

Chapter 17. Sweet Corn Production

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Botany and Planting

Sweet corn - *Zea mays* var. *rugosa*, Poaceae (Gramineae).

Table 17.1. Planting information for sweet corn.

Planting dates	
North Florida	Feb - Apr
Central Florida	Jan - Apr
South Florida	Oct - Mar
Planting information	
Distance between rows (in)	28 - 36
Distance between plants (in)	6 - 8
Seeding depth (in)	1.0 - 1.5
Seed per acre (lb)	6 - 15
Days to maturity from seed	64 - 90
Plant population (acre)	24,000 - 32,000

Cultivars

Table 17.2. Description of major sweet corn cultivars currently available.

Type	Genes controlling sweetness	Storage life (days)	Relative sugar content
Sugary	Full complement of sugary	1 to 3	Normal
Sugary Enhanced, also "Modified" and "EH"	Full complement of sugary (su) and half or full complement of sugary enhancer (se)	3 to 5	Slight to moderate or even high levels
Supersweet, also "Ultra", "Extra" sweet	No sugary (su); full complement of shrunken-2 (sh2)	5 to 10	High
Synergistic, also "Sweet-Gene Hybrid"	Full complement of sugary (su); and half complement of shrunken-2 (sh2)	3 to 5	Moderate
Improved Supersweet	Half complement of sugary (su); and full complement of shrunken-2 (sh2)	5 to 10	Very high
ADX	No sugary (su) or shrunken-2 (sh2) genes; full complement of ae, du, and wx genes.	5 to 10	Moderate to high

Table 17.3. Supersweet (shrunken-2) sweet corn cultivars arranged by kernel color.

Yellow		White		Bicolor		
Accentuate	Passion	3380 XT	Munition	Battalion	Crookham 423	Summer Sweet 2182
Brezza	Primetime	Crookham 433	Glacial	Beyond BC	2182	Summer Sweet 8102 R Plus
Beyond Multisweet	GSS 1170	Devotion		Big Time	Obsession	Honor XR
Crookham 382	Hercules			BSS 1075	Prestige	
1336	SV 1446			7143	Seminole Sweet	

Table 17.4. Herbicides approved for managing weeds in sweetcorn.

Labels change frequently. Be sure to read a current product label before applying any chemical.			
Active ingredient lb. a.i./A	Trade name product/A	MOA code	Weeds controlled / remarks
*** PREEMERGENCE ***			
Atrazine Mineral 1.0 - 2.0 Muck 2.0 - 3.0	(AAtrex) 4 L Mineral 2 - 4 pt. Muck 4 - 6 pt. (Aatrex Nine-0) 90 WDG Mineral 1.1 - 2.2 lb. Muck 2.2 - 3.3 lb.	5	Germinating broadleaf and grass weeds. Apply to moist soil. Do not exceed 2.5 lb. a.i./A per calendar year. Consult labels for plant back restrictions on rotational crops.
Carfentrazone up to 0.031	(Aim) 1.9 EW up to 2 fl. oz. (Aim) 2 EC up to 2 fl. oz.	14	Apply as a preplant burn down for emerged broadleaf weeds. Use crop oil concentrate, methylated seed oil, or nonionic surfactant at recommended rates. Maximum rate of 0.096 lb. a.i./A per season. No pretransplant interval.
Dimethenamid-P 0.56 - 0.84	(Outlook, Slider) 6 EC 12 - 18 fl. oz.	15	Annual broadleaf and grass weeds. After application incorporate into soil by rainfall, sprinkler irrigation, or mechanical tillage. Consult label for rate based on soil texture.
EPTC 4.0 - 6.0	(Eradicane) 6.7 E 4.75 - 7.33 pt.	8	Annual broadleaf, grass weeds and nutsedge. Use lower rates on lighter soils (sand). Control of perennial weeds such as bermudagrass or nutsedge is increased through incorporation.
Flufenacet 0.49 - 0.68	(Define DF) 60 DF 13 - 18 oz. (Define SC) 4 SC 15 - 19 fl. oz.	15	Annual broadleaf and grass weeds. Rainfall, irrigation, or light cultivation is required within 7 to 10 days of application. Consult label for rate based on soil texture.
Glyphosate	(various formulations) consult labels	9	Emerged broadleaf and grass weeds. Apply as a preplant burndown. Tank mix with a residual herbicide to broaden spectrum of weed control. Consult label for individual product directions.
Mesotrione 0.188 - 0.24	(Callisto) 4 L 6.0 - 7.7 fl. oz.	28	Annual broadleaf weeds. Tank mix with a preemergence grass herbicide for grass control. Do not exceed 7.7 fl. oz./A per season.
Paraquat 0.5 - 1.0	(Gramoxone) 2 SL 2.0 - 4.0 pt. (Firestorm) 3 SL 1.3 - 2.7 pt.	22	Emerged broadleaf and grass weeds. Apply as a preplant burndown. No more than 3 applications per year. Tank mix with a residual preemergence herbicide to broaden the spectrum of weed control.
Pendimethalin Mineral 0.75 - 1.0 Muck 1.0 - 2.0	(Acumen, Prowl) 3.3 EC Mineral 1.8 - 2.4 pt. Muck 2.4 - 4.8 pt. (Prowl H20) 3.8 Mineral 2.0 - 3.0 pt. Muck 2.0 - 4.0 pt.	3	Broadleaf and grass weeds. Overhead irrigation or rainfall is required within 7 days of application.
Pelargonic acid	(Scythe) 4.2 EC 3 - 10% v/v	27	Emerged broadleaf and grass weeds. Apply as a preplant burndown treatment. Product is a contact, nonselective, foliar applied herbicide with no residual control. May be tank mixed with soil residual compounds.
Pyraflufen 0.001 - 0.003	(ET Herbicide) 0.208 EC 0.5 - 2.0 fl. oz.	14	Emerged broadleaf weeds. Apply as a preplant burndown treatment.
S-metolachlor 1.0 - 1.6	(Brawl, Dual Magnum) 7.62 EC 1.0 - 1.67 pt. (Cinch, Dual II Magnum) 7.64 EC 1.0 - 1.67 pt.	15	Annual broadleaf and grass weeds. Use a lower rate on lighter soils. Weed control is increased with 0.5 to 1 in. of rainfall or irrigation. Do not exceed 3.9 pt./A per crop year depending on soil texture.
Simazine 2.0	(Princep, Simazine) 4 L 2.0 qt. (Princep, Simazine) 90 WDG 2.2 lb.	5	Broadleaf and grass weeds. If a second application is required do not exceed 2.5 lb. a.i./A per calendar year. Simazine 4 L and Simazine 90 DF can be applied to muck soils at 2.5 lb. a.i./A. PHI 45 days.
*** POSTEMERGENCE ***			
Atrazine Mineral 1.0 - 2.0 Muck 2.0 - 3.0	(AAtrex) 4 L Mineral 2 - 4 pt. Muck 4 - 6 pt. (Aatrex Nine-0) 90 WDG Mineral 1.1 - 2.2 lb. Muck 2.2 - 3.3 lb.	5	Broadleaf and some grass weeds. Apply before weeds exceed 1.5 in. tall and before corn exceeds 12 in. in height. Do not exceed 2.5 lb. a.i./A per calendar year. Consult label for plant back restrictions on rotational crops.
Bentazon 0.75 - 1.0	(Basagran) 4 L 1.5 - 2.0 pt.	6	Certain broadleaf and sedge weeds. Consult label for weeds controlled/weed size table. Do not apply more than 4 pt./A per season.

