

Sweet Corn

Sweet Corn Types

Sweet corn is usually described by color (yellow, bicolor, or white) and by the major genes that make it sweet. The original sweet corn (called standard, sugary, or su) contains the su1 genetic variant that makes it sweet instead of starchy like field corn. Sugary sweet corn is grown today primarily for processing and specialized markets.

A second type of sweet corn is called sugar-enhanced, sugary enhancer, EH, or se corn because it contains the se1 genetic variant that increases sugar content and makes the kernels more tender. Heterozygous se corn has one copy of the se1 mutation, and homozygous se corn has two copies of the se1 mutation, increasing its effect. Sugar-enhanced sweet corn is grown primarily for direct retail sales and local wholesale markets.

A third type of sweet corn, called supersweet, ultrasweet, extra sweet, or shrunken-2 contains the sh2 genetic variation. This type typically has a higher sugar content than sugary corn, and the sugar content does not decline rapidly after picking, so it remains sweet for several days after harvest. Kernels typically are not as tender as se corn. Supersweet types are grown for retail sales, local fresh markets, and wholesale shipping markets.

Some of the newest sweet corn varieties combine the sh2 with su and/or se genetics in new ways. Many of these new varieties have performed well in Midwestern trials and are gaining popularity. The new types are often identified by trademarked brand names and described as having enhanced eating quality. Consult with seed company representatives and sweet corn trial researchers to identify varieties suitable for your needs.

Isolation Requirements

Sweet corn flavor is affected by pollen source. All sweet corn types should be isolated from field corn pollen by 250 feet or by a 14-day difference in tasselling dates. Supersweet (sh2) varieties must be similarly isolated from sugary and sugar-enhanced types. If not isolated, kernels of both varieties will be starchy instead of sweet.

It is not essential to isolate sugar-enhanced (se) sweet corn from sugary (su) sweet corn: cross-pollination will not result in starchy kernels. However, isolation permits the full expression of sugar-enhanced traits. Likewise, to get the full benefits of new genetics, isolation is usually recommended for the new combinations of sh2 and se or su. If complete isolation is not possible, plants should at least be isolated from pollen that will increase the proportion of starchy kernels. Refer to the table below for isolation requirements or check with your seed supplier.

To maintain color purity, isolate white corn from yellow or bi-color corn. Pollen from yellow or bi-color corn will cause some yellow kernels in white varieties. Pollen from yellow corn will lead to extra yellow kernels in bi-color varieties. Pollen from white corn will not affect yellow or bi-color varieties.

Sweet Corn Isolation Requirements¹

Corn Type or Brand	Isolate from these Types or Brands
Standard (su)	Shrunken-2, Xtra Tender, Gourmet Sweet
Sugar-enhanced (se)	Shrunken-2, Xtra Tender, Gourmet Sweet
TripleSweet, Synergistic	Shrunken-2, Xtra Tender, Gourmet Sweet
Shrunken-2 (sh2)	Standard, Sugar-enhanced, TripleSweet, Synergistic
Xtra Tender, Gourmet Sweet	Standard, Sugar-enhanced, TripleSweet, Synergistic

¹ Isolate all types from field corn.

Spacing

Rows 30 to 40 inches apart. Plant early varieties 8 to 10 inches apart in the row, late varieties 9 to 12 inches apart in the row.

Seed 10 to 15 pounds per acre.



The chlorotic (yellow) leaf streaks and the stunting of the sweet corn plant on the right are symptoms of Stewart's wilt.

Fertilizing

Lime: To maintain a soil pH of 6.0 to 6.5.

Preplant: N: 60 pounds per acre. P₂O₅: 0 to 100 pounds per acre. K₂O: 0 to 150 pounds per acre. Adjust according to soil type, previous management, and soil test results for your state. For early season varieties, apply a starter fertilizer at planting. Do not exceed 80 to 100 pounds of N + K₂O per acre in the fertilizer band (2 inches to the side of the row and 2 inches below the seed). A good starter fertilizer would be 200 pounds per acre of 6-24-24, or 10 gallons of 10-34-0 or similar

analysis. On sandy soils, broadcast 30 pounds or band 15 pounds of sulfur per acre.

