (R) Voliam Xpress	5-8 oz	0.05-0.08				5
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05				1
		flubendiamide Belt SC Synapse WG	1.5 oz 3 oz	0.045				1
		methomyl (R) Lannate 2.4 LV Lannate SP	1 1/2-3 pt 1/2-1 lb	0.45-0.9	Apply on foliage as needed when loopers are small. Methomyl is preferred treatment.			1
		tebufenozide Confirm 2F	6-8 fl oz	0.09-0.12				7
		Colorado potato beetle, flea beetle, stink bug	beta-cyfluthrin Baythroid XL	1.6-2.8 oz	0.013-0.022	2.8 oz for flea beetles.		
	beta-cyfluthrin + imidacloprid Leverage 360		3.8-4.1 oz	0.089-0.096				0
	bifenthrin (R) Brigade 2 EC		2.1-5.2 oz	0.033-0.08				1
	carbaryl Sevin 4F Sevin XLR Plus		1-2 qt 1-2 qt	1.0-2.0	Apply on foliage as needed.	DO NOT apply during bloom.		3
imidacloprid Admire Pro 4.6F	1.3 fl oz		0.047				0	

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
TOMATO (cont.)	Colorado potato beetle, flea beetle, stink bug	spinosad SpinTor 2 SC	3-6 oz	0.047-0.094		Follow label directions.	1	
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	3.2-4.0 oz	0.02-0.025			1	
		zeta-cypermethrin + bifenthrin Hero	4.0-10.3 oz	0.04-0.1			1	
	Leaf miner, aphids	abamectin (R) Agri-Mek 0.7 SC	1.75-3.5 fl oz	0.009-0.019	20 gallons of water/acre required.	Mites, leafminers, pinworms, potato beetle (will not control aphids). Use 3.5 oz rate on pinworms.	7	
		acetamiprid Assail 30 SG	2-4 oz	0.038-0.075		Follow label directions.	7	
		beta-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz	0.089-0.096			0	
		bifenthrin (R) Brigade 2 EC	2.1-5.2 oz	0.033-0.08			1	
		dimethoate Dimethoate 400 Dimethoate 4EC Dimethoate 5 lb	1/2-1 pt 1/2-1 pt 6.4-12.8 oz	0.25-0.5			7	
		esfenvalerate (R) Asana XL 0.66 EC	9.6 oz	0.05		Use 5.8-9.6 oz of Asana per acre for aphids.	1	
		imidacloprid Admire Pro 4.6F	1.3 fl oz	0.047			0	
		methomyl (R) Lannate 2.4 LV Lannate SP	1 1/2-3 pt 1/2-1 lb	0.45-0.9			Aphids only. 1	
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	3.2-4.0 oz	0.02-0.025			Aphid control may be variable. 1	
		zeta-cypermethrin + bifenthrin Hero	4.0-10.3 oz	0.04-0.1			1	
		Cutworm	beta-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz	0.089-0.096			0
			bifenthrin (R) Brigade 2 EC	2.1-5.2 oz	0.033-0.08			1
			bifenthrin (R) Capture LFR	0.29-0.39 oz/ 1,000 ft row OR 3.4-6.8 oz/acre	0.04-0.08	Apply in 5- to 7-inch band or in furrow ahead of press wheel. Compatible with liquid fertilizers.		30

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
TOMATO (cont.)	Cutworm	carbaryl		2.0	Apply to soil surface 2-3 days prior to transplanting or when damage occurs.	DO NOT apply during bloom.	3	
		Sevin 4F	2 qt					
		Sevin XLR Plus	2 qt					
		diazinon		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 gallons of water/acre.			
		Diazinon AG500	2-4 qt					
		Diazinon 50 W	4-8 lb					
		Diazinon AG600C	51-102 oz					
		esfenvalerate (R)		0.03-0.05	Broadcast prior to planting and work into soil 4-8 inches.			1
		Asana XL 0.66 EC	5.8-9.6 oz					
		flubendiamide		0.047	1			
Belt SC	1.5 oz							
Synapse WG	3 oz							
tebufenozide		0.09-0.12	7					
Confirm 2F	6-8 fl oz							
zeta-cypermethrin (R)		0.008-0.025	1					
Mustang Maxx 0.8 EC	1.28-4.0 oz							
zeta-cypermethrin + bifenthrin		0.1	1					
Hero	10.3 oz							
Wireworm	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)		3.0-4.0				
		Diazinon 50W	6-8 lb					
		Diazinon AG600	76 1/2-102 oz					
		Diazinon AG500	3-4 qt					
Spider mites	abamectin (R) Agri-Mek 0.7 SC		1.75-3.5 oz	0.0094-0.019	DO NOT apply Agri-Mek in less than 20 gallons of water per acre.	7		
		bifenthrin (R) Brigade 2 EC	5.2-6.4 oz	0.08-0.1			Follow label directions.	
		dicofol		0.375-0.75	Spray when damaging numbers are present.	DO NOT apply more than once per season.		2
		Dicofol 4E	3/4-1 1/2 pt					
		spiromesifen		0.11-0.13	1			
		Oberon 2 SC	7-8.5 oz					
Pinworm	abamectin (R) Agri-Mek 0.7 SC		3.5 oz	0.019	2.8 ounces for flea beetles.	7		
		beta-cyfluthrin Baythroid XL	2.1-2.8 oz				0	

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
TOMATO (cont.)	Pinworm	beta-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz	0.089-0.096			0
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05		DO NOT exceed 0.5 lb ai/acre per season.	1
		gamma-cyhalothrin Proaxis 0.5 EC	2.56-3.84 oz	0.01-0.015		Follow label directions.	5
		indoxacarb Avaunt 30 DG	3.5 oz	0.065		Follow label directions.	3
		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.	1
		No-Mate Spiral Bioinsecticide				Read product label.	Comes in a plastic coil that is wrapped around tomato vines or support stakes.
	Thrips	beta-cyfluthrin + imidacloprid Leverage 360	3.8-4.1 oz	0.089-0.096			0
		bifenthrin (R) Brigade 2 EC	2.1-5.2 oz	0.033-0.08			1
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 degrees F. DO NOT treat if rain is anticipated within 6 hours.					
		S-Methoprene Extinguish	3-5 Tbsp/mound 1.0-1.5 lb/acre		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/acre		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/acre		Mound-to-mound treatment rate Broadcast rate	See label for specific rate and application instructions. Acceptable for organic production.	