Table 17.4. Herbicides approved for managing weeds in sweetcorn. (continued)

Labels change frequently. Be sure to read a current product label before applying any chemical.			
Active ingredient lb. a.i./A	Trade name product/A	MOA code	Weeds controlled / remarks
Carfentrazone 0.008 - 0.016	(Aim) 1.9 EW 0.5 - 1.0 fl. oz (Aim) 2 EC 0.5 - 1.0 fl. oz	14	Emerged broadleaf weeds. Apply up to the 14-leaf stage of corn growth. After the V8 stage of growth, apply as a directed application. Do not apply more than 2.0 fl. oz./A per season including preplant burndown and crop application. PHI 3 days.
Halosulfuron 0.03 - 0.05	(Sanda) 75 DF 0.6 - 1.0 oz.	2	Broadleaf and nutsedge weeds. Apply over-the-top or with drop nozzles from the spike to the layby stage of corn. A sequential application of 0.66 oz./A may be with drop nozzles to avoid application to the plant whorl. No more than 2 applications per year.
Mesotrione 0.094	(Callisto) 4 L 3 fl. oz.	28	Broadleaf weeds. Treat up to 30 in. tall or up to the 8-leaf stage. Include a crop oil concentrate or nonionic surfactant in the spray solution. Slight leaf bleaching may occur. Do not exceed 7.7 fl. oz./A per season.
Nicosulfuron 0.03 - 0.06	(Accent) 75 WDG 0.6 - 1.3 oz. (Accent Q) 54.5 WDG 0.9 - 1.8 oz.	2	Broadleaf and grass weeds. Sensitivity to sweet corn varieties is variable. Do not apply to 'Merit' sweet corn. Do not apply to corn that has previously been treated with 'Counter', 'Lorsban', or 'Thimet' insecticides for this may result in injury. Consult label for acceptable insecticides. Apply broadcast to corn plants less than 12 in. tall. Apply with drop nozzles to direct spray to corn plants 12 - 18 in. tall.
Pendimethalin Mineral 0.75 - 1.0 Muck 1.0 - 2.0	(Acumen, Prowl) 3.3 EC Mineral 1.8 - 2.4 pt. Muck 2.4 - 4.8 pt. (Prowl H20) 3.8 Mineral 2.0 - 3.0 pt. Muck 2.0 - 4.0 pt.	3	Broadleaf and grass weeds. Apply after 4 in. tall until corn is 20 to 24 in. tall or the V8 growth stage. Direct the spray to the base of the plants.
S-metolachlor up to 1.9	(Brawl, Dual Magnum) 7.62 EC up to 2.0 pt. (Cinch, Dual II Magnum) 7.64 EC up to 2.0 pt.	15	Annual broadleaf and grass weeds. Apply after crop emergence up to 40 in. in height. Direct spray to the base of the plants when plants are taller than 5 in. Use a lower rate on lighter soils. Weed control is increased with 0.5 to 1 in. of rainfall or irrigation. DO not exceed 3.9 pt./A per crop year depending on soil texture. PHI 30 days.
Tembotrione 0.08	(Laudis) 3.5 EC 3 fl. oz.	28	Annual broadleaf and grass weeds. Crop tolerance is dependent on variety so apply to a small area if tolerance is unknown. Do not use on Merit or Shogun varieties. May be applied from corn emergence through the V7 stage of growth. Do not exceed 3 fl. oz./A per season.
Topramezone 0.02 - 0.022	(Armezon, Impact) 2.8 0.75 - 1.0 fl. oz.	28	Broadleaf and grass weeds. Consult label for maximum size of certain weed species for control. PHI 45 days.

Table 17.5. Insecticides labeled for management of arthropod pests of sweet corn.

Labels change frequently. Be sure to read a current product label before applying any chemical.						
Also refer to Table 19.1 for biopesticide and other alternative products labeled for disease management.						
Insect or mite pest	MOA Code ¹	Trade Name (Active Ingredient) *Restricted	Rate (Product/acre)	REI (hours)	Days to Harvest	Remarks ²
Aphids	1A	*Lannate LV, *Lannate SP (methomyl)	LV: 0.75-1.5 pt; SP: 0.25-0.50 lb	48	0 - ears, 3 - forage, 21 - stover	Certain hybrid varieties are susceptible to methomyl injury. Treat a small area to determine safety first.
	1B	*Lorsban 75WG, *Advanced, 15G (chlorpyrifos)	75WG: 0.33-1.33 lb; Advanced: 1.0-2.0 pt; 15G: 8 oz per 1000 ft of row	24	75WG: 21 - ears, forage; 15G: at planting	Do not feed treated corn silage, forage, or fodder, or allow livestock to graze. Do not make more than 3 applications of any product containing chlorpyrifos per season.
	3A	*Asana XL (0.66EC) (esfenvalerate)	5.8-9.6 fl oz	12	1	Do not apply more than 0.5 lb ai/acre per season (10 applications at highest rate).
	3A	*Brigade 2EC (bifenthrin)	2.1-6.4 fl oz	12	1	Use of Brigade is prohibited in coastal counties. Maximum of 12.8 fl oz/acre per season. Many other brands available with same active ingredient.
	3A	*Capture LFR (bifenthrin)	4.0-5.3 fl oz (pre-plant incorporated); 3.4-13.6 fl oz (at plant); 3.4 fl oz (pre- emergence)	12	pre-plant incorporated, at planting, pre-emergence application	For mixing with liquid fertilizer. Maximum of 0.2 lb ai/acre per season of all bifenthrin products. Many other brands available with same active ingredient.

Table 17.5. Insecticides labeled for management of arthropod pests of sweet corn. (continued)

Labels change frequently. Be sure to read a current product label before applying any chemical.
Also refer to Table 19.1 for biopesticide and other alternative products labeled for disease management.

Insect or mite pest	MOA Code ¹	Trade Name (Active Ingredient) <i>*Restricted</i>	Rate (Product/acre)	REI (hours)	Days to Harvest	Remarks ²
	3A	*Mustang (zeta-cypermethrin)	2.4-4.3 fl oz	12	3	Maximum of 0.3 lb ai/acre per season.
	3A	PyGanic Crop Protection EC 5.0 (pyrethrins)	4.5-18 fl oz	12	0	Thorough coverage is essential. Breaks down rapidly in sunlight. OMRI-listed ² .
	3A, 3A	Hero Insecticide (bifenthrin, zeta-cypermethrin)	4.0-10.3 fl oz	12	3	Maximum of 27.39 fl oz/acre per season (0.266 lb ai). See label when using more than one product containing bifenthrin or zeta-cypermethrin.
	4A	Assail 30SG (acetamiprid)	2.1-2.9 oz	12	1	Maximum of 11.2 oz/acre per growing season. Do not exceed 2 crop seasons per year.
	4A, 15	Cormoran (acetamiprid, novaluron)	9-12 fl oz	12	7	Maximum of 40 fl oz/acre per season or 0.21 lb ai acetamiprid and 0.39 lb ai novaluron /acre per year.
	4D	Sivanto Prime (Flupyradifurone)	7.0-14.0 fl oz	4	7 - ears and forage, 21 - stover	Maximum of 28 fl oz/acre per year.
	-	Aza-Direct (azadirachtin)	1-2 pts, up to 3.5 pts, if needed	4	0	Antifeedant, repellent, insect growth regulator. OMRI-listed ² .
	-	Azatin XL (azadirachtin)	5-21 fl oz	4	0	Antifeedant, repellent, insect growth regulator.
	-	BotaniGard ES, Mycotrol ESO (<i>Beauveria bassiana</i> strain GHA)	0.25-1 qt	4	0	Apply in sufficient water to cover foliage, typically 5-100 gallon/acre. Compatible in tank mix with some fungicides. Mycotrol ESO OMRI-listed ² .
	-	Grandevo (<i>Chromobacterium subtsugae</i> strain PRAA4-1)	2-3 lb	4	0	OMRI-listed ² .
	-	Molt-X (azadirachtin)	10 fl oz	4	0	OMRI-listed ² .
	-	Neemix 4.5 (azadirachtin)	4-16 fl oz	4	0	OMRI-listed ² .
	-	Oil, insecticidal (e.g., Suffoil-X)	1-2 gal/100 gal, depending on brand	4	0	OMRI-listed ² depending on brand.
	-	Trilogy (extract of neem oil)	1.0-2.0% v/v	4	0	Apply morning or evening to reduce potential for leaf burn. Toxic to bees exposed to direct treatment.
Beetles (includes banded cucumber beetle, flea beetles, sap beetles, seed corn beetle)	1A	*Lannate LV, *Lannate SP (methomyl)	LV: 0.75-1.5 pt; SP: 0.25-0.50 lb	48	0 - ears, 3 - forage, 21 - stover	Certain hybrid varieties are susceptible to methomyl injury. Treat a small area to determine safety first.
	1A	Sevin 4F; XLR Plus (carbaryl)	1-2 qt	24 (21 days for detasseling workers)	2 - ears, 14 - forage, 48 - fodder	Maximum of 16 qt/acre per crop per year. Highly toxic to bees.
	1B, 3A	*Cobalt Advanced (chlorpyrifos, lambda-cyhalothrin)	6-42 fl oz	24	21	See label for application methods and many restrictions.
	1B	*Counter 15G Lock 'n Load (terbufos)	6.0-8.0 oz per 1000 ft of row, banded or in furrow; post emergence incorporated, 8 oz per 1000 ft of row at cultivation	48	60	Only one application (at-planting, post-emergence incorporated, or cultivation time treatment) per season. Do not exceed 8.7 lb/acre. 20G formulation also available.
	1B	*Thimet 20-G (phorate)	4.5-6.0 oz per 1000 ft of row	48	at planting	One application per season, no more than 6.5 lb/acre per season.
	3A	*Ambush 25W (permethrin)	6.4-16.0 oz	12	1	Do not apply more than 2.0 lb ai/acre per season. Rates above 12.8 oz are for Florida only.
	3A	*Asana XL (0.66EC) (esfenvalerate)	5.8-9.6 fl oz	12	1	Do not apply more than 0.5 lb ai/acre per season (10 applications at highest rate).
	3A	*Baythroid XL (beta-cyfluthrin)	0.8-2.8 fl oz	12	0	Maximum of 28 fl oz/acre per season. Maximum of 10 applications.

