Corn

Table 1. Chinch bugs

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound SP	Economic Threshold/When to Treat
terbufos Counter (15G[2])	6.0-8.0 ounces per 1,000 row feet	1	See label.	**Preventive treatment** • Apply at planting. Rates are based on 1,000 feet of row. • See seed treatment Tables.
beta-cyfluthrin Baythroid XL (1EC)	1.6-2.8 ounces	0.013-0.02	80-45.7	**Post-emergence** • Seedling corn less than 6 inches tall: five or more bugs on 20% or more plants. • Larger plants require a judgment decision based on bug counts, crop vigor and weather conditions.
lambda-cyhalothrin Warrior II (2.08CS)	1.92 ounces	0.03	66.7	
bifenthrin Brigade (2EC)	2.1-6.4 ounces	0.033-0.1	61-20	
z-cypermethrin Mustang Maxx (0.8EC)	3.2-4.0 ounces	0.02-0.025	40-32	
cyfluthrin Tombstone (2EC)	1.6-2.8 ounces	0.025-0.044	80-45.7	

Table 2. Corn earworm (whorls only)

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound SP	Economic Threshold/When to Treat
chlorantraniliprole, lambda-cyhalothrin Besiege (ZC)	5.0-10.0 ounces	premix	25.6-12.8	• Chemical treatment for worms in the whorl is not recommended, except in extreme situations. • Plant transgenic Bt varieties recommended for your area and comply with labeled refuge requirements. • Bt corn hybrids: See Table 16.
chlorantraniliprole Vantacor (5SC)	1.2-2.5 ounces	0.047-0.098	106.7-51.2	
chlorantraniliprole, bifenthrin Elevest (SC)	4.8-9.6 ounces	premix	26.7-13.3	

Table 3. Cucumber beetles and grape colaspis

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound SP	Economic Threshold/When to Treat
esfenvalerate Asana XL (0.66EC)	5.8-9.6 ounces	0.03-0.05	22-13	• At silking, treat when 5 or more bugs are found per ear.
beta-cyfluthrin Baythroid XL (1EC)	1.6-2.8 ounces	0.013-0.022	80-45.7	
bifenthrin Brigade (2EC)	2.1-6.4 ounces	0.033-0.10	61-20	
cyfluthrin Tombstone (2EC)	1.6-2.8 ounces	0.025-0.044	80-45.7	
lambda-cyhalothrin Warrior II (2.08CS)	1.28-1.92 ounces	0.02-0.03	100-66.7	
z-cypermethrin Mustang Maxx (0.8EC)	2.72-4.0 ounces	0.017-0.025	47-32	

Table 4. Cutworms

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound SP	Economic Threshold/When to Treat
tefluthrin Force (3G)	3.0-4.0 ounces per 1,000 row feet	0.1	See label.	**Preventive treatment** • Apply at planting. Rates are based on 1,000 feet of row.
bifenthrin Capture LFR (1.5EC)	0.2-0.39 ounces per 1,000 row feet	0.04-0.08	See label.	
lambda-cyhalothrin Ballista LFC (2.5EC)	0.66 ounce per 1,000 row feet	0.005	See label.	
chlorethoxyfos, bifenthrin SmartChoice (5G)	4.5-5.0 ounces per 1,000 row feet	0.2-0.25	See label.	

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound SP	Economic Threshold/When to Treat
lambda-cyhalothrin Warrior II (2.08CS)	0.96-1.60 ounces	0.015-0.025	133.3-80	**At planting bands or postemergence1** • Treat when seedling plants show 6% to 8% damage from above-ground cutting or 2% to 4% from below-ground boring. • Plant transgenic Bt varieties recommended for your area and comply with labeled refuge requirements. • Bt corn hybrids: See Table 16.
z-cypermethrin Mustang Maxx (0.8EC)	1.28-2.8 ounces	0.008-0.0175	100-45.7	
bifenthrin Brigade (2EC)	2.1-6.4 ounces	0.033-1.0	61-20	
esfenvalerate Asana XL (0.66EC)	5.8-9.6 ounces	0.03-0.05	22-13	
beta-cyfluthrin Baythroid XL (1EC)	0.8-1.6 ounces	0.007-0.013	160-80	
cyfluthrin Tombstone (2EC)	0.8-1.6 ounces	0.013-0.025	160-80	
bifenthrin Capture LFR (1.5EC)	3.4-6.8 ounces	0.04-0.08	37.6-18.8	

Table 5. Fall armyworm (whorls only)