Sidedress N: For loam or finer textured soils, apply 30 to 40 pounds N per acre when plants are 4 to 5 inches tall, and before they are 10 inches tall. If the soil organic matter content exceeds 3 percent and/or sweet corn follows a legume, this sidedressed N application could be skipped unless there has been excessive rainfall. For irrigated sandy loam soils along river areas, the N preplant application should be replaced with two sidedressings of approximately 40 pounds N per acre each: one when 4 to 5 inches tall (4th to 5th leaf), and the other at 10 inches tall (10th to 12th leaf).

Disease Control

Diseases Controlled	Treatment	Comments
Anthracnose	Headline® at 6-12 fl. oz. per acre.	No more than 2 sequential applications. 7-day PHI.
	RR Quadris Flowable® at 6.2-15.5 fl. oz. per acre.	Do not apply Quadris® more than once before alternating to a fungicide with a different mode of action. 7-day PHI.
	Quilt® at 10.5-14 fl. oz. per acre.	Do not make more than 1 application of Quilt® (or any other group 11 fungicide) per year. 14-day PHI.
“Helminthosporium” Leaf Blight, Southern Corn Leaf Blight, Northern Corn Leaf Blight, Northern Corn Leaf Spot	Plant resistant varieties ¹ .	
	Several chlorothalonil formulations (e.g., Bravo®, Echo®, Equus®) are labeled for use at various rates. Note that rates vary for different diseases.	Do not apply chlorothalonil to sweet corn to be processed. Do not feed treated forage to livestock. 14-day PHI.
	Folicur 3.6F® at 4-6 fl. oz. per acre.	7-day PHI.
	Headline® at 6-12 fl. oz. per acre.	No more than 2 sequential applications. 7-day PHI.
	Several formulations of mancozeb (e.g., Dithane®, Manzate®, Penncozeb®) are labeled at various rates.	7-day PHI.
	Monsoon 3.6F® at 4-6 fl. oz. per acre.	7-day PHI.
	Propimax® at 2-4 fl. oz. per acre.	Begin applications when disease first appears. Repeat at 7-14 day intervals. Do not exceed 16 fl. oz. per acre per season. 14-day PHI.
	RR Quadris Flowable® at 6.2-15.5 fl. oz. per acre.	Do not apply Quadris® more than once before alternating to a fungicide with a different mode of action. 7-day PHI.
	Quilt® at 7-14 fl. oz. per acre.	Do not make more than 1 application of Quilt® (or any other group 11 fungicide) per year. 14-day PHI.
	Quilt Xcel® at 10.5-14 fl. oz. per acre.	14-day PHI.
	Tilt® at 2-4 fl. oz. per acre.	Begin applications when disease first appears. Repeat at 7-14 day intervals. Do not exceed 16 fl. oz. per acre per season. 14-day PHI.
Toledo 3.6F® at 4-6 fl. oz. per acre.	7-day PHI.	
Rust	Plant rust-resistant hybrids ¹ .	A new race of the rust fungus capable over overcoming resistance in many sweet corn hybrids has been observed in the Midwest for the past several years. Sweet corn hybrid resistance to rust will depend on the hybrid’s particular Rp-resistant gene, its general (background) resistance, and the race(s) of the rust fungus prevalent in the planting.
	Several chlorothalonil formulations (e.g., Bravo®, Echo®, Equus®) are labeled for use at various rates. Note that rates vary for different diseases.	Do not apply chlorothalonil to sweet corn to be processed. Do not feed treated forage to livestock. 14-day PHI.
	Headline® at 6-12 fl. oz. per acre.	No more than 2 sequential applications. 7-day PHI.
	Several formulations of mancozeb (e.g., Dithane®, Manzate®, Penncozeb®) and maneb are labeled for use at various rates.	7-day PHI.
	Monsoon 3.6F® at 4-6 fl. oz. per acre.	7-day PHI.

RR This is a reduced-risk pesticide. See pages 23-24 for details.