Table 17.5. Insecticides labeled for management of arthropod pests of sweet corn. (continued)

Labels change frequently. Be sure to read a current product label before applying any chemical. Also refer to Table 19.1 for biopesticide and other alternative products labeled for disease management.						
Insect or mite pest	MOA Code ¹	Trade Name (Active Ingredient) *Restricted	Rate (Product/acre)	REI (hours)	Days to Harvest	Remarks ²
	3A	*Brigade 2EC (bifenthrin)	2.1-6.4 fl oz	12	1	Use of Brigade is prohibited in coastal counties. Maximum of 12.8 fl oz/acre per season. Many other brands available with same active ingredient.
	3A	*Capture LFR (bifenthrin)	4.0-5.3 fl oz (pre-plant incorporated); 3.4-13.6 fl oz (at plant); 3.4 fl oz (pre-emergence)	12	pre-plant incorporated, at planting, pre-emergence application	For mixing with liquid fertilizer. Maximum of 0.2 lb ai/acre per season of all bifenthrin products. Many other brands available with same active ingredient.
	3A	*Declare (gamma-cyhalothrin)	1.02-1.54 fl oz	24	1 - ears, 21 -fodder	Maximum of 24.6 fl oz/acre per crop.
	3A	*Force 3G (tefluthrin)	variable depending on row spacing	0	at planting or cultivation within 30 days of seedling emergence	Only one application per crop. Granules must be incorporated.
	3A	*Mustang (zeta-cypermethrin)	2.4-4.3 fl oz	12	3	Maximum of 25.8 fl oz/acre per season.
	3A	PyGanic Crop Protection EC 5.0 (pyrethrins)	4.5-18 fl oz	12	0	Thorough coverage is essential. Breaks down rapidly in sunlight. OMRI-listed ² .
	3A	*Warrior II (lambda-cyhalothrin)	0.33 fl oz/1000 ft of row (at plant); 1.28-1.92 fl oz (foliar)	24	1 - ears (foliar), 21 for feeding livestock or at plant applications	Maximum of 30.72 fl oz/acre per crop. Many other brands with same active ingredient are available.
	3A, 3A	Hero Insecticide (bifenthrin, zeta-cypermethrin)	4.0-10.3 fl oz	12	3	Maximum of 27.39 fl oz/acre per season (0.266 lb ai). See label when using more than one product containing bifenthrin or zeta-cypermethrin.
	3A, 28	*Besiege (lambda-cyhalothrin, chlorantraniliprole)	6-10 fl oz	24	1	Maximum of 31 fl oz/acre per year.
	4A	Assail 30SG (acetamiprid)	4.0-5.3 oz	12	7	Maximum of 11.2 oz/acre per growing season. Do not exceed 2 crop seasons per year.
	4A, 15	Cormoran (acetamiprid, novaluron)	9-12 fl oz	12	7	Maximum of 40 fl oz/acre per season or 0.21 lb ai acetamiprid and 0.39 lb ai novaluron /acre per year.
	15	Rimon 0.83EC (novaluron)	6-12 fl oz	12	1	Maximum of 60 fl oz/acre per season.
	-	Aza-Direct (azadirachtin)	1-2 pts, up to 3.5 pts, if needed	4	0	Antifeedant, repellent, insect growth regulator. OMRI-listed ² .
	-	Azatin XL (azadirachtin)	5-21 fl oz	4	0	Antifeedant, repellent, insect growth regulator.
	-	Grandevo (<i>Chromobacterium subtsugae</i> strain PRAA4-1)	2-3 lb	4	0	OMRI-listed ² .
Caterpillars (includes beet armyworm, corn borer, corn earworm, cutworms, fall armyworm, webworms)	1A	*Lannate LV, *Lannate SP (methomyl)	LV: 0.75-1.5 pt; SP: 0.25-0.50 lb	48	0 - ears, 3 - forage, 21 - stover	Certain hybrid varieties are susceptible to methomyl injury. Treat a small area to determine safety first.
	1A	*Methomyl 5G (methomyl)	1.5-3.0 lbs	48	3 - forage, 21 - ears	For corn earworm and fall armyworm control. Apply as a banded application, directing granules to the whorl of the plants. Apply from the 4th leaf stage until tasseling. Maximum of 30 lbs/acre or 5 applications per season.
	1A	Sevin 4F; XLR Plus (carbaryl)	1-2 qt	24 (21 days for detasseling workers)	2 - ears, 14 - forage, 48 - fodder	Maximum of 16 qt/acre per crop per year. Highly toxic to bees.
	1B, 3A	*Cobalt Advanced (chlorpyrifos, lambda-cyhalothrin)	6-42 fl oz	24	21	See label for application methods and many restrictions.

Table 17.5. Insecticides labeled for management of arthropod pests of sweet corn. (continued)

Labels change frequently. Be sure to read a current product label before applying any chemical.
Also refer to Table 19.1 for biopesticide and other alternative products labeled for disease management.

Insect or mite pest	MOA Code ¹	Trade Name (Active Ingredient) *Restricted	Rate (Product/acre)	REI (hours)	Days to Harvest	Remarks ²
	1B	*Counter 15G Lock 'n Load (terbufos)	6.0-8.0 oz per 1000 ft of row, banded or in furrow; post emergence incorporated, 8 oz per 1000 ft of row at cultivation	48	60	Only one application (at-planting, post-emergence incorporated, or cultivation time treatment) per season. Do not exceed 8.7 lb/acre. 20G formulation also available.
	1B	Lorsban 75WG, *Advanced, 15G (chlorpyrifos)	75WG: 0.33-1.33 lb; Advanced: 1.0-2.0 pt; 15G: 8 oz per 1000 ft of row	24	75WG: 21 - ears, forage; 15G: at planting	Do not feed treated corn silage, forage, or fodder, or allow livestock to graze. Do not make more than 3 applications of any product containing chlorpyrifos per season. See 24(c) SLN for Lorsban Advanced for control of beet armyworm, fall armyworm, and corn earworm larvae (7 day PHI).
	1B	*Mocap 15G (ethoprop)	See label.	48	at planting	One application per growing season.
	3A	*Ambush 25W (permethrin)	6.4-16.0 oz	12	1	Do not apply more than 2.0 lb ai/acre per season. Rates above 12.8 oz are for Florida only.
	3A	*Asana XL (0.66EC) (esfenvalerate)	5.8-9.6 fl oz	12	1	Do not apply more than 0.5 lb ai/acre per season (10 applications at highest rate).
	3A	*Baythroid XL (beta-cyfluthrin)	0.8-2.8 fl oz	12	0	Maximum of 28 fl oz/acre per season. Maximum of 10 applications.
	3A	*Brigade 2EC (bifenthrin)	0.15-0.30 fl oz/1000 ft of row (in-furrow T-band at plant); 2.1-6.4 fl oz (foliar)	12	1	Use of Brigade is prohibited in coastal counties. Maximum of 12.8 fl oz/acre per season. Many other brands available with same active ingredient.
	3A	*Capture LFR (bifenthrin)	4.0-5.3 fl oz (pre-plant incorporated); 3.4-13.6 fl oz (at plant); 3.4 fl oz (pre-emergence)	12	pre-plant incorporated, at planting, pre-emergence application	For mixing with liquid fertilizer. Maximum of 0.2 lb ai/acre per season of all bifenthrin products. Many other brands available with same active ingredient.
	3A	*Declare (gamma-cyhalothrin)	1.02-1.54 fl oz	24	1 - ears, 21- fodder	Maximum of 24.6 fl oz/acre per crop.
	3A	*Force 3G (tefluthrin)	depends on row spacing	0	at planting or cultivation within 30 days of seedling emergence	Only one application per crop. Granules must be incorporated.
	3A	*Mustang (zeta-cypermethrin)	2.4-4.3 oz	12	3	Maximum of 0.3 lb ai/acre per season.
	3A	PyGanic Crop Protection EC 5.0 (pyrethrins)	4.5-18 fl oz	12	0	Thorough coverage is essential. Breaks down rapidly in sunlight. OMRI-listed ² .
	3A	*Warrior II (lambda-cyhalothrin)	0.33 fl oz/1000 ft of row (at plant); 1.28-1.92 fl oz (foliar)	24	1 - ears (foliar), 21 for feeding livestock or at plant applications	Maximum of 30.72 fl oz/acre per crop. Many other brands with same active ingredient are available.
	3A, 3A	Hero Insecticide (bifenthrin, zeta-cypermethrin)	4.0-10.3 fl oz	12	3	Maximum of 27.39 fl oz/acre per season (0.266 lb ai). See label when using more than one product containing bifenthrin or zeta-cypermethrin.
	3A, 28	*Besiege (lambda-cyhalothrin, chlorantraniliprole)	6-10 fl oz	24	1	Maximum of 31 fl oz/acre per year.
	4A, 15	Cormoran (acetamiprid, novaluron)	9-12 fl oz	12	7	Maximum of 40 fl oz/acre per season or 0.39 lb ai novaluron and 0.21 lb ai acetamiprid /acre per year.
	5	Entrust SC (spinosad)	1.5-6.0 fl oz	4	1 - ears, 7 - forage, 28 fodder	Maximum of 29 fl oz/acre per year or 6 applications. OMRI-listed ² .
	5	Radiant SC (spinetoram)	3-6 fl oz	4	1 - ears, 3 - forage or fodder	Maximum of 36 fl oz/acre per year or 6 applications.
	5, 18	Intrepid Edge (spinetoram, methoxyfenozide)	4-12 fl oz	4	3 - ears and forage, 21 dry fodder	Maximum of 51 fl oz/acre per year (1 lb ai methoxyfenozide, 0.2 lb ai spinetoram) or 6 applications.

