

Field Crops

Department of Entomology

CORN INSECT CONTROL RECOMMENDATIONS - 2016

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Read and Follow ALL Label Rate, Application, and Use Directions

This publication is intended to aid pest managers in treating pest infestations in corn during the growing season and in situations where replanting is needed. Consequently, many current preventative pest management decisions that are made pre-planting (e.g., Bt traited hybrids) are not included in this list.

Pest	Active Ingredient(s)	Trade Name(s)	Pre-Harvest Interval (days)	MoA ¹	Treatment Guideline	
Armyworm species	alpha-cypermethrin*	Fastac	30	3	Greater than 50% of the plants show fresh feeding and the larvae are less than 1-1/4" long. Whorl feeding: more than 75% of plants show whorl feeding, plants are stressed, and larvae less than 1-1/4" long.	
	beta-cyfluthrin*	Baythroid	21	3		
	bifenthrin*	Capture, generics	30	3		
	carbaryl	Sevin, Carbaryl, generics	48	1A		
	chlorpyrifos*	Lorsban, generics	21	1B		
	cyfluthrin*	Tombstone	21	3		
	deltamethrin*	Delta Gold	21	3		
	esfenvalerate*	Asana, generics	21	3		
	flubendiamide	Belt	28	28		
	gamma-cyhalothrin*	Declare, Proaxis	21	3		
	lambda-cyhalothrin*	Warrior II, generics	21	3		
	methoxyfenozide	Intrepid	21	18		
	permethrin*	Ambush, Pounce, generics	30	3A		
	spinetoram	Delegate, Radiant	28	5		
	spinosad	Tracer, generics	28	5		
	zeta-cypermethrin*	Mustang Max, Respect	30	3		
	Pre-Mixes					
	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		
	bifenthrin;zeta-cypermethrin*	Hero, Steed	30	3;3		
	chlorpyrifos;gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3		
chlorpyrifos;lambda-cyhalothrin*	Cobalt Advanced	21	1B;3			

Pest	Active Ingredient(s)	Trade Name(s)	Pre-Harvest Interval (days)	MoA ¹	Treatment Guideline	
Armyworm species (Con't.)	chlorpyrifos;zeta-cypermethrin*	Stallion	30	3;3		
	lambda-cyhalothrin; chlorantraniliprole*	Besiege	21	3;28		
Cutworms (Black, Dingy, Variegated, Clay-backed)	alpha-cypermethrin*	Fastac	30	3	Post emergence: 3-5% of the plants show damage, 2 or more larvae are found per 100 plants and larvae are 1/2 to 1-1/2" long.	
	beta-cyfluthrin*	Baythroid	21	3		
	bifenthrin*	Capture, generics	30	3		
	carbaryl	Sevin, Carbaryl, generics	48	1A		
	chlorpyrifos*	Lorsban, generics	21	1B		
	cyfluthrin*	Tombstone	21	3		
	deltamethrin*	Delta Gold	21	3		
	esfenvalerate*	Asana, generics	21	3		
	flubendiamide	Belt	28	28		
	gamma-cyhalothrin*	Declare, Proaxis	21	3		
	lambda-cyhalothrin*	Warrior II, generics	21	3		
	methoxyfenozide	Intrepid	21	18		
	permethrin*	Ambush, Pounce, generics	30	3A		
	zeta-cypermethrin*	Mustang Max, Respect	30	3		
	Pre-Mixes					
	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		
	bifenthrin;zeta-cypermethrin*	Hero, Steed	30	3;3		
	chlorpyrifos;gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3		
	chlorpyrifos;lambda-cyhalothrin*	Cobalt Advanced	21	1B;3		
	chlorpyrifos;zeta-cypermethrin*	Stallion	30	3;3		
lambda-cyhalothrin; chlorantraniliprole*	Besiege	21	3;28			
Brown Stink Bug	alpha-cypermethrin*	Fastac	30	3	Control may be needed if seedling plants are emerging from poorly closed seed slots and being damaged and/or killed.	
	beta-cyfluthrin*	Baythroid	21	3		
	bifenthrin*	Capture, generics	30	3		
	cyfluthrin*	Tombstone	21	3		
	deltamethrin*	Delta Gold	21	3		
	esfenvalerate*	Asana, generics	21	3		
	gamma-cyhalothrin*	Declare, Proaxis	21	3		
	lambda-cyhalothrin*	Warrior II, generics	21	3		
	zeta-cypermethrin*	Mustang Max, Respect	30	3		
Pre-Mixes						

