

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)		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				
Coragen 1.67 SC	3.5-5 oz			DO NOT use an adjuvant with Coragen.	1		
<i>Bacillus thuringiensis</i>	See label for rates.				0		
		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 over the top of the row at planting time (30-in. row min).	DO NOT feed foliage of treated beans. DO NOT place Thimet in contact with seed.	
	Thimet 20G						
	Bean leaf beetle, Mexican bean beetle	bifenthrin (R)		0.04-0.1			3
		Brigade 2 EC	2.6-6.4 fl oz				
		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)		0.015-0.03				
	Asana XL 0.66 EC	2.9-5.8 oz					
gamma-cyhalothrin		0.01-0.015		Asana is not registered on lima beans.	3		
Proaxis 0.5EC	2.56-3.84 oz				7		
lambda-cyhalothrin (R)		0.02-0.03			7		
Karate Z	1.28-1.92 oz						

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BEANS (snap or lima)	Bean leaf beetle, Mexican bean beetle	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	
	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 bean 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 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) (cont.)	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	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 Provado 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 Provado 1.6 F	3.5 oz	0.044			7

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CARROTS	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, cauliflower)	Cutworm	beta-cyfluthrin Baythroid XL	0.8-1.6 oz	0.007-0.013	Broadcast just before planting and incorporate.		0	
		bifenthrin (R) Brigade 2 EC	2.1-6.4	0.033-0.01			7	
		cypermethrin Ammo 2.5 EC	2.5-5 oz	0.05-0.01			1	
		diazinon (R) Diazinon AG500 Diazinon AG600 WBC	2-4 qt 51-102 fl oz	2.0-4.0			3	
		esfenvalerate (R) Asana XL 0.66 EC	5.8-9.6 oz	0.03-0.05			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)					0.07
		beta-cyfluthrin + imidacloprid Leverage 360	3 oz					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	3.5-5.0 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
		lambda-cyhalothrin (R) Karate Z	1.28-1.92 fl oz		0.02-0.03			1

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COLE CROPS (Broccoli, Brussels sprouts, cabbage, cauliflower) (cont.)	Caterpillars (cabbage looper, diamondback, imported and cross-striped cabbage worm)	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 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		
		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, cauliflower)	Aphids	imidacloprid Provado 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 pt on winter squash or pumpkins or 2 pt 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		
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) (cont.)	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 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	4-8 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)	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		
	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. DO NOT apply during bloom.	3
		carbaryl Sevin XLR Plus Sevin 4F	1 qt 1 qt	1.0			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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		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
		Aphid	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	3.5-5.0 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 (cont.)	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, European corn borers 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
		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)	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	Flea beetle, Colorado potato beetle, earworm, European corn borer, hornworm	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				
		lambda-cyhalothrin (R)		0.02-0.03			5
		Karate Z	1.28-1.92 fl oz				
		permethrin (R)		0.1-0.2			3
		Pounce 25 WP	6.4-12.8 oz				
	spinetoram		0.04-0.078			1	
	Radiant 1 SC	5-10 fl oz					
	spinosad		0.047-0.125			1	
	SpinTor 2 SC	3-8 fl oz					
	zeta-cypermethrin (R)		0.014-0.025			1	
	Mustang Maxx 0.8 EC	2.24-4.0 oz					
zeta-cypermethrin + bifenthrin		0.04-0.1			7		
Hero	4.0-10.3 oz						
Aphid	beta-cyfluthrin + imidacloprid		0.89-0.096			7	
	Leverage 360	3.8-4.1 oz					
	flonicamid		0.026-0.69			0	
	Beleaf 50 SG	2.0-2.8 oz					
	imidacloprid		0.047			0	
Admire Pro 4.6F	1.2 fl oz						
methomyl (R)		0.45			3		
Lannate 2.4 LV	1 1/2 pt						
Lannate SP	1/2 lb						
thiamethoxam		0.033-0.047			0		
Actara 25 WDG	2-3 oz						
Lep. larvae	bifenthrin (R)		0.033-0.1			7	
	Brigade 2 EC	2.1-6.4 oz					
	beta-cyfluthrin		0.013-0.022			7	
	Baythroid XL	1.6-2.8 oz					
	beta-cyfluthrin + imidacloprid		0.89-0.096			7	
Leverage 360	3.8-4.1 oz						
chlorantraniliprole + lambda-cyhalothrin (R)		0.06-0.09			5		
Voliam Xpress	6-9 oz						