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound SP	Economic Threshold/When to Treat
chlorantraniliprole, lambda-cyhalothrin Besiege (ZC)	6.0-10.0 ounces	premix	21.3-12.8	• Chemical treatment for worms in the whorl is rarely needed, except in extreme situations. Treatment for worms in the ear is not recommended. • Plant transgenic Bt varieties recommended for your area and comply with labeled refuge requirements. • Bt corn hybrids: See Table 16.
chlorantraniliprole Vantacor (5SC)	1.2-2.5 ounces	0.047-0.098	106.7-51.2	
chlorantraniliprole, bifenthrin Elevest (SC)	4.8-9.6 ounces	premix	26.7-13.3	

Table 6. Rootworms

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound SP	Economic Threshold/When to Treat
bifenthrin Brigade (2EC)	0.30 ounce per 1,000 row feet	0.06-0.08		• See seed treatments Tables. • Preventive treatment. Apply at planting. Rates are based on 1,000 row feet.
terbufos Counter (15G[2])	6.0-8.0 ounces per 1,000 row feet	1		
tefluthrin Force (3G)	4.0-5.0 ounces per 1,000 row feet	0.1		
tebupirimphos, cyfluthrin Aztec (2.1G)	6.7 ounces per 1,000 row feet	0.11		
lambda-cyhalothrin Ballista LFC (2.5EC)	0.66 ounces per 1,000 row feet	0.005		
chlorethoxyfos, bifenthrin SmartChoice (5G)	4.5-5.0 ounces per 1,000 row feet	0.2-0.25		

Table 7. Spider mites

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound SP	Economic Threshold/When to Treat
etoxazole Zeal (72WP)	1.0-3.0 ounces	0.045-0.135	16-5.3	• Treat when spider mite populations are rapidly growing to prevent damage to leaves at ear height or higher.
fenpyroximate Portal (0.4EC)	24.0-32.0 ounces	0.075-0.01	5.3-4	
propargite Comite II (6EC)	36-54 ounces	1.69-2.53	3.5-2.4	
spiromesifen Oberon (4SC)	2.85-8.0 ounces	0.09-0.25	44.9-16	

Table 8. Stalk borers

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound SP	Economic Threshold/When to Treat
z-cypermethrin Mustang Maxx (0.8EC)	2.72-4.0 ounces	0.017-0.025	47-32	• Before tassel stage, treat for 5% infested plants. • At and after tassel stage, treat for 10% infested plants. • Plant transgenic Bt varieties recommended for your area and comply with labeled refuge requirements. • Bt corn hybrids: See Table 16.
beta-cyfluthrin Baythroid XL (1EC)	1.6-2.8 ounces	0.012-0.022	80-45.7	
esfenvalerate Asana XL (0.66EC)	5.8-9.6 ounces	0.03-0.05	22-13	
cyfluthrin Tombstone (2EC)	1.6-2.8 ounces	0.025-0.044	80-45.7	
lambda-cyhalothrin Warrior II (2.08CS)	1.28-1.92 ounces	0.02-0.03	100-66.7	
methoxyfenozide Intrepid (2F)	4-16 ounces	0.06-0.25	32-8	
bifenthrin Brigade (2EC)	2.1-6.4 ounces	0.033-0.10	61-20	
chlorantraniliprole, lambda-cyhalothrin Besiege (ZC)	6.0-10.0 ounces	premix	21.3-12.8	
chlorantraniliprole Vantacor (5SC)	1.2-2.5 ounces	0.047-0.098	106.7-51.2	
chlorantraniliprole, bifenthrin Elevest (SC)	4.8-9.6 ounces	premix	26.7-13.3	

Table 9. Stink bugs

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound SP	Economic Threshold/When to Treat
beta-cyfluthrin Baythroid XL (1EC)	1.6-2.8 ounces	0.012-0.022	80-45.7	• Treat if 5% of plants have bugs at or prior to ear shoot appearance. • Early season plants up to V5, treat when 10% of plants are infested.
z-cypermethrin Mustang Maxx (0.8EC)	2.72-4.0 ounces	0.017-0.025	47-32	
bifenthrin Brigade (2EC)	2.1-6.4 ounces	0.033-0.1	61-20	
cyfluthrin[4] Tombstone (2EC)	1.6-2.8 ounces	0.025-0.044	80-45.7	
lambda-cyhalothrin Warrior II (2.08CS)	1.28-1.92 ounces	0.02-0.03	100-66.7	