Diseases Controlled	Treatment	Comments
Rust (continued)	Propimax EC® at 4 fl. oz. per acre.	Begin applications when rust pustules first appear. Repeat at 7-14 day intervals. Do not apply more than 16 fl. oz. per acre per season. 14-day PHI.
	RR Quadris Flowable® at 6.2-9.2 fl. oz. per acre.	Do not make more than 1 sequential applications of Quadris® before alternating to a fungicide with a different mode of action. 7-day PHI.
	Quilt® at 10.5-14 fl. oz. per acre.	Do not make more than 1 application of Quilt® (or any other group 11 fungicide) per year. 14-day PHI.
	Quilt Xcel® at 10.5-14 fl. oz. per acre.	14-day PHI.
	Tilt® at 4 fl. oz. per acre.	Begin applications when rust pustules first appear. Repeat at 7-14 day intervals. Do not apply more than 16 fl. oz. per acre per season. 14-day PHI.
	Toledo 3.6F® at 4-6 fl. oz. per acre.	7-day PHI.
Smut	Some hybrids tend to have fewer smut infections; growers should use past experience to choose successful hybrids. Avoid mechanical damage to corn plants.	Growers should attempt to avoid plant stresses that would affect pollen production and silk emergence.
Stewart's Wilt	Plant wilt-resistant hybrids ¹ .	
	Use an insecticide or seed treatment to control flea beetles.	Insecticide treatments are more likely to be necessary in seasons following a mild winter.
Virus Diseases (Maize Dwarf Mosaic, Chlorotic Dwarf, Wheat Streak Mosaic)	Plant resistant or tolerant varieties ¹ .	
	Control Johnsongrass and volunteer wheat.	

¹For an up-to-date list of sweet corn hybrid reactions to prevalent diseases, visit the University of Illinois' Sweet Corn Disease Nursery Web site, www.sweetcorn.uiuc.edu. Or refer to the Purdue Extension bulletin, *Midwest Vegetable Trial Report for 2010*, available from The Education Store at www.the-education-store.com.

RR This is a reduced-risk pesticide. See pages 23-24 for details.

Atrazine Restrictions

Many herbicides labeled for corn contain atrazine. Observe the following restrictions on atrazine from all sources:

1. On highly erodible soils with low residue, do not apply more than 1.6 lbs. a.i. atrazine per acre before corn emerges.
2. On all soils, do not apply more than 2 lbs. a.i. atrazine per acre in one application.
3. On all soils, do not apply more than 2.5 lbs. a.i. atrazine per acre per year.
4. Check www.atrazine-watershed.info or call (800) 365-3014 for additional local restrictions on the use of any material containing atrazine.

Weed Control

Weeds Controlled ¹	Treatment ²	Comments
Annuals (emerged) — treatment applied before crop emergence or crop protected from spray	Gramoxone Inteon 2L® at 2-4 pts. per acre.	Use 1 qt. COC or 4-8 fl. oz. of nonionic surfactant per 25 gallons of spray solution. Apply before or after seeding but before crop emerges. Or use 1-2 pts. of Gramoxone Inteon 2L® and apply between rows using hooded or shielded sprayers, or wait until corn is over 10 in. tall and apply between rows using directed spray that reaches no higher than 3 in. up the corn stalk. Corn plants contacted by spray may be injured or killed. RUP.
Annuals and Perennials (emerged) — crop not present or protected from spray	Glyphosate products at 0.75-3.75 lbs. acid equivalent (ae) per acre. Use formulations containing 3 lbs. ae/gal. (4 lbs. isopropylamine salt/gal.) at 1-5 qts. per acre, or formulations containing 4.5 lbs. ae/gal. (5 lbs. potassium salt/gal.) at 0.66-3.3 qts. per acre.	Broadcast before or after seeding but before crop emerges; or after corn is 12 in. tall, apply up to 0.75 lb. ae between crop rows with hooded sprayers. Use low rate for annuals and higher rates for perennials. See label for suggested application volume and adjuvants. 7-day PHI.