Pest	Active Ingredient(s)	Trade Name(s)	Pre-Harvest Interval (days)	MoA ¹	Treatment Guideline	
Brown Stink Bug (Con't.)	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		
	bifenthrin;zeta-cypermethrin*	Hero, Steed	30	3;3		
	chlorpyrifos;gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3		
	chlorpyrifos;lambdacyhalothrin*	Cobalt Advanced	21	1B;3		
	chlorpyrifos;zeta-cypermethrin*	Stallion	30	3;3		
	lambda-cyhalothrin; chlorantraniliprole*	Besiege	21	3;28		
Corn Earworm	alpha-cypermethrin*	Fastac	30	3	Control is only economically justified on seed, sweet, or popcorn. Treat if 10 or more moths for several consecutive nights are captured in an earworm pheromone trap just before or during silking.	
	beta-cyfluthrin*	Baythroid	21	3		
	bifenthrin*	Capture, generics	30	3		
	chlorantraniliprole	Coragen	14	28		
	cyfluthrin*	Tombstone	21	3		
	deltamethrin*	Delta Gold	21	3		
	esfenvalerate*	Asana, generics	21	3		
	flubendiamide	Belt	28	28		
	gamma-cyhalothrin*	Declare, Proaxis	21	3		
	lambda-cyhalothrin*	Warrior II, generics	21	3		
	spinosad	Tracer, generics	28	5		
	zeta-cypermethrin*	Mustang Max, Respect	30	3		
	Pre-Mixes					
	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		
	bifenthrin;zeta-cypermethrin*	Hero, Steed	30	3;3		
	chlorpyrifos;gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3		
	chlorpyrifos;lambdacyhalothrin*	Cobalt Advanced	21	1B;3		
	chlorpyrifos;zeta-cypermethrin*	Stallion	30	3;3		
	lambda-cyhalothrin; chlorantraniliprole*	Besiege	21	3;28		
Corn Flea Beetle	alpha-cypermethrin*	Fastac	30	3	5 or more beetles per plant, 50% of seedlings are severely damaged, and plants are under additional stress(es).	
	beta-cyfluthrin*	Baythroid	21	3		
	bifenthrin*	Capture, generics	30	3		
	carbaryl	Sevin, Carbaryl, generics	48	1A		
	chlorpyrifos*	Lorsban, generics	21	1B		
	cyfluthrin*	Tombstone	21	3		
	deltamethrin*	Delta Gold	21	3		

Pest	Active Ingredient(s)	Trade Name(s)	Pre-Harvest Interval (days)	MoA ¹	Treatment Guideline	
Corn Flea Beetle (Con't.)	esfenvalerate*	Asana, generics	21	3		
	gamma-cyhalothrin*	Declare, Proaxis	21	3		
	lambda-cyhalothrin*	Warrior II, generics	21	3		
	permethrin*	Ambush, Pounce, generics	30	3A		
	zeta-cypermethrin*	Mustang Max, Respect	30	3		
	Pre-Mixes					
	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		
	bifenthrin;zeta-cypermethrin*	Hero, Steed	30	3;3		
	chlorpyrifos;gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3		
	chlorpyrifos;lambda-cyhalothrin*	Cobalt Advanced	21	1B;3		
	chlorpyrifos;zeta-cypermethrin*	Stallion	30	3;3		
lambda-cyhalothrin; chlorantraniliprole*	Besiege	21	3;28			
Corn Leaf Aphid	chlorpyrifos*	Lorsban, generics	21	1B	Pre-tassel: 15 aphids/plant whorl 3 weeks before tasseling and plants under moisture stress. Post-tassel: 50% of tassels covered prior to 50% pollination and plants under moisture stress.	
	dimethoate	Dimethoate, generics	14	1B		
	malathion	Malathion	5	1B		
	Pre-Mixes					
	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		
	chlorpyrifos;gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3		
	chlorpyrifos;lambda-cyhalothrin*	Cobalt Advanced	21	1B;3		
	chlorpyrifos;zeta-cypermethrin*	Stallion	30	3;3		
Corn Rootworm Beetles	alpha-cypermethrin*	Fastac	30	3	When tassels are shedding pollen and green silk is continuously clipped back to 1/2 inch or less before 50% pollination has taken place and beetles are present.	
	beta-cyfluthrin*	Baythroid	21	3		
	bifenthrin*	Capture, generics	30	3		
	carbaryl	Sevin, Carbaryl, generics	48	1A		
	chlorpyrifos*	Lorsban, generics	21	1B		
	cyfluthrin*	Tombstone	21	3		
	deltamethrin*	Delta Gold	21	3		
	esfenvalerate*	Asana, generics	21	3		
	gamma-cyhalothrin*	Declare, Proaxis	21	3		
	lambda-cyhalothrin*	Warrior II, generics	21	3		
	permethrin*	Ambush, Pounce, generics	30	3A		