Table 10. Sugarcane beetle

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound SP	Economic Threshold/When to Treat

bifenthrin
Brigade (2EC)
	0.30 ounces per 1,000 row feet	0.06-0.08	See label.	• At planting[1]
				See seed treatment Tables.
				• Preventive treatments. Rates are based on 1,000 row feet.
				• Poncho 250, 500 and Cruiser 250, 500 and 1250 benefit from the addition of an in-furrow insecticide.
				  • Counter 15G[2]
				  • Force 3G
				  • Aztec 2.1G
				  • SmartChoice 5G[3]
				  • Bifenthrin (2)
				  • Ballista LFC (2.5)
				  • Capture LFR (1.5)

[1] Refer to the label for application instructions/restrictions on application method (i.e., in-furrow, surface band, T-band, etc.)
[2] Serious crop injury may occur if an ALS-inhibiting herbicide is applied to corn previously treated at planting with Counter 15G or other systemic organophosphate soil insecticide. Read the ALS herbicide label carefully for exact restrictions and precautions.
[3] Crop injury may occur if an ALS-inhibiting herbicide is applied too soon either before or after the application of a foliar organophosphate insecticide. Read the ALS herbicide label carefully for exact restrictions and precautions.

Insecticide Precautions and Limitations (Refer to insecticide label for complete information)

Abbreviations: REI: Re-entry interval. AI: Active ingredient.

- **Asana XL:** Toxic to fish. Do not apply directly to water. Maximum active ingredient per acre per season: 0.25 lb. Preharvest interval: 21 days. REI: 12 hours.
- **Aztec:** Toxic to fish and wildlife. Do not apply directly to water or areas where surface water is present. Maximum active ingredient per acre per season: 0.15 lb. REI: 48 hours (0 hours if the product is soil-injected or soil-incorporated and contact with anything treated is prevented).
- **Baythroid:** Toxic to fish and aquatic invertebrates. Maximum active ingredient per acre per season: 0.088 lb. Preharvest interval: 21 days. REI: 12 hours.
- **Bifenthrin:** Same as Brigade.
- **Brigade:** Do not apply within 30 days of harvest. Do not graze or cut for feed within 30 days of last application. Toxic to bees, fish, and aquatic invertebrates. Maximum active ingredient per acre per season: 0.3 lb. REI: 24 hours.
- **Counter:** Toxic to birds, fish, and other wildlife. Keep out of any body of water. REI: 48 hours.
- **Cruiser:** Toxic to wildlife and aquatic invertebrates. Do not apply directly to water and do not allow drift or runoff. REI: 12 hours.
- **Cyfluthrin:** Same as Baythroid, but maximum active ingredient per acre per season: 0.175 lb.
- **Declare:** Same as Karate, but do not apply more than 0.06 lb active ingredient per acre per season.
- **Dimethoate:** Toxic to wildlife and aquatic organisms. Do not apply after heading. Avoid runoff when spraying. REI: 48 hours.
- **Force:** Highly toxic to fish and other aquatic organisms. Do not apply directly to water or wetlands or within 20 yards of water. Rotate only to corn or soybeans. REI: 0 hours.
- **Gaucho 600:** Highly toxic to birds and aquatic invertebrates. Do not graze or feed livestock on treated seed areas for 45 days after planting. REI: 12 hours.
- **Intrepid:** Drift and runoff may be toxic to sensitive aquatic vertebrates. Do not apply by air within 150 feet or by ground within 25 feet of surface water. Do not apply within 21 days of harvest. REI: 4 hours.
- **Warrior II** Toxic to fish, aquatic organisms, and bees. Do not graze livestock on treated areas or harvest for livestock feed. Maximum active ingredient per acre per season: 0.12 lb. Preharvest interval: 21 days. REI: 24 hours.
- **Lannate:** Toxic to fish, birds, bees, and other wildlife. Keep out of any body of water. Do not graze or feed to livestock within 14 days of last application. Do not harvest grain within 14 days of last application. Maximum active ingredient per acre per season: 0.9 lb. REI: 48 hours.
- **Mustang Maxx:** Toxic to bees, fish, and aquatic vertebrates. Maximum active ingredient per acre per season: 0.10 lb. Preharvest interval: 30 days. REI: 12 hours.
- **Poncho:** Do not use treated seed for feed, food, or oil. Refer to the label for replant restrictions following treated seed planting. Treated seeds exposed to soil surface may be hazardous to wildlife.
- **Respect:** Toxic to bees, fish, and aquatic vertebrates. Maximum active ingredient per acre per season: 0.10 lb. Preharvest interval: 30 days. REI: 12 hours.
- **Tracer:** Toxic to bees. Do not apply to water. Do not apply more than 14.4 ounces per acre per year. Preharvest treatment for grain or fodder: seven days; for forage: 14 days. REI: 4 hours.