Table 17.5. Insecticides labeled for management of arthropod pests of sweet corn. (continued)

Labels change frequently. Be sure to read a current product label before applying any chemical. Also refer to Table 19.1 for biopesticide and other alternative products labeled for disease management.						
Insect or mite pest	MOA Code ¹	Trade Name (Active Ingredient) *Restricted	Rate (Product/acre)	REI (hours)	Days to Harvest	Remarks ²
	11A	Agree WG (<i>Bacillus thuringiensis</i> subspecies <i>aizawai</i>)	1.0-2.0 lb	4	0	Apply when larvae are small for best control. OMRI-listed ² .
	11A	Biobit HP (<i>Bacillus thuringiensis</i> subspecies <i>kurstaki</i>)	0.5-2.0 lb	4	0	Treat when larvae are young. Good coverage is essential. Can be used in the greenhouse. OMRI-listed ² .
	11A	Crymax WDG (<i>Bacillus thuringiensis</i> subspecies <i>kurstaki</i>)	0.5-2.0 lb	4	0	Use high rate for armyworms. Treat when larvae are young. Not for organic production.
	11A	Deliver (<i>Bacillus thuringiensis</i> subspecies <i>kurstaki</i>)	0.25-1.5 lb	4	0	Use higher rates for armyworms. OMRI-listed ² .
	11A	DiPel DF (<i>Bacillus thuringiensis</i> subspecies <i>kurstaki</i>)	0.5-2.0 lb	4	0	Treat when larvae are young. Good coverage is essential. For organic production.
	11A	Javelin WG (<i>Bacillus thuringiensis</i> subspecies <i>kurstaki</i>)	0.12-1.50 lb	4	0	Treat when larvae are young. Thorough coverage is essential. OMRI-listed ² .
	11A	Xentari DF (<i>Bacillus thuringiensis</i> subspecies <i>aizawai</i>)	0.5-2.0 lb	4	0	Treat when larvae are young. Thorough coverage is essential. May be used in the greenhouse. Can be used in organic production.
	15	Rimon 0.83EC (novaluron)	6-12 fl oz	12	1	Maximum of 60 fl oz/acre per season.
	18	Intrepid 2F (methoxyfenozide)	4-16 fl oz	4	3 - ears and forage, 21 dry fodder	Maximum of 64 fl oz/acre per year.
	22	Avaunt, Avaunt eVo (indoxacarb)	2.5-3.5 oz	12, (14 days for hand harvesting)	3 - ears, 35 - fodder and stover	Whorl stage through tassel push applications only. Maximum of 14 oz/acre per crop, or 4 applications/acre per crop, or 42 oz/acre per year.
	28	Coragen (chlorantraniliprole)	3.5-7.5 fl oz	4	1	Foliar only. Maximum of 15.4 fl oz/acre, or 4 applications, or 0.2 lb ai/acre chlorantraniliprole per year.
	-	Aza-Direct (azadirachtin)	1-2 pts, up to 3.5 pts, if needed	4	0	Antifeedant, repellent, insect growth regulator. OMRI-listed ² .
	-	Azatin XL (azadirachtin)	5-21 fl oz	4	0	Antifeedant, repellent, insect growth regulator.
	-	Grandevo (<i>Chromobacterium subtsugae</i> strain PRAA4-1)	1-3 lb	4	0	OMRI-listed ² .
	-	Molt-X (azadirachtin)	10 fl oz	4	0	OMRI-listed ² .
	-	Neemix 4.5 (azadirachtin)	4-16 fl oz	4	0	OMRI-listed ² .
	-	Oil, insecticidal	1-2 gal/100 gal, depending on brand	4	0	
Chinch bugs	1A	Sevin 4F; XLR Plus (carbaryl)	1-2 qt	24 (21 days for detasseling workers)	2 - ears, 14 - forage, 48 - fodder	Maximum of 16 qt/acre per crop per year. Highly toxic to bees.
	1B, 3A	*Cobalt Advanced (chlorpyrifos, lambda-cyhalothrin)	6-42 fl oz	24	21	See label for application methods and many restrictions.

Table 17.5. Insecticides labeled for management of arthropod pests of sweet corn. (continued)

Labels change frequently. Be sure to read a current product label before applying any chemical.						
Also refer to Table 19.1 for biopesticide and other alternative products labeled for disease management.						
Insect or mite pest	MOA Code¹	Trade Name (Active Ingredient) *Restricted	Rate (Product/acre)	REI (hours)	Days to Harvest	Remarks²
	1B	*Counter 15G Lock 'n Load (terbufos)	6.0-8.0 oz per 1000 ft of row, banded or in furrow; post emergence incorporated, 8 oz per 1000 ft of row at cultivation	48	60	Only one application (at-planting, post-emergence incorporated, or cultivation time treatment) per season. Do not exceed 8.7 lb/acre. 20G formulation also available.
	3A	*Asana XL (0.66EC) (esfenvalerate)	5.8-9.6 fl oz	12	1	Do not apply more than 0.5 lb ai/acre per season (10 applications at highest rate).
	3A	*Baythroid XL (beta-cyfluthrin)	0.8-2.8 fl oz	12	0	Maximum of 28 fl oz/acre per season. Maximum of 10 applications.
	3A	*Brigade 2EC (bifenthrin)	2.1-6.4 fl oz	12	1	Use of Brigade is prohibited in coastal counties. Maximum of 12.8 fl oz/acre per season. Many other brands available with same active ingredient.
	3A	*Force 3G (tefluthrin)	depends on row spacing	0	at planting or cultivation within 30 days of seedling emergence	Only one application per crop. Granules must be incorporated.
	3A	*Mustang (zeta-cypermethrin)	2.4-4.3 oz	12	3	Maximum of 0.3 lb ai/acre per season.
	3A	*Warrior II (lambda-cyhalothrin)	1.28-1.92 fl oz	24	1 - ears, 21 - feeding livestock	Maximum of 30.72 fl oz/acre per crop. Many other brands with same active ingredient are available.
	3A, 3A	Hero Insecticide (bifenthrin, zeta-cypermethrin)	4.0-10.3 fl oz	12	3	Maximum of 27.39 fl oz/acre per season (0.266 lb ai). See label when using more than one product containing bifenthrin or zeta-cypermethrin.
	3A, 28	*Besiege (lambda-cyhalothrin, chlorantraniliprole)	6-10 fl oz	24	1	Maximum of 31 fl oz/acre per year.
	-	Grandevo (<i>Chromobacterium subtsugae</i> strain PRAA4-1)	2-3 lb	4	0	OMRI-listed ² .
Corn silkworms	3A	*Asana XL (0.66EC) (esfenvalerate)	5.8-9.6 fl oz	12	1	Do not apply more than 0.5 lb ai/acre per season (10 applications at highest rate).
	3A	*Baythroid XL (beta-cyfluthrin)	0.8-2.8 fl oz	12	0	Maximum of 28 fl oz/acre per season. Maximum of 10 applications.
	3A	*Mustang (zeta-cypermethrin)	2.4-4.3 oz	12	3	Maximum of 0.3 lb ai/acre per season.
	3A	*Warrior II (lambda-cyhalothrin)	1.92 fl oz	24	1 - ears, 21 - feeding livestock	Maximum of 30.72 fl oz/acre per crop. Many other brands with same active ingredient are available.
	3A, 28	*Besiege (lambda-cyhalothrin, chlorantraniliprole)	10 fl oz	24	1	Maximum of 31 fl oz/acre per year.
	3A, 3A	Hero Insecticide (bifenthrin, zeta-cypermethrin)	4.0-10.3 fl oz	12	3	Maximum of 27.39 fl oz/acre per season (0.266 lb ai). See label when using more than one product containing bifenthrin or zeta-cypermethrin.
	4A	Assail 30SG (acetamiprid)	4.0-5.3 oz	12	7	Maximum of 11.2 oz/acre per growing season. Do not exceed 2 crop seasons per year.
	4A, 15	Cormoran (acetamiprid, novaluron)	12 fl oz	12	7	Maximum of 40 fl oz/acre per season or 0.21 lb ai acetamiprid and 0.39 lb ai novaluron /acre per year.
Fire ants	3A	*Force 3G Insecticide (tefluthrin)	depends on row spacing	0	at planting or cultivation within 30 days of seedling emergence	Only one application per crop. Granules must be incorporated.
	7A	Extinguish ((S)-methoprene)	1-1.5 lb	4	0	Slow-acting insect growth regulator (IGR). Best applied early spring and fall where crop will be grown. Colonies will be reduced after three weeks and eliminated after 8 to 10 weeks. May be applied by ground equipment or aerially.