Weeds Controlled ¹	Treatment ²	Comments
Annuals and Perennials (emerged)	Roundup PowerMax [®] or Roundup WeatherMax [®] at 0.66-3.3 qts. per acre before corn emerges, or at 16-22 fl. oz. per acre after corn has emerged. For Roundup Ready [®] sweet corn only.	Use only on Roundup Ready[®] sweet corn. Other corn will be killed. May be tank mixed with several preemergence or postemergence herbicides labeled for corn. Use of other herbicides with residual activity is recommended if Roundup [®] is used. Postemergence applications may be made over the top of corn through the 8 leaf-collar stage (V8) or until corn is 30 inches tall. Drop nozzles are recommended if corn is more than 24 inches tall, and must be used if corn is more than 30 inches tall to prevent spraying into whorls. Do not apply to corn more than 30 inches tall if it has reached the reproductive stage. Do not exceed 3.3 qts. per acre prior to crop emergence. Do not exceed 44 fl. oz. per acre in a single application in the crop. Do not exceed 4.1 qts. per acre per growing season from emergence through crop height of 48 inches. Do not exceed 5.3 qts. per acre for all applications. 30-day PHI if corn is harvested for forage or grain.
Broadleaves (not emerged or newly emerged) and Grasses (not emerged)	Atrazine products at 1-2 lbs. active ingredient (a.i.) per acre. Use 4L formulations at 1-2 qts. per acre, or 90W formulations at 1.1-2.2 lbs. per acre.	To control emerged weeds, include 1 qt. of COC per acre. Apply before planting and incorporate, after planting before corn emerges, or after emergence before corn is 12 in. tall. Potential for carryover in soil and injury to following crops. Consult label for details. Do not exceed 1.6 lbs. a.i. per acre before corn emerges on highly erodible soils with low residue; do not exceed 2.5 lbs. a.i. total per acre per year. RUP.
	Apply 2.5-4.6 pts. per acre of products that contain dimethenamid-P (1.7 lbs. a.i. per gallon) plus atrazine (3.3 lbs. a.i. per gallon) including: Guardsman Max [®] , Commit ATZ [®] , Establish ATZ [®] . Or Apply 2.0 to 3.5 pts. per acre of products that contain dimethenamid-P (2.25 lbs. a.i. per gallon) plus atrazine (2.75 lbs. a.i. per gallon) including: G-Max Lite [®] , Commit ATZ Lite [®] , Establish ATZ Lite [®] .	Use low rates on coarse soils with low organic matter. Apply before planting and incorporate, or after planting before corn emerges, or after emergence before corn is 12 in. tall. Rates may be reduced if corn will be cultivated or full-season control is not needed. If multiple applications are made, do not exceed maximum rate per acre per year. 50-day PHI. RUP.
	Apply 1.3-2.6 qts. per acre of products that contain s-metolachlor (2.4 lbs. per gallon) plus atrazine (3.1 lbs. per gallon) including: Bicep II Magnum [®] , Cinch ATZ [®] , Charger Max ATZ [®] . Or Apply 0.9-2.2 qts. per acre of products that contain s-metolachlor (3.33 lbs. per gallon) plus atrazine (2.67 lbs. per gallon) including: Bicep Lite II Magnum [®] , Cinch ATZ Lite [®] , Charger Max ATZ Lite [®]	Use low rates on coarse soils with low organic matter. Apply before planting and incorporate, or after planting before corn emerges, or after emergence before corn is 5 in. tall. May also be applied as a directed spray between rows when corn is 5-12 in. tall. Do not exceed 3.2 qts. per acre per year of products with 3.1 lbs. atrazine per gallon. Do not exceed 3.75 qts. per acre per year of products with 2.67 lbs. atrazine per gallon. 30-day PHI. RUP.
Broadleaves (not emerged or emerged) and Grasses (not emerged)	Lexar [®] at 3 or 3.5 qts. per acre. RUP.	Use low rate on soils with organic matter less than 3%. Apply up to 14 days before planting or apply after planting before corn emerges. To control emerged broadleaves include COC at 1% v/v or nonionic surfactant at 0.25% v/v. Note organophosphate insecticide precautions. Lexar [®] contains 1.74 lbs. s-metolachlor, 0.224 lb. mesotrione and 1.74 lb. atrazine per gallon. Lumax [®] contains 2.68 lbs. s-metolachlor, 0.268 lb. mesotrione and 1 lb. atrazine per gallon. Do not use if other products containing mesotrione (e.g., Callisto [®]) or topramezone (e.g., Impact [®]) have been or will be applied the same growing season. Do not exceed 3.5 qts. of Lexar [®] or 3 qts. of Lumax [®] per acre per year.
	Lumax [®] at 2.5 or 3 qts. per acre. RUP.	