Pest	Active Ingredient(s)	Trade Name(s)	Pre-Harvest Interval (days)	MoA ¹	Treatment Guideline	
Corn Rootworm Beetles (Con't.)	zeta-cypermethrin*	Mustang Max, Respect	30	3		
	Pre-Mixes					
	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		
	bifenthrin;zeta-cypermethrin*	Hero, Steed	30	3;3		
	chlorpyrifos;gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3		
	chlorpyrifos;lambdacyhalothrin*	Cobalt Advanced	21	1B;3		
	chlorpyrifos;zeta-cypermethrin*	Stallion	30	3;3		
	lambda-cyhalothrin; chlorantraniliprole*	Besiege	21	3;28		
Corn Rootworm Larvae	chlorpyrifos*	Lorsban, generics	21	1B	2 or more larvae per plant are found while hand sorting through soil and root-mass prior to lay-by ("cultivation").	
	chlorpyrifos;gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3		
	chlorpyrifos;lambdacyhalothrin*	Cobalt Advanced	21	1B;3		
Corn Borer: European and Southwestern	alpha-cypermethrin*	Fastac	30	3	European corn borer: base controls on anticipated yield, level of infestation, number of larvae per plant, corn growth stage, expected level of control, and cost of product and application. Refer to Field Crops IPM website < http://www.entm.purdue.edu/fieldcropsipm/ >.	
	<i>Bacillus thuringiensis</i>	Dipel, Agree, generics	0	11A		
	beta-cyfluthrin*	Baythroid	21	3		
	bifenthrin*	Capture, generics	30	3		
	carbaryl	Sevin, Carbaryl, generics	48	1A		
	chlorantraniliprole	Coragen	14	28		
	chlorpyrifos*	Lorsban, generics	21	1B		
	cyfluthrin*	Tombstone	21	3		
	deltamethrin*	Delta Gold	21	3		
	esfenvalerate*	Asana, generics	21	3		
	flubendiamide	Belt	28	28		
	gamma-cyhalothrin*	Declare, Proaxis	21	3		
	lambda-cyhalothrin*	Warrior II, generics	21	3		
	methoxyfenozide	Intrepid	21	18		
	permethrin*	Ambush, Pounce, generics	30	3A		
	spinetoram	Delegate, Radiant	28	5		
	spinosad	Tracer, generics	28	5		
	zeta-cypermethrin*	Mustang Max, Respect	30	3		
	Pre-Mixes					Southwestern corn borer: First generation - at or just before 35% of the plants show fresh whorl feeding and live larvae are present. Second generation - controls are less effective and generally not economical for field corn.
	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		
bifenthrin;zeta-cypermethrin*	Hero, Steed	30	3;3			

Pest	Active Ingredient(s)	Trade Name(s)	Pre-Harvest Interval (days)	MoA ¹	Treatment Guideline	
Corn Borer: European and South- western	chlorpyrifos;gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3		
	chlorpyrifos;lambdacyhalothrin*	Cobalt Advanced	21	1B;3		
	chlorpyrifos;zeta-cypermethrin*	Stallion	30	3;3		
	lambda-cyhalothrin;chlorantraniliprole*	Besiege	21	3;28		
Grasshopper	alpha-cypermethrin*	Fastac	30	3	Treat field borders if about 8 or more adults or 15 or more nymphs/square yard are estimated. Treat field if about 3 or more adults or nymphs/yard are estimated.	
	beta-cyfluthrin*	Baythroid	21	3		
	bifenthrin*	Capture, generics	30	3		
	carbaryl	Sevin, Carbaryl, generics	48	1A		
	chlorpyrifos*	Lorsban, generics	21	1B		
	cyfluthrin*	Tombstone	21	3		
	deltamethrin*	Delta Gold	21	3		
	esfenvalerate*	Asana, generics	21	3		
	gamma-cyhalothrin*	Declare, Proaxis	21	3		
	lambda-cyhalothrin*	Warrior II, generics	21	3		
	zeta-cypermethrin*	Mustang Max, Respect	30	3		
	Pre-Mixes					
	bifenthrin;chlorpyrifos*	Tundra Supreme	30	3;1B		
	bifenthrin;zeta-cypermethrin*	Hero, Steed	30	3;3		
	chlorpyrifos;gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3		
	chlorpyrifos;lambdacyhalothrin*	Cobalt Advanced	21	1B;3		
	chlorpyrifos;zeta-cypermethrin*	Stallion	30	3;3		
	lambda-cyhalothrin;chlorantraniliprole*	Besiege	21	3;28		
	Japanese Beetle	alpha-cypermethrin*	Fastac	30		3
beta-cyfluthrin*		Baythroid	21	3		
bifenthrin*		Capture, generics	30	3		
carbaryl		Sevin, Carbaryl, generics	48	1A		
cyfluthrin*		Tombstone	21	3		
deltamethrin*		Delta Gold	21	3		
esfenvalerate*		Asana, generics	21	3		
gamma-cyhalothrin*		Declare, Proaxis	21	3		
lambda-cyhalothrin*		Warrior II, generics	21	3		
zeta-cypermethrin*		Mustang Max, Respect	30	3		
Pre-Mixes						