Table 17.5. Insecticides labeled for management of arthropod pests of sweet corn. (continued)

Labels change frequently. Be sure to read a current product label before applying any chemical. Also refer to Table 19.1 for biopesticide and other alternative products labeled for disease management.						
Insect or mite pest	MOA Code ¹	Trade Name (Active Ingredient) *Restricted	Rate (Product/acre)	REI (hours)	Days to Harvest	Remarks ²
Grasshoppers	1B, 3A	*Cobalt Advanced (chlorpyrifos, lambda-cyhalothrin)	6-42 fl oz	24	21	See label for application methods and many restrictions.
	1B	Lorsban 75WG, *Advanced, 15G (chlorpyrifos)	75WG: 0.33-1.33 lb; Advanced: 0.5-2.0 pt 15G: 8 oz per 1000 ft of row	24	75WG: 21 - ears, forage; 15G: at planting	Do not feed treated corn silage, forage, or fodder, or allow livestock to graze. Do not make more than 3 applications of any product containing chlorpyrifos per season.
	3A	*Asana XL (0.66EC) (esfenvalerate)	5.8-9.6 fl oz	12	1	Do not apply more than 0.5 lb ai/acre per season (10 applications at highest rate).
	3A	*Baythroid XL (beta-cyfluthrin)	0.8-2.8 fl oz	12	0	Maximum of 28 fl oz/acre per season. Maximum of 10 applications.
	3A	*Brigade 2EC (bifenthrin)	2.1-6.4 fl oz	12	1	Use of Brigade is prohibited in coastal counties. Maximum of 12.8 fl oz/acre per season. Many other brands available with same active ingredient.
	3A	*Mustang (zeta-cypermethrin)	2.4-4.3 oz	12	3	Maximum of 0.3 lb ai/acre per season.
	3A	*Warrior II (lambda-cyhalothrin)	1.28-1.92 fl oz	24	1 - ears, 21 - feeding livestock	Maximum of 30.72 fl oz/acre per crop. Many other brands with same active ingredient are available.
	3A,3A	Hero Insecticide (bifenthrin, zeta-cypermethrin)	4.0-10.3 fl oz	12	3	Maximum of 27.39 fl oz/acre per season (0.266 lb ai). See label when using more than one product containing bifenthrin or zeta-cypermethrin.
	3A, 28	*Besiege (lambda-cyhalothrin, chlorantraniliprole)	6-10 fl oz	24	1	Maximum of 31 fl oz/acre per year.
	4A, 15	Cormoran (acetamiprid, novaluron)	9-12 fl oz	12	7	Maximum of 40 fl oz/acre per season or 0.21 lb ai acetamiprid and 0.39 lb ai novaluron /acre per year.
	15	Rimon 0.83EC (novaluron)	6-12 fl oz	12	1	Maximum of 60 fl oz/acre per season.
	28	Coragen (chlorantraniliprole)	2.0-5.0 fl oz	4	1	Foliar only. Maximum of 15.4 fl oz/acre, or 4 applications, or 0.2 lb ai/acre chlorantraniliprole per year.
	Leafhoppers	1A	Sevin 4F; XLR Plus (carbaryl)	1-2 qt	24 (21 days for detasseling workers)	2 - ears, 14 - forage, 48 - fodder
3A		*Ambush 25W (permethrin)	6.4-16.0 oz	12	1	Do not apply more than 2.0 lb ai/acre per season. Rates above 12.8 oz are for Florida only.
3A		*Mustang (zeta-cypermethrin)	2.4-4.3 oz	12	3	Maximum of 0.3 lb ai/acre per season.
3A		PyGanic Crop Protection EC 5.0 (pyrethrins)	4.5-18 fl oz	12	0	Thorough coverage is essential. Breaks down rapidly in sunlight. OMRI-listed ² .
3A		*Warrior II (lambda-cyhalothrin)	1.28-1.92 fl oz	24	1 - ears, 21 - feeding livestock	Maximum of 30.72 fl oz/acre per crop. Many other brands with same active ingredient are available.
3A, 3A		Hero Insecticide (bifenthrin, zeta-cypermethrin)	4.0-10.3 fl oz	12	3	Maximum of 27.39 fl oz/acre per season (0.266 lb ai). See label when using more than one product containing bifenthrin or zeta-cypermethrin.
3A, 28		*Besiege (lambda-cyhalothrin, chlorantraniliprole)	6-10 fl oz	24	1	Maximum of 31 fl oz/acre per year.
4D		Sivanto Prime (flupyradifurone)	7.0-14.0 fl oz	4	7 - ear and forage, 21 - stover	Maximum of 28 fl oz/acre per year.
-		Aza-Direct (azadirachtin)	1-2 pts, up to 3.5 pts, if needed	4	0	Antifeedant, repellent, insect growth regulator. OMRI-listed ² .
-		Molt-X (azadirachtin)	10 fl oz	4	0	OMRI-listed ² .

Table 17.5. Insecticides labeled for management of arthropod pests of sweet corn. (continued)

Labels change frequently. Be sure to read a current product label before applying any chemical.
Also refer to Table 19.1 for biopesticide and other alternative products labeled for disease management.