Corn seed treatments and their relative efficacy for control of seedling insect pests in field corn

(updated November 2023)

Table 11. Active Ingredient: Clothianidin

Insecticide	Rate	Corn billbug (Relative Efficacy for Insect Control[1])	White grubs (Relative Efficacy for Insect Control[1])	Wireworms (Relative Efficacy for Insect Control[1])	Seedcorn maggot (Relative Efficacy for Insect Control[1])	Cutworms[2] (Relative Efficacy for Insect Control[1])	Sugarcane beetle (Relative Efficacy for Insect Control[1])	Southern green stink bug (Relative Efficacy for Insect Control[1])	Brown stink bug (Relative Efficacy for Insect Control[1])	Chinch bug (Relative Efficacy for Insect Control[1])	Southern corn rootworm[2] (Relative Efficacy for Insect Control[1])	Western corn rootworm (Relative Efficacy for Insect Control[1])	Lesser cornstalk borer (Relative Efficacy for Insect Control[1])
PONCHO 250, NIPSIT INSIDE or ACCELERON[3]	0.25 mg a.i./kernel	NL	F	G	G	P	P	F	NL	G	E	NL	G, NL
PONCHO 500, NIPSIT INSIDE or ACCELERON with PONCHO VOTiVO 500[4]	0.50 mg a.i./kernel	F	E	G	E	P	F	G	NL	G-E	E	P, NL	G, NL
PONCHO 1250, NIPSIT INSIDEACCELERON with PONCHO VOTiVO 1250, or PONCHO VOTiVO[4]	1.25 mg a.i./kernel	G	E	E	E	F	G	G	G, NL	E	E	F-G	E, NL

Table 12. Active Ingredient: Thiamethoxam

Insecticide	Rate	Corn billbug (Relative Efficacy for Insect Control[1])	White grubs (Relative Efficacy for Insect Control[1])	Wireworms (Relative Efficacy for Insect Control[1])	Seedcorn maggot (Relative Efficacy for Insect Control[1])	Cutworms[2] (Relative Efficacy for Insect Control[1])	Sugarcane beetle (Relative Efficacy for Insect Control[1])	Southern green stink bug (Relative Efficacy for Insect Control[1])	Brown stink bug (Relative Efficacy for Insect Control[1])	Chinch bug (Relative Efficacy for Insect Control[1])	Southern corn rootworm[2] (Relative Efficacy for Insect Control[1])	Western corn rootworm (Relative Efficacy for Insect Control[1])	Lesser cornstalk borer (Relative Efficacy for Insect Control[1])
CRUISER MAXX 250[3]	0.25 mg a.i./kernel	NL	F	G	E	P	P	P	NL	F	G-E, NL	NL	G, NL

Insecticide	Rate	Corn billbug (Relative Efficacy for Insect Control[1])	White grubs (Relative Efficacy for Insect Control[1])	Wireworms (Relative Efficacy for Insect Control[1])	Seedcorn maggot (Relative Efficacy for Insect Control[1])	Cutworms[2] (Relative Efficacy for Insect Control[1])	Sugarcane beetle (Relative Efficacy for Insect Control[1])	Southern green stink bug (Relative Efficacy for Insect Control[1])	Brown stink bug (Relative Efficacy for Insect Control[1])	Chinch bug (Relative Efficacy for Insect Control[1])	Southern corn rootworm[2] (Relative Efficacy for Insect Control[1])	Western corn rootworm (Relative Efficacy for Insect Control[1])	Lesser cornstalk borer (Relative Efficacy for Insect Control[1])
PPST 250[6]	0.25 mg a.i./kernel	NL, F	F	G	E	P	P	P	NL	F	G-E, NL	NL	G, NL
CRUISER MAXX 500[3] or AVICTA COMPLETE CORN[4]	0.50 mg a.i./kernel	NL	G	G	E	P	P	F	NL	F	E	NL	G, NL
CRUISER MAXX 1250[3]	1.25 mg a.i./kernel	G	E	E	E	F	P	G	NL	G	E	P	E, NL