Pest	Active Ingredient(s)	Trade Name(s)	Pre-Harvest Interval (days)	MoA ¹	Treatment Guideline	
Japanese Beetle (Con't.)	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		
	bifenthrin;zeta- cypermethrin*	Hero, Steed	30	3;3		
	chlorpyrifos;gamma- cyhalothrin*	Cobalt, Bolton	21	1B;3		
	chlorpyrifos;lambda- cyhalothrin*	Cobalt Advanced	21	1B;3		
	chlorpyrifos;zeta- cypermethrin*	Stallion	30	3;3		
	lambda-cyhalothrin; chlorantraniliprole*	Besiege	21	3;28		
Seed Feeders: Seedcorn Maggot, Seedcorn Beetles	beta-cyfluthrin*	Baythroid	21	3	No rescue treatments available. Apply treatments if replanting into damaged field and pests are still present.	
	bifenthrin*	Capture, generics	30	3		
	chlorpyrifos*	Lorsban, generics	21	1B		
	clothianidin	Poncho, generics	-	4A		
	lambda-cyhalothrin*	Warrior II, generics	21	3		
	permethrin*	Kernel Guard Supreme	-	3		
	terbufos*	Counter	-	1B		
	tefluthrin*	Force	-	3		
	thiamethoxam	Cruiser	-	4A		
	Pre-Mixes					
	bifenthrin; chlorethoxyfos*	SmartChoice	-	3;1B		
	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		
	bifenthrin;zeta- cypermethrin*	Hero, Steed	30	3;3		
	cyfluthrin; tebupirimphos*	Aztec, generics	-	3;1A		
	chlorpyrifos;gamma- cyhalothrin*	Cobalt, Bolton	21	1B;3		
chlorpyrifos;lambda- cyhalothrin*	Cobalt Advanced	21	1B;3			
Slugs	metaldehyde	Deadline MPs	-		Spread bait evenly across damaged area if leaves are significantly defoliated and stand is threatened. Use high rate for severe infestations.	
Spider Mites	dimethoate	Dimethoate, generics	14	1B	If infested fields have significant yield potential (100+ bu/a), spider mite colonies have established on the lower leaves (discolored), and spreading to the ear leaf or above, then treating before the dent stage may be justified.	
	etoxazole	Zeal	21	10B		
	hexythiazox	Onager	30	10A		
	propargite*	Comite	30	12C		
	spiromesifen	Oberon	30	23		
	Pre-Mixes					
	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		