Weeds Controlled ¹	Treatment ²	Comments
Broadleaves and Grasses (not emerged)	Acetochlor products including: Breakfree 6.4EC [®] at 1.5-3.75 pts. per acre. Degree 3.8ME [®] at 2.75-5.5 qts. per acre. Harness 7EC [®] at 1.5-3.0 pts. per acre. Surpass 6.4EC [®] at 1.5-3.75 pts. per acre. TopNotch [®] at 2-3 qts. per acre. Breakfree ATZ [®] (acetochlor + atrazine 3.0 + 2.25 ai) at 2.2-3.4 qts. per acre. Breakfree ATZ Lite [®] (acetochlor+atrazine 4.0 + 1.5 ai) at 1.6-3.0 qts. per acre. Degree Xtra [®] (acetochlor + atrazine 2.7 + 1.34 ai) at 2.9-3.7 qts. per acre. FulTime [®] (acetochlor + atrazine 2.4 + 1.6 ai) at 2.5-5.0 qts. per acre. Harness Xtra 5.6L [®] (acetochlor + atrazine 3.1 + 2.5 ai) at 1.4-3 qts. per acre. Harness Xtra [®] (acetochlor + atrazine 4.3 + 1.7 ai) at 1.8-3.3 qts. per acre. Keystone [®] (acetochlor + atrazine 3.0 + 2.25 ai) at 2.2-3.4 qts. per acre, or Keystone LA [®] (acetochlor + atrazine 4.0 + 1.5 ai) at 1.6-3.0 qts. per acre.	Do not apply postemergence. Use lower rates on coarse soils with low organic matter. Apply before planting and incorporate, or apply after planting before sweet corn emerges. May be mixed with atrazine or simazine. See label for details. Do not apply to light textured soils specified in the label where ground water is at 30 ft. or less. RUP .
	Alachlor products containing 4 lbs. active ingredient per gallon at 2-3.25 qts. per acre.	Use lower rates on coarse soils with low organic matter. Apply before planting and incorporate, or apply after planting before corn emerges. May be mixed with atrazine, see label for details. RUP .
	Define 60DF [®] at 12-21 oz. per acre, or Define SC [®] at 15-25 fl oz. per acre.	Do not apply postemergence. Use lower rates on coarse soils with low organic matter. Apply before planting and incorporate, or apply after planting before sweet corn emerges. May be tank-mixed with atrazine or simazine. See labels for details.
	Outlook [®] at 10-21 fl. oz. per acre.	Use lower rate on coarse soils low in organic matter. Apply before planting and incorporate, or after planting before corn emerges, or after emergence before corn is 12 in. tall. Apply preemergence for best activity. Do not exceed 2 pts. of Frontier [®] or 21 fl. oz. of Outlook [®] per acre per year. 50-day PHI.
	Prowl 3.3EC [®] at 1.8-4.8 pts. per acre, or Prowl H ₂ O [®] at 2- 4 pts. per acre.	Use low rates on coarse soils with low organic matter. Apply after planting before corn emerges, or after emergence until corn is 20-24 in. tall or shows 8 leaf collars. Plant corn at least 1.5 in. deep and make sure seed is well covered. Use drop nozzles and directed spray for post applications if necessary to get spray to soil. Do not apply both pre- and postemergence.
	Apply s-metolachlor products containing 7.6 lbs. a.i. per gal. at 1-2 pts. per acre, including: Brawl [®] , Brawl II [®] , Dual Magnum [®] , Dual II Magnum [®] , Charger Basic [®] , Cinch [®] .	Use lower rate on coarse soils. Apply before planting and incorporate, or apply after planting before corn emerges. May also be applied as a directed spray between rows when corn is 5-40 in. tall. Incorporate to control nutsedge. May be mixed with atrazine, see label for details. Do not exceed 3.9 pts. per acre per year.
Broadleaves (not emerged or emerged)	RR Callisto [®] at the following rates: Preemergence: 6-7.7 fl. oz. per acre. Postemergence: 3 oz. per acre.	Processing and fresh market varieties. Some varieties may be severely injured. To control emerged weeds use a nonionic surfactant at 0.25% v/v or COC at 1.0% v/v. Adding nonionic surfactant preferred over COC to reduce crop injury, COC will improve weed control under dry conditions. Do not add UAN or AMS. Adding atrazine PRE at 0.75 or POST at 0.25 to 0.5 lb a.i. per acre will improve weed control. Peas are very sensitive to Callisto [®] , observe rotation and drift management recommendations. Note organophosphate insecticide precautions. Not recommended if products containing mesotrione (e.g., Lexar [®] or Lumax [®]) or topramezone (e.g., Impact [®]) have been, or will be, applied to crop. Do not exceed 0.24 lb. mesotrione per acre per year (7.7 fl. oz. Callisto [®]) from all sources. 45-day PHI.
Broadleaves and Nutsedge (not emerged or emerged)	Sandea [®] at 2/3-1 oz. per acre.	Apply over the top or with drop nozzles from the spike through layby stages. A second application of 2/3 oz. per acre may be made only with drop nozzles aimed to avoid application into whorls. Do not exceed 2 applications per 12-month period. 30-day PHI.