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		0.047			1	
		Belt SC	1.5 oz					
		Synapse WG	3 oz					
		lambda-cyhalothrin (R)			0.02-0.03			5
		Karate Z	1.28-1.92 fl oz					
		methomyl (R)			0.45			3
		Lannate 2.4 LV	1 1/2 pt					
		Lannate 90 SP	1/2 lb					
		methoxyfenozide			0.06-0.25			1
	Intrepid 2F	4-16 fl oz						
tebufenozide			0.09-0.12			7		
Confirm 2F	6-8 fl oz							
zeta-cypermethrin (R)			0.014-0.025			1		
Mustang Maxx 0.8 EC	2.24-4.0 oz							
zeta-cypermethrin + bifenthrin			0.4-0.1			7		
Hero	4.0-10.3 oz							
Mite	abamectin (R)			0.0094-0.01875		Use only two times per season.	7	
	Agri-Mek 0.7 SC	1.75-3.5 fl oz						
	spiromesifen			0.11-0.13			1	
Oberon 2 SC	7-8.5 oz							
POTATOES (white or Irish)	Colorado potato beetle, potato leaf hopper, flea beetle	beta-cyfluthrin		0.013-0.022			0	
		Baythroid XL	1.6-2.8 oz					
		beta-cyfluthrin + imidacloprid			0.066			7
		Leverage 360	2.8 oz					
		carbaryl			0.5-2.0	When insects first appear.	DO NOT apply during bloom. Use higher rates on Colorado potato beetle.	7
		Sevin 4F	1/2-2 qt					
		Sevin XLR Plus	1/2-2 qt					
		endosulfan			0.5-1.0	When feeding is noticed.		7
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 oz							
lambda-cyhalothrin (R)			0.02-0.03			7		
Karate Z	1.28-1.92 fl oz							
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 25 WP	6.4-12.8 oz		0.1-0.2					

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
POTATOES (white or Irish)	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	
	Aphid	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 postemergence. 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/acre/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	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			7
			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 21	
flonicamid Beleaf 50 SG			2.0-2.8 oz	0.026-0.69			0	
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 Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
SPINACH	Aphids, plant bug, leafhopper, leafminer	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	When larvae appear.	DO NOT apply to zucchini squash.	0			
		endosulfan Thionex 3 EC Thionex 50 WP	2/3-1 1/3 qt 1-2 lb	0.5-1.0			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			
		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		Repeat as necessary to maintain control.	0
			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
	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			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 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		
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	Corn earworm	carbaryl Sevin 4F Sevin XLR	1-2 qt 1-2 qt	1.0-2.0		DO NOT apply during bloom.	2	
		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	
		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 1/2 pt 1/3-1/2 lb	0.3-0.45			0 (ears) 3 (forage)	
		permethrin (R) Ambush 2.0 EC Ambush 25 WP	6.4-12.8 oz 6.4-12.8 oz	0.1-0.2			1	
		spinosad SpinTor 2 SC	3-6 fl oz	0.047-0.094			1	
		thiodicarb (R) Larvin 3.2	20-30 oz	0.5-0.75			0	
		zeta-cypermethrin (R) Mustang Maxx 0.8 EC	2.24-4.0 oz	0.014-0.025			3	
		Whorl feeder, fall armyworm, 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 oz	0.033-0.1		Follow label directions.	1
			carbaryl Sevin 4F Sevin XLR Plus	1-2 qt 1-2 qt	1.0-2.0	Apply when needed. Hand harvesting prohibited.	Plants will tolerate a great deal of feeding with no yield loss. DO NOT apply during bloom.	2
			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
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 1/2 pt 1/3-1/2 pt		0.03-0.45			3		
spinosad SpinTor 2 SC	3-6 oz		0.042-0.094		Follow label directions.	1		

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 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.		125

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest	
SWEET POTATO	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	3.5-5.0 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/A 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		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	0.033-0.08			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	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 gal 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/A	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 gal of water per 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							
Wireworms	bifenthrin (R)	0.29-0.39 oz/	1,000 ft row or	0.04-0.08	Apply in 5- to 7-inch band or in furrow ahead of press wheel. Compatible with liquid fertilizers.		30	
	Capture LFR	3.4-6.8 oz/A						
	diazinon (R)		3.0-4.0					
	Diazinon 50W	6-8 lb	76 1/2-102 oz		Broadcast prior to planting and immediately work into soil 4-8 inches.			
	Diazinon AG600							
	Diazinon AG500	3-4 qt						
Spider mites	abamectin (R)			0.0094-0.019	DO NOT apply Agri-Mek in less than 20 gallons of water per acre.		7	
	Agri-Mek 0.7 SC	1.75-3.5 oz						
	bifenthrin (R)			0.08-0.1	Follow label directions.			
	Brigade 2 EC	5.2-6.4 oz						
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)			0.019			7	
	Agri-Mek 0.7 SC	3.5 oz						
	beta-cyfluthrin				2.8 oz for flea beetles.	0		
	Baythroid XL	2.1-2.8 oz						

VEGETABLE INSECT CONTROL RECOMMENDATIONS (COMMERCIAL)

Crop	Insect	Insecticide	Formulation Per Acre	Lb ai/Acre	Application	Remarks/Precautions	Days to Harvest
TOMATO	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/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/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.	