Table 13. Active Ingredient: Thiamethoxam + Chlorantranilirprole

Insecticide	Rate	Corn billbug (Relative Efficacy for Insect Control[1])	White grubs (Relative Efficacy for Insect Control[1])	Wireworms (Relative Efficacy for Insect Control[1])	Seedcorn maggot (Relative Efficacy for Insect Control[1])	Cutworms[2] (Relative Efficacy for Insect Control[1])	Sugarcane beetle (Relative Efficacy for Insect Control[1])	Southern green stink bug (Relative Efficacy for Insect Control[1])	Brown stink bug (Relative Efficacy for Insect Control[1])	Chinch bug (Relative Efficacy for Insect Control[1])	Southern corn rootworm[2] (Relative Efficacy for Insect Control[1])	Western corn rootworm (Relative Efficacy for Insect Control[1])	Lesser cornstalk borer (Relative Efficacy for Insect Control[1])
PPST 250 PLUS LUMIVIA[3]	0.25 mg a.i.+0.25 mg a.i./kernel	E	G[7]	G[7]	E	G[7]	P	P	NL	F	G-E, NL	NL	G, NL

Table 14. Active Ingredient: Imidacloprid

Insecticide	Rate	Corn billbug (Relative Efficacy for Insect Control[1])	White grubs (Relative Efficacy for Insect Control[1])	Wireworms (Relative Efficacy for Insect Control[1])	Seedcorn maggot (Relative Efficacy for Insect Control[1])	Cutworms[2] (Relative Efficacy for Insect Control[1])	Sugarcane beetle (Relative Efficacy for Insect Control[1])	Southern green stink bug (Relative Efficacy for Insect Control[1])	Brown stink bug (Relative Efficacy for Insect Control[1])	Chinch bug (Relative Efficacy for Insect Control[1])	Southern corn rootworm[2] (Relative Efficacy for Insect Control[1])	Western corn rootworm (Relative Efficacy for Insect Control[1])	Lesser cornstalk borer (Relative Efficacy for Insect Control[1])
IMIDA E-AG 5 FST, SENATOR 600, IMIDACLOPRID 5, ATTENDANT 600, NITROSHIELD IV	0.60 mg a.i./kernel [5]	NL	G	G	E	P, NL	P, NL	P, NL	NL	F	G, NL	NL	NL
LATITUDE[5]	3.5 oz./hundred-weight	NL	F, NL	G	G	NL	NL	NL	NL	F, NL	G, NL	NL	NL
CONCUR[3]	1.5 oz./42 lb. seed	NL	F	G	G	NL	NL	NL	NL	F, NL	G, NL	NL	NL

Table 15. Active Ingredient: Permethrin

Insecticide	Rate	Corn billbug (Relative Efficacy for Insect Control[1])	White grubs (Relative Efficacy for Insect Control[1])	Wireworms (Relative Efficacy for Insect Control[1])	Seedcorn maggot (Relative Efficacy for Insect Control[1])	Cutworms[2] (Relative Efficacy for Insect Control[1])	Sugarcane beetle (Relative Efficacy for Insect Control[1])	Southern green stink bug (Relative Efficacy for Insect Control[1])	Brown stink bug (Relative Efficacy for Insect Control[1])	Chinch bug (Relative Efficacy for Insect Control[1])	Southern corn rootworm[2] (Relative Efficacy for Insect Control[1])	Western corn rootworm (Relative Efficacy for Insect Control[1])	Lesser cornstalk borer (Relative Efficacy for Insect Control[1])
KERNEL GUARD SUPREME[3] or KICKSTART VP[3]	1.5 oz./42 lb. seed	NL	F, NL	P?	F	NL	NL	NL	NL	NL	NL	NL	NL

[1]E = highly effective, G = effective, F = inconsistent results, P = not effective, based on trials in the Southeastern U.S.; L = insect is on the label for this product; NL = insect is not on the label for this product. In this case, it is best to assume that the product is ineffective against that particular pest unless there is specific knowledge to the contrary about product efficacy in the Southeast.
[2]In the Southeast, several species of cutworms overwinter as medium to large-sized larvae. They may be capable of cutting considerable numbers of seedlings before they eat a lethal dose of the insecticide. Black cutworm, the cutworm that appears on the label of most of these products, has a different life cycle in which eggs are laid in the spring, so that black cutworm larvae will be small if they have hatched out by the time the corn is planted. Southern corn rootworm larvae are a seedling pest, not a mid-season pest like western corn rootworm larvae. **Ratings are based on input from the Southern Corn Insect Working Group which meets at the Annual Meeting of the Southeastern Branch of the Entomological Society of America.**
[3]Product name as marketed includes fungicides.
[4]Product name as marketed includes fungicides and a nematicide. AVICTA COMPLETE CORN contains abamectin; PONCHO VOTiVO contains *Bacillus firmus* I-1582.
[5]Other rates for this active ingredient are available. See label.
[6]Product name as marketed includes fungicides and a biological growth promoter.
[7]Product sell sheets state that this product provides enhanced control of white grubs, wireworms, and cutworms relative to PPST 250. Therefore, efficacy ratings were increased by one level relative to PPST 250.