RR This is a reduced-risk pesticide. See pages 23-24 for details.

Sweet Corn (continued)
Weed Control (continued)

Weeds Controlled ¹	Treatment ²	Comments
Grasses (not emerged)	Define DF [®] at 12-21 oz. per acre.	Apply before planting with optional incorporation, after planting before corn emerges, or after emergence before corn shows 6 leaf collars. Sweet corn varieties may vary in response to Define [®] . Do not exceed 21 oz. per acre per season.
Broadleaves and Nutsedge (emerged)	Bentazon products at 0.75-1 lb. a.i. per acre. Use 4L formulations at 0.75-1 qt. per acre.	Use 1 qt. of COC per acre. Apply to small weeds. Do not apply to corn that is stressed because injury may result. Combine with atrazine to broaden weed control spectrum.
Broadleaves and Grasses (emerged)	See also: treatments under Broadleaves and some Grasses (not emerged or newly emerged)	
	Capreno [®] at 3 fl. oz. per acre	Apply with 1 qt. COC per 25 gallons spray solution and either 1.5 qt. per acre of urea ammonium nitrate (UAN) or 1.5 lb. per acre of ammonium sulfate (AMS). Apply after corn has one leaf collar (V1) and before corn exceeds 6 leaf collars (V6). Cultivars differ in sensitivity to this herbicide; get information on cultivars prior to use. Do not use on corn previously treated with Lorsban [®] , Counter [®] , Dyfonate [®] , Thimet [®] , or other organophosphate insecticides. Contains 2.88 lbs. tembotrione and 0.57 lb. thiencazone-methyl per gallon. Minimum 18-month rotation restriction for other vegetable crops.
Broadleaves and large crabgrass (emerged)	Callisto Xtra [®] at 20-24 fl. oz. per acre.	Apply with 8 fl. oz. nonionic surfactant or 1 qt. COC per 25 gallons spray solution. Apply after corn emerges and before corn is 12 inches tall. Cultivars differ in sensitivity to this herbicide; get information on cultivars prior to use. Do not use on corn previously treated with Lorsban [®] or Counter [®] insecticides, or within 7 days of treatment with any organophosphate or carbamate insecticide. Contains 0.5 lb. of mesotrione and 3.2 lbs. of atrazine per gallon. Do not exceed 0.24 lb. mesotrione or 2.5 lbs. atrazine per acre per year from all sources. Maximum one application per year. 45-day PHI.
Broadleaves (emerged)	2, 4-D amine formulations at 0.25-0.75 lb. a.i. per acre, or 4L formulations at 0.5-1.5 pts. per acre.	Use lower rates on annual weeds and higher rates on perennial weeds in the bud stage. Use drop nozzles if corn is more than 8 in. tall. Do not apply to open whorls or within 2 weeks of tasseling through harvest. Avoid drift onto other vegetable crops. Can cause severe injury to some varieties.
	Aim EC [®] at 0.5 fl. oz. per acre.	Use 8 fl. oz. of nonionic surfactant per 25 gallons of spray solution. Apply to weeds up to 4 in. tall and apply up to the 14 leaf-collar stage of sweet corn. To reduce injury, the label requires using drop nozzles or other directed sprayers to minimize application to the whorl. Do not exceed 2 fl. oz. of Aim EC [®] per acre per season.