Insect or mite pest	MOA Code ¹	Trade Name (Active Ingredient) *Restricted	Rate (Product/acre)	REI (hours)	Days to Harvest	Remarks ²
Soil pests (includes corn rootworms, seed corn maggot, white grubs, wireworms)	1A	*Lannate LV, *Lannate SP (methomyl)	LV: 0.75-1.5 pt; SP: 0.25-0.50 lb	48	0 - ears, 3 - forage, 21 - stover	Certain hybrid varieties are susceptible to methomyl injury. Treat a small area to determine safety first.
	1A	Sevin 4F; XLR Plus (carbaryl)	1-2 qt	24 (21 days for detasseling workers)	2 - ears, 14 - forage, 48 - fodder	Maximum of 16 qt/acre per crop per year. Highly toxic to bees.
	1B, 3A	*Cobalt Advanced (chlorpyrifos, lambda-cyhalothrin)	6-42 fl oz	24	21	See label for application methods and many restrictions.
	1B	*Counter 15G Lock 'n Load (terbufos)	6.0-8.0 oz per 1000 ft of row, banded or in furrow; post emergence incorporated, 8 oz per 1000 ft of row at cultivation	48	60	Only one application (at-planting, post-emergence incorporated, or cultivation time treatment) per season. Do not exceed 8.7 lb/acre. 20G formulation also available.
	1B	Lorsban 75WG, *Advanced, 15G (chlorpyrifos)	75WG: 0.33-1.33 lb; Advanced: 0.5-2.0 pt; 15G: 8 oz per 1000 ft of row	24	75WG: 21 - ears, forage; 15G: at planting	Do not feed treated corn silage, forage, or fodder, or allow livestock to graze. Do not make more than 3 applications of any product containing chlorpyrifos per season.
	1B	*Mocap 15G (ethoprop)	See label.	48	at planting	One application per growing season.
	1B	*Thimet 20-G (phorate)	4.5-6.0 oz/1000 ft of row at planting or cultivation	48	30 - ears, forage	Maximum of 6.5 lb/acre per season or one application.
	3A	*Asana XL (0.66EC) (esfenvalerate)	5.8-9.6 fl oz	12	1	Do not apply more than 0.5 lb ai/acre per season (10 applications at highest rate).
	3A	*Baythroid XL (beta-cyfluthrin)	0.8-2.8 fl oz	12	0	Maximum of 28 fl oz/acre per season. Maximum of 10 applications.
	3A	*Brigade 2EC (bifenthrin)	0.15-0.30 fl oz/1000 ft of row (in-furrow T-band at plant); 2.1-6.4 fl oz (foliar)	12	1	Use of Brigade is prohibited in coastal counties. Maximum of 12.8 fl oz/acre per season. Many other brands available with same active ingredient.
	3A	*Capture LFR (bifenthrin)	4.0-5.3 fl oz (pre-plant incorporated); 3.4-17.0 fl oz (at plant); 3.4 fl oz (pre-emergence)	12	pre-plant incorporated, at planting, pre-emergence application	For mixing with liquid fertilizer. Maximum of 0.2 lb ai/acre per season of all bifenthrin products. Many other brands available with same active ingredient.
	3A	*Force 3G (tefluthrin)	depends on row spacing	0	at planting or cultivation within 30 days of seeding emergence	Only one application per crop. Granules must be incorporated.
	3A	*Warrior II (lambda-cyhalothrin)	0.33 fl oz/1000 ft of row (at plant); 1.28-1.92 fl oz (foliar)	24	1 - ears (foliar), 21 for feeding livestock or at plant applications	Maximum of 30.72 fl oz/acre per crop. Many other brands with same active ingredient are available.
	3A, 28	*Besiege (lambda-cyhalothrin, chlorantraniliprole)	6-10 fl oz	24	1	Maximum of 31 fl oz/acre per year.
-	Oil, insecticidal	1-2 gal/100 gal, depending on brand	4	0		
Tarnished plant bug	3A	*Asana XL (0.66EC) (esfenvalerate)	5.8-9.6 fl oz	12	1	Do not apply more than 0.5 lb ai/acre per season (10 applications at highest rate).
	3A	*Brigade 2EC (bifenthrin)	2.1-6.4 fl oz	12	1	Use of Brigade is prohibited in coastal counties. Do not apply more than 12.8 fl oz per acre per season. See label for soil application at planting. Many other brands available with same active ingredient.
	3A	*Warrior II (lambda-cyhalothrin)	1.28-1.92 fl oz	24	1 - ears, 21 - feeding livestock	Maximum of 30.72 fl oz/acre per crop. Many other brands with same active ingredient are available.
	3A, 28	*Besiege (lambda-cyhalothrin, chlorantraniliprole)	6-10 fl oz	24	1	Maximum of 31 fl oz/acre per year.

Table 17.5. Insecticides labeled for management of arthropod pests of sweet corn. (continued)

Labels change frequently. Be sure to read a current product label before applying any chemical. Also refer to Table 19.1 for biopesticide and other alternative products labeled for disease management.						
Insect or mite pest	MOA Code ¹	Trade Name (Active Ingredient) *Restricted	Rate (Product/acre)	REI (hours)	Days to Harvest	Remarks ²
Thrips (check label for species controlled)	1B	*Counter 15G Lock 'n Load (terbufos)	6.0-8.0 oz per 1000 ft of row, banded or in furrow; post emergence incorporated, 8 oz per 1000 ft of row at cultivation	48	60	Only one application (at-planting, post-emergence incorporated, or cultivation time treatment) per season. Do not exceed 8.7 lb/acre. 20G formulation also available.
	3A	PyGanic Crop Protection EC 5.0 (pyrethrins)	4.5-18 fl oz	12	0	Thorough coverage is essential. Breaks down rapidly in sunlight. OMRI-listed ² .
	-	Aza-Direct (azadirachtin)	1-2 pts, up to 3.5 pts, if needed	4	0	Antifeedant, repellent, insect growth regulator. OMRI-listed ² .
	-	Azatin XL (azadirachtin)	5-21 fl oz	4	0	Antifeedant, repellent, insect growth regulator.
	-	Trilogy (extract of neem oil)	1.0-2.0% v/v	4	0	Apply morning or evening to reduce potential for leaf burn. Toxic to bees exposed to direct treatment.
	-	BotaniGard ES, Mycotrol ESO (<i>Beauveria bassiana</i> strain GHA)	0.25-1 qt	4	0	Apply in sufficient water to cover foliage, typically 5-100 gallon/acre. Compatible in tank mix with some fungicides. Mycotrol ESO OMRI-listed ² .
	-	Grandevo (<i>Chromobacterium subsugae</i> strain PRAA4-1)	2-3 lb	4	0	OMRI-listed ² .
	-	Molt-X (azadirachtin)	10 fl oz	4	0	OMRI-listed ² .
	-	Oil, insecticidal (e.g., Suffoil-X)	1-2 gal/100 gal, depending on brand	4	0	OMRI-listed ² depending on brand.
Spider mites	1B	*Thimet 20-G (phorate)	4.5-6.0 oz per 1000 ft of row	48	at planting, see label	One application per season, no more than 6.5 lb/acre per season.
	3A	*Brigade 2EC (bifenthrin)	5.12-6.4 fl oz	12	1	Use of Brigade is prohibited in coastal counties. Maximum of 12.8 fl oz/acre per season. Many other brands available with same active ingredient.
	3A, 3A	Hero Insecticide (bifenthrin, zeta-cypermethrin)	10.3 fl oz	12	3	Maximum of 27.39 fl oz/acre per season (0.266 lb ai). See label when using more than one product containing bifenthrin or zeta-cypermethrin.
	6	*Agri-Mek SC (abamectin)	1.75-3.50 fl oz	12	7	Maximum of 7 fl oz/acre per year. No more than 2 sequential applications. Must be mixed with an adjuvant. Highly toxic to foraging bees.
	23	Oberon 2SC (spiromesifen)	5.7-16 fl oz	12	5 - ears, green forage, silage; 30 - grain or stover	Maximum of 17 fl oz/acre per season or no more than two applications.
	-	Aza-Direct (azadirachtin)	1-2 pts, up to 3.5 pts, if needed	4	0	Antifeedant, repellent, insect growth regulator. OMRI-listed ² .
	-	Trilogy (extract of neem oil)	1.0-2.0% v/v	4	0	Apply morning or evening to reduce potential for leaf burn. Toxic to bees exposed to direct treatment.
	-	Grandevo (<i>Chromobacterium subsugae</i> strain PRAA4-1)	2-3 lb	4	0	OMRI-listed ² .
	Weevils	-	Aza-Direct (azadirachtin)	1-2 pts, up to 3.5 pts, if needed	4	0
-		Azatin XL (azadirachtin)	5-21 fl oz	4	0	Antifeedant, repellent, insect growth regulator.

¹ Mode of Action (MOA) codes for plant pest insecticides from the Insecticide Resistance Action Committee (IRAC) Mode of Action Classification v. 8.2 March 2017. Number codes (1 through 29) are used to distinguish the main insecticide mode of action groups, with additional letters for certain sub-groups within each main group. All insecticides within the same group (with same number) indicate same active ingredient or similar mode of action. This information must be considered for the insecticide resistance management decisions. - = unknown, or a mode of action that has not been classified yet.

² Information provided in this table applies only to Florida. Be sure to read a current product label before applying any product. The use of brand names and any mention or listing of commercial products or services in the publication does not imply endorsement by the University of Florida Cooperative Extension Service nor discrimination against similar products or services not mentioned. OMRI listed: Listed by the Organic Materials Review Institute for use in organic production.

* Restricted use insecticide.

Table 17.6. Sweet corn fungicides ordered by disease and then FRAC group according to their mode of action.