Table 16. Bt corn products for 2024 in the Southern U.S. (updated October 2024).

Product trade name (Abbreviation)	Bt protein(s)	Corn earworm (ear) (Relative Efficacy for Insect Control[1])	Fall armyworm (whorl) (Relative Efficacy for Insect Control[1])	Corn borers[2] (stalk) (Relative Efficacy for Insect Control[1])	Black cutworm (seedling) (Relative Efficacy for Insect Control[1])	LCB[3] (seedling) (Relative Efficacy for Insect Control[1])	Herbicide tolerance[4]	Required refuge in the South[5]	Event(s)
Agrisure 3011	Cry1Ab mCry3A	P	F-G	E	P/F	G	GT LL	50%	Bt11, MIR604, GA21
Agrisure Viptera 3110	Vip3Aa20 Cry1Ab	E	E	E	VG	G	GT LL	20%	MIR162, Bt11, GA21
Agrisure Viptera 3111	Vip3Aa20 Cry1Ab mCry3A	E	E	E	VG	G	GT LL	20%	MIR162, Bt11, MIR604, GA21
Agrisure Viptera 3220	Vip3Aa20 Cry1Ab Cry1F	E	E	E	VG	VG	GT LL	20%	MIR162, Bt11, TC 1507, GA21
Optimum Intrasect (YHR)	Cry1F Cry1Ab	P	G	E	VG	VG	LL RR2	20%	TC 1507, MON810
Optimum Intrasect XTRA (YXR)	Cry1F Cry1Ab Gpp34Ab1/Tpp35Ab1	P	G	E	VG	VG	LL RR2	20%	TC 1507, MON810, DAS-59122-7
YieldGard VT Triple (VT3)	Cry1Ab Cry3Bb1	P	F	E	P	G	RR2	50%	MON810, MON88017
Genuity VT Double PRO (GENVT2P)	Cry1A.105 Cry2Ab2	P	VG	E	P	VG	RR2	20%	MON89034, NK603
Genuity VT Triple PRO (GENVT3P)	Cry1A.105 Cry2Ab2 Cry3Bb1	P	VG	E	P	VG	RR2	20%	MON89034, MON88017
POWERCORE	Cry1A.105 Cry2Ab2 Cry1F	P	E	E	G	VG	LL RR2	20%	MON89034, TC 1507, NK603

Product trade name (Abbreviation)	Bt protein(s)	Corn earworm (ear) (Relative Efficacy for Insect Control[1])	Fall armyworm (whorl) (Relative Efficacy for Insect Control[1])	Corn borers[2] (stalk) (Relative Efficacy for Insect Control[1])	Black cutworm (seedling) (Relative Efficacy for Insect Control[1])	LCB[3] (seedling) (Relative Efficacy for Insect Control[1])	Herbicide tolerance[4]	Required refuge in the South[5]	Event(s)
SmartStax (SSX, Dow) or Genuity SmartStax (GENSS, Monsanto)	Cry1A.105 Cry2Ab2 Cry1F Cry3Bb1 Cry34Ab1/Cry35Ab1	P	E	E	G	VG	LL RR2	20%	MON89034, TC 1507, MON88017, DAS-59122-7
Trecepta	Cry1A.105 Cry2Ab2 Vip3Aa20	E	E	E	VG	VG	RR2	20%	MON89034, NK603, MIR162,

[1]E = excellent, VG = very good, G = good, F = fair, P = poor. Excellent usually means better than 95% control. Poor means less than about 30% control.
[2]Southwestern corn borer, European corn borer, sugarcane borer, and others.
[3]Lepidopteran Bt traits do not specifically list lesser cornstalk borer (LCB) as a target pest.
[4]GT = Glyphosate tolerant; LL= Liberty Link (glufosinate tolerant); RR2= Roundup Ready 2 (glyphosate tolerant).
[5]See product Insect Resistance Management (IRM) documentation from the seed companies for more details.