	Cadet [®] at 0.6-0.9 fl. oz. per acre.	Apply from 2 collars to tasseling. Controls velvetleaf and several other broadleaves. Add COC or nonionic surfactant. Do not exceed 1.25 fl. oz. per acre per year. 40-day PHI.
	Impact [®] at 0.75 fl. oz. per acre.	Use 2-3 pt. of methylated seed oil or COC and 2.5-5 pts. of urea ammonium nitrate (UAN) or ammonium phosphate (10-34-0) per 25 gallons of spray solution. Not recommended if products containing mesotrione have been or will be applied to crop. Do not exceed 0.75 fl. oz. per acre per season. 45-day PHI.
Broadleaves (emerged) — primarily composites and nightshade	Stinger 3L [®] at 0.33-0.66 pt. per acre.	Spray on actively growing weeds before corn is 18 in. tall. Wait 21 days between applications. Do not exceed 0.66 pt. per crop per year. 30-day PHI.
Some Broadleaf Weeds (emerged) and Volunteer Potato (emerged)	Starane 1.5L [®] at 0.66 pt. per acre, or Starane Ultra 2.8L [®] at 0.4 pt., per acre.	Apply broadcast or as a directed spray to corn that has up to 4 fully exposed leaf collars. Use directed spray when corn is beyond the 4-leaf collar stage. For volunteer potato, can apply preplant to emerged potato followed by a second application postemergence to emerged potato. 31-day PHI.
Grasses and some Broadleaves (emerged)	Accent Q [®] at 0.45 to 0.90 oz. per acre.	Use 1 qt. of COC or 8 fl. oz. of nonionic surfactant per 25 gallons of spray solution. Apply broadcast or with drop nozzles on corn up to 12 in. or up through 5 leaf collars. For corn 12-18 in. tall use drop nozzles. Do not apply to corn over 18 in. tall or showing 6 leaf collars or more. Cultivars differ in sensitivity to this herbicide; get information on cultivars prior to use. Not recommended for use on corn previously treated with Counter [®] , Lorsban [®] , or Thimet [®] insecticides.
	Option 35WDG [®] at 1.5-1.75 oz. per acre.	Apply with MSO at 1.5 pts. per acre with either AMS at 1.5-3 lbs. per acre, or UAN at 1.5-2 qts. per acre. Not recommended or precautions apply for use on corn previously treated with Counter [®] , Lorsban [®] , or Thimet [®] insecticides (see labels). 45 day PHI.





Weeds Controlled ¹	Treatment ²	Comments
Broadleaves and many grasses (emerged)	Impact 75DG [®] at 0.5 to 0.75 oz. per acre.	Apply with 1.0-1.5% v/v COC or MSO, with UAN at 1.25-2.5 % v/v, or with AMS at 8.5-17 lbs. per acre. Tank-mixing with atrazine will improve efficacy and spectrum of weed species controlled. Not recommended to be tank-mixed with, or applied sequentially to, products containing mesotrione (Callisto [®] products). 45 day PHI.
	Laudis 3.5SC [®] at 3 oz. per acre.	Apply with 1% v/v MSO + 8.5 lbs. of AMS per 100 gallons of spray solution. COC is less efficacious than MSO but can be used instead of MSO when broadleaves are the main target and conditions for control are excellent. Tank-mixing with atrazine will improve efficacy and spectrum of weed species controlled.
Grasses (emerged)	Poast [®] at 0.75 to 1.5 pt. per acre. Apply ONLY to Poast Protected[®] varieties or crop will be killed.	Use 1 pt. Dash [®] , 1.5 