Pertinent Diseases or Pathogens	Fungicide Group ¹	Chemical (active ingredients)	Max. Rate/Acre		Min. Days to		Remarks ²
			Applic.	Season	Harvest	Reentry	
Labels change frequently. Be sure to read a current product label before applying any chemical. Refer to Table 19.2 for biopesticide and other alternative products labeled for disease management.							
Bacterial stalk rot	M1	(copper compounds) Many brands available: Badge X2, Copper Count N, Cueva, Kocide 2000, Kocide 3000, Mastercop, Nu-Cop DF, Top Cop w/ Sulfur	SEE INDIVIDUAL LABELS		1		Varies by product from 4 hr to 2 days
Powdery mildew Rust	M2	(sulfur) Many brands available: Kumulus DF, Microfine Sulfur, Sulfur 90W, Top Cop w/ Sulfur, Yellow Jacket Wettable Sulfur	SEE INDIVIDUAL LABELS		1	1	Do not apply during periods of warm weather. Do not apply within 2 weeks of an oil spray.
Northern blight Southern blight Common rust	M3	(mancozeb) Many brands available: Dithane DF Rainshield, Dithane F-45 Rainshield, Dithane M45, Koverall, Manzate DF, Manzate Flowable, Manzate Pro-Stick, Penncozeb 4FL, Penncozeb 75DF, Penncozeb 80WP, Roper DF	1.5 lb	24 lb	7	1	Start applications at the first sign of disease.
	M5	(chlorothalonil) Many brands available: Bravo Ultrex, Bravo Weather Stik, Chloronil 720, Chlorothalonil 720 SC, Echo 720, Echo 90DF, Echo ZN, Equus 500 ZN, Equus 720, Equus DF, Initiate 720, Initiate ZN	SEE INDIVIDUAL LABELS		7	0.5	
	3	(propiconazole) Many brands available: Amcide propiconazole 41.8, Bumper 41.8EC, Fitness, Propiconazole E-AG 41.8EC, Propi-cure 3.6F, Propimax EC, Propi-Star EC, Shar-Shield PPZ, Tide Propiconazole, Tilt 3.6EC, Topaz	4 fl oz	16 fl oz	14	0.5	Do not exceed 4 total appls.
	3	(tebuconazole) Many brands available: Folicur 3.6F, Monsoon 3.6F, Onset 3.6L, Orius 3.6F, Tebu-Crop, Tebustar 3.6L, Tebuzol 3.6F, Toledo 3.6F	6 fl oz	24 fl oz	7	0.5	Restricted-entry time is 19 days.
	3	Prosaro (tebuconazole + prothioconazole)	8.2 fl oz	26 fl oz	7	0.5	See label for adjuvant information and rotational restrictions.
	3 & 33	Viathon (tebuconazole + potass. phosphite)	3.0 pt	16.5 pt	7	0.5	See label for details and rotational restrictions.
	3 & M2	Unicorn (tebuconazole & sulfur)	3.75 lb	15.0 lb	14	19	See label for details and rotational restrictions.
	7	Vertisan (penthiopyrad)	24 fl oz	48 fl oz	0	0.5	Soil and foliar treatments.
	7	Luna Privilege (fluopyram)	6.8 fl oz	13.6 fl oz	7	0.5	Alternate with fungicides of dissimilar modes of action.
	7 & 11	Elatus (benzovindiflupyr + azoxystrobin)	7.3 oz	14.6 oz	7	0.5	Alternate with fungicides of dissimilar modes of action.
	3 & 7 & 11	Trivapro (propiconazole + benzovindiflupyr + azoxystrobin)	13.7 fl oz	54.8 fl oz	14	0.5	Use no more than 2 sequential applications before alternating with a fungicide of dissimilar mode of action.
	11	Aftershock (fluoxastrobin)	0.24 fl oz per 1000' of row in soil, 3.8 fl oz foliarly	22.8 fl oz or 7.6 fl oz foliarly		0.5	Soil and foliar treatments.
	11	Approach SC (picoxystrobin)	12 fl oz	36 fl oz	7	0.5	See label for details.
	11	Evito 480SC (fluoxastrobin)	3.8 fl oz	15.2 fl oz	7	0.5	Do not exceed 2 sequential and 4 total appls.
	11	Headline EC (pyraclostrobin)	12 fl oz	72 fl oz	0	0.5	Do not exceed 2 sequential and 6 total appls. of Headline or other QoI fungicides.

Table 17.6. Sweet corn fungicides ordered by disease and then FRAC group according to their mode of action. (continued)

Pertinent Diseases or Pathogens	Fungicide Group ¹	Chemical (active ingredients)	Max. Rate/Acre		Min. Days to		Remarks ²
			Applic.	Season	Harvest	Reentry	
Labels change frequently. Be sure to read a current product label before applying any chemical. Refer to Table 19.2 for biopesticide and other alternative products labeled for disease management.							
	11	Headline SC (pyraclostrobin)	12 fl oz	72 fl oz	0	0.5	Do not exceed 2 sequential and 6 total appls. of Headline or other QoI fungicides.
	11	Quadris (azoxystrobin)	15.4 fl oz or 0.8 fl oz/1000 row ft	2.88 qt	0	4 hr	Do not exceed 2 sequential and 4 total appl. of Quadris or other QoI fungicides. See label for soil applications.
	11	Willowood (azoxystrobin)	15.5 fl oz	62 fl oz	0	4 hr	Do not exceed 2 sequential applications
	11 & 3	Custodia (azoxystrobin + tebuconazole)	12.9 fl oz	51.7 fl oz	21	0.5	See label for details.
	11 & 3	Evito T (fluoxastrobin + tebuconazole)	9 fl oz	36 fl oz	7	19	Do not exceed 2 sequential and 4 total appls.
	11 & 3	Headline AMP (pyraclostrobin + metconazole)	14.4 fl oz	57.6 fl oz		0.5	Do not exceed 2 sequential and 4 total appls. of Headline AMP.
	11 & 3	Quilt (azoxystrobin + propiconazole)	14 fl oz	56 fl oz	14	0.5	Alternate every other application with a fungicide of dissimilar mode of action.
	11 & 3	Quilt XCEL (azoxystrobin + propiconazole)	14 fl oz	56 fl oz	14	0.5	Alternate every other application with a fungicide of dissimilar mode of action.
	11 & 3	Avaris (azoxystrobin + propiconazole)	14 fl oz	28 fl oz	14	0.5	See label for details.
	11 & 3	Stratego 250EC (trifloxystrobin + propiconazole)	12 fl oz	24 fl oz	14	0.5	Do not apply more than 2 sequential applications.
	11 & 3	Stratego YLD (trifloxystrobin + prothioconazole)	5 fl oz	20 fl oz	14	0.5	Do not apply more than 2 sequential applications.
	11 & 7	Priaxor SC (pyraclostrobin + fluxapyroxad)	8 fl oz	16 fl oz	7	0.5	See label for details.
Gray leaf spot	3	(tebuconazole) Many brands available: Folicur 3.6F, Monsoon 3.6F, Orius 3.6F, Tebustar 3.6L, Tebuzol 3.6F, Toledo 3.6F	6 fl oz	24 fl oz	7	0.5	Restricted-entry time is 19 days.
	3 & 33	Viathon (tebuconazole + potass. phosphite)	3.0 pt	16.5 pt	7	0.5	See label for details and rotational restrictions.
	7 & 11	Priaxor SC (pyraclostrobin & fluxapyroxad)	8 fl oz	16 fl oz	7	0.5	Alternate with a fungicide of dissimilar mode of action.
Eye Spot	3	(propiconazole) Many brands available: Amtide propiconazole 41.8, Bumper 41.8EC, Fitness, Propiconazole E-AG 41.8EC, Propimax EC, Tilt 3.6E	4 fl oz	16 fl oz	14	0.5	Do not exceed 4 total appls.
	7	Vertisan (penthiopyrad)	24 fl oz	48 fl oz	0	0.5	Soil and foliar treatments. See label for details.
	7 & 11	Priaxor SC (pyraclostrobin & fluxapyroxad)	8 fl oz	16 fl oz	7	0.5	Alternate with fungicides of dissimilar modes of action.
	11	Aftershock (fluoxastrobin)	0.24 fl oz per 1000' of row in soil, 3.8 fl oz foliarly	22.8 fl oz in-furrow or 7.6 fl oz foliarly		0.5	Soil and foliar treatments. See label for details.
	11	Evito 480SC (fluoxastrobin)	3.8 fl oz	15.2 fl oz	7	0.5	Do not exceed 2 sequential and 4 total appls.
	11	Headline EC (pyraclostrobin)	12 fl oz	72 fl oz	0	0.5	Do not exceed 2 sequential and 6 total appls. of Headline or other QoI fungicides.
	11	Headline SC (pyraclostrobin)	12 fl oz	72 fl oz	0	0.5	Do not exceed 2 sequential and 6 total appls. of Headline or other QoI fungicides.