Pest	Active Ingredient(s)	Trade Name(s)	Pre-Harvest Interval (days)	MoA ¹	Treatment Guideline	
Stalk Borer	alpha-cypermethrin*	Fastac	30	3	Treatment protects only uninfested plants. When crop stands are threatened, control should be applied to prevent additional plant damage and/or death. Spot spraying infested area(s) of the field is often effective.	
	beta-cyfluthrin*	Baythroid	21	3		
	bifenthrin*	Capture, generics	30	3		
	chlorpyrifos*	Lorsban, generics	21	1B		
	cyfluthrin*	Tombstone	21	3		
	deltamethrin*	Delta Gold	21	3		
	esfenvalerate*	Asana, generics	21	3		
	flubendiamide	Belt	28	28		
	gamma-cyhalothrin*	Declare, Proaxis	21	3		
	lambda-cyhalothrin*	Warrior II, generics	21	3		
	permethrin*	Ambush, Pounce, generics	30	3A		
	zeta-cypermethrin*	Mustang Max, Respect	30	3		
	Pre-Mixes					
	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		
	bifenthrin;zeta-cypermethrin*	Hero, Steed	30	3;3		
	chlorpyrifos;gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3		
	chlorpyrifos;lambda-cyhalothrin*	Cobalt Advanced	21	1B;3		
chlorpyrifos;zeta-cypermethrin*	Stallion	30	3;3			
lambda-cyhalothrin; chlorantraniliprole*	Besiege	21	3;28			
Western Bean Cutworm	alpha-cypermethrin*	Fastac	30	3	Treatment may be needed if 5% of the plants have an egg mass and/or young larvae in the whorl.	
	beta-cyfluthrin*	Baythroid	21	3		
	bifenthrin*	Capture, generics	30	3		
	chlorantraniliprole	Coragen	14	28		
	chlorpyrifos*	Lorsban, generics	21	1B		
	cyfluthrin*	Tombstone	21	3		
	esfenvalerate*	Asana, generics	21	3		
	flubendiamide	Belt	28	28		
	gamma-cyhalothrin*	Declare, Proaxis	21	3		
	lambda-cyhalothrin*	Warrior II, generics	21	3		
	methoxyfenozide	Intrepid	21	18		
	permethrin*	Ambush, Pounce, generics	30	3A		
	spinetoram	Delegate, Radiant	28	5		
	spinosad	Tracer, generics	28	5		
	zeta-cypermethrin*	Mustang Max, Respect	30	3		
Pre-Mixes						

Pest	Active Ingredient(s)	Trade Name(s)	Pre-Harvest Interval (days)	MoA ¹	Treatment Guideline	
Bean Cut-worm (Con't.)	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		
	bifenthrin; zeta-cypermethrin*	Hero, Steed	30	3;3		
	chlorpyrifos; gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3		
	chlorpyrifos; lambda-cyhalothrin*	Cobalt Advanced	21	1B;3		
	chlorpyrifos; zeta-cypermethrin*	Stallion	30	3;3		
	lambda-cyhalothrin; chlorantraniliprole*	Besiege	21	3;28		
White Grubs	chlorpyrifos*	Lorsban, generics	21	1B	No rescue treatments are available. Apply treatments if replanting into damaged field areas and grubs are still present.	
	clothianidin	Poncho, generics	0 day plant-back	4A		
	lambda-cyhalothrin*	Warrior II, generics	21	3		
	terbufos*	Counter	-	1B		
	tefluthrin*	Force	-	3		
	thiamethoxam	Cruiser	-	4A		
	Pre-Mixes					
	bifenthrin; chlorethoxyfos*	SmartChoice	-	3;1B		
	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B		
	bifenthrin; zeta-cypermethrin*	Hero, Steed	30	3;3		
	chlorpyrifos; gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3		
	chlorpyrifos; lambda-cyhalothrin*	Cobalt Advanced	21	1B;3		
	cyfluthrin; tebupirimphos*	Aztec, generics	-	3;1A		
Wireworms	beta-cyfluthrin*	Baythroid	21	3	No rescue treatments are available. Apply treatments if replanting into damaged field areas and wireworms are still present.	
	bifenthrin*	Capture, generics	30	3		
	chlorpyrifos*	Lorsban, generics	21	1B		
	clothianidin	Poncho, generics	0 day plant-back	4A		
	lambda-cyhalothrin*	Warrior II, generics	21	3		
	terbufos*	Counter	-	1B		
	tefluthrin*	Force	-	3		
	thiamethoxam	Cruiser	-	4A		
	Pre-Mixes					

Pest	Active Ingredient(s)	Trade Name(s)	Pre-Harvest Interval (days)	MoA ¹	Treatment Guideline
Wireworms (Con't.)	bifenthrin; chlorethoxyfos*	SmartChoice	-	3;1B	
	bifenthrin; chlorpyrifos*	Tundra Supreme	30	3;1B	
	chlorpyrifos; gamma-cyhalothrin*	Cobalt, Bolton	21	1B;3	
	chlorpyrifos; lambda-cyhalothrin*	Cobalt Advanced	21	1B;3	
	cyfluthrin; tebupirimphos*	Aztec, generics	-	3;1A	

*Restricted Use Product.

¹Mode of Action: Insecticides are classified based on their target site. Using different, and combined, modes of action may delay insect resistance to insecticide groups. More specific information can be found at IRAC: <www.irac-online.org>.

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