Table 17.6. Sweet corn fungicides ordered by disease and then FRAC group according to their mode of action. (continued)

Pertinent Diseases or Pathogens	Fungicide Group ¹	Chemical (active ingredients)	Max. Rate/Acre		Min. Days to		Remarks ²
			Applic.	Season	Harvest	Reentry	
Labels change frequently. Be sure to read a current product label before applying any chemical. Refer to Table 19.2 for biopesticide and other alternative products labeled for disease management.							
Damping-off	11	Quadris (azoxystrobin)	15.4 fl oz or 0.8 fl oz/ 1000 row ft	2.88 qt	0	4 hr	Do not exceed 1 sequential and 4 total appl. of Quadris or other QoI fungicides. See label for soil applications.
	11 & 3	Evito T (fluoxastrobin + tebuconazole)	9 fl oz	36 fl oz	7	19	Do not exceed 2 sequential and 4 total appls.
	11 & 3	Headline AMP (pyraclostrobin + metconazole)	14.4 fl oz	57.6 fl oz		0.5	Do not exceed 2 sequential and 4 total appls. of Headline AMP.
	11 & 3	Helmstar Plus (azoxystrobin + tebuconazole)	10.8 fl oz	43.2 fl oz	7	19	Do not spray after V-8 growth stage.
	11 & 3	Quilt (azoxystrobin + propiconazole)	14 fl oz	56 fl oz	14	0.5	Alternate every other application with a fungicide of dissimilar mode of action.
	11 & 3	Quilt XCEL (azoxystrobin + propiconazole)	14 fl oz	56 fl oz	14	0.5	Alternate every other application with a fungicide of dissimilar mode of action.
	11 & 3	Avaris (azoxystrobin + propiconazole)	14 fl oz	28 fl oz	14	0.5	See label for details.
	11 & 3	Stratego 250EC (trifloxystrobin + propiconazole)	12 fl oz	24 fl oz	14	0.5	Do not apply more than 2 sequential applications.
	11 & 3	Stratego YLD (trifloxystrobin + propiconazole)	5 fl oz	20 fl oz	14	0.5	Do not apply more than 2 sequential applications.
	11 & 7	Priaxor SC (pyraclostrobin + fluxapyroxad)	8 fl oz	16 fl oz	7	0.5	See label for details.
	M3	Defiant 75WP (thiram)	5.3 oz/ 100 lbs of seed			1	Seed treatment only.
	M3	Signet 480FS (thiram)	5.0 oz/ 100lbs of seed			1	Seed treatment only.
	Damping-off Seedling blight	3	Vortex (ipconazole)	0.085 fl oz/ 100 lb of seed			0.5
4 & 3		Dividend Extreme (mefenoxam + difenoconazole)	5 fl oz/ 100 lbs of Seed			2	Seed treatment only.
11		Dynasty (azoxystrobin)	0.153 fl oz/100 lbs of seed			4 hrs	Seed treatment only.
11		Trilex (trifloxystrobin)	0.96 fl oz/100 lb of seed			0.5	Seed treatment only.
Pythium seedling blight Systemic downy mildew	4	(metalaxyl) Various brands available: Acquire, Acceleron, Allegiance, Sebring 2.65ST	3 fl oz/100 lb seed			1	Seed treatment only.
	4	Apron XL LS (mefenoxam)	2.2 fl. oz./ 100 lb seed			2	Seed treatment only.
	33	(mono- and di-potassium salts of phosphorous acid) Various brands available: Confine Extra, K-phite	3 qts		0	4 hr	See label for details.
Soil-borne diseases	11	Aftershock (fluoxastrobin)	0.24 fl oz per 1000' of row in soil, 3.8 fl oz foliarly	22.8 fl oz in-furrow or 7.6 fl oz foliarly		0.5	Soil and foliar treatments. See label for details.
Various seedling diseases	1	Thiabendazole 4L ST	0.41 fl oz/ 80,000 kernel			0.5	Seed treatment only.

Table 17.6. Sweet corn fungicides ordered by disease and then FRAC group according to their mode of action. (continued)

Pertinent Diseases or Pathogens	Fungicide Group ¹	Chemical (active ingredients)	Max. Rate/Acre		Min. Days to		Remarks ²	
			Applic.	Season	Harvest	Reentry		
Labels change frequently. Be sure to read a current product label before applying any chemical. Refer to Table 19.2 for biopesticide and other alternative products labeled for disease management.								
	1, 4, 11, 12	Maxim Quatro (thiabendazole, mefenoxam,				0.5	Seed treatment only.	
	3	Difencconazole 3L ST (difencconazole)	1.25 fl oz/			100 lbs of seed	0.5	Seed treatment only.
	3 & 4	Evergol Energy (metalaxyl + prothioconazole)	2 fl oz/			100 lbs of Seed	0.5	Seed treatment only.
	4, 14, & NC	System 3 (mefenoxam + PCNB + Bacillus subtilis GB03)	3 oz/bu of seed				1	Seed treatment only.
	7	Kernel Guard Supreme (carboxin + permethrin)					0.5	Seed treatment only.
	11	Stamina (pyraclostrobin)	1.6 fl oz/			100 lbs seed		Seed treatment only.
	12	(fludioxonil) Various brands available: Dyna-Shield, Maxim 4FS, Spirato, 480 FS	0.16 fl oz/			100 lbs seed	0.5	Seed treatment only.
	14	Rizolex (tolclofos-methyl)	0.3 fl oz/			100 lbs/ seed	12 hr	Seed treatment only.

¹ FRAC code (fungicide group): Nu mber (1 through 46) and letters (U and P) are used to distinguish the fungicide mode of action groups. All fungicides within the same group (with same number or letter) indicate same active ingredient or similar mode of action. This information must be considered for the fungicide resistance management decisions. U = unknown, or a mode of action that has not been classified yet and is typically associated with another number; P = host plant defense inducers. Source: FRAC Code List 2018; <http://www.frac.info/> (FRAC = Fungicide Resistance Action Committee).

² Information provided in this table applies only to Florida. Be sure to read a current product label before applying any chemical. The use of brand names and any mention or listing of commercial products or services in the publication does not imply endorsement by the University of Florida Cooperative Extension Service nor discrimination against similar products or services not mentioned.

Table 17.7. Non-fumigant nematicides for sweet corn in Florida.

Product	Broadcast or overall rates		Row rates	
	Per acre	Per 1000 sq ft	Per acre, 36" row spacing	Per 1000 ft. of row, any row spacing
Counter 15G **	---	---	5.4 – 7.3 lb	6.0 - 8.0 oz
Mocap 15G*	40 lb	0.9 lb	10.8 – 14.8 lb	0.75 – 1.0 lb

*Do not allow Mocap to come in contract with seed. Apply as a 12 to 15 inch band treatment, incorporating Mocap product according to label instructions.

**Apply banded or in the row not to exceed 8.7 lb/a.

These products are not as consistently effective against root-knot nematodes as the fumigants, but are registered as indicated.

Table 17.8. Fumigant nematicides for sweet corn in Florida.

Nematicide	Broadcast Application ¹		In the Row Applications
	Gallons or Lbs Per acre	Fl oz /1000 ft / chisel spaced 12" apart	
Telone II ^{2,3}	9 to 12 gal	26 to 35	For any row spacing, application rates given may be concentrated in the row, but shall never exceed the labeled maximum for broadcast applications. Consult the product label for additional detail.
Telone C-17 ^{2,3}	10.8 to 17.1 gal	31.8 to 50.2	For any row spacing, application rates given may be concentrated in the row, but shall never exceed the labeled maximum for broadcast applications. Consult the product label for additional detail.
Telone C-35 ^{2,3}	13 to 20.5 gal	38 to 60	For any row spacing, application rates given may be concentrated in the row, but shall never exceed labeled maximum for broadcast applications. Consult the product label for additional detail.
Pic-Clor 60	19 to 31.5 gal	57 to 90	For any row spacing, application rates should never exceed the labeled maximum for broadcast applications. Consult the product label for additional detail.
Vapam HL	75 gal	-	For drip or in-row chisel fumigation, consult product label for proportionately reduced overall rates, drip concentration and flow modifying directions and procedures.
KPam HL	60 gal	-	For drip or in-row chisel fumigation, consult product label for proportionately reduced overall rates, drip concentration and flow modifying directions.
Allyl isothiocyanate (AITC) Dominus	40 gal	-	For drip or in-row fumigation and crop termination, consult product label for proportionately reduced overall rates, drip concentration and flow modifying directions

¹ Gallons /acre and Fl oz / 1000 feet provided only for mineral soils. Higher rates may be possible for heavier textured (loam, silt, clay) or highly organic soils.

² All of the fumigants mentioned are for retail sale and use only by state certified applicators or persons under their direct supervision. New supplemental labeling for the Telone products must be in the hands of the user at the time of application. See new label details for additional use restrictions based on soil characteristics, buffer zones, Fumigant Management Plans (FMP), requirement for Personal Protective Equipment (PPE), mandatory good agricultural practices (GAP's), product and applicator training certification, and other rate modifying recommendations.

³ Higher application rates are possible in the presence of cyst-forming nematodes.

Rates are believed to be correct for products named, and similar products of other brand names, when applied to mineral soils. Higher rates are required for muck (organic) soils. However, the **grower** has the final responsibility to see that each product is used legally; **read the label** of the product to be sure that you are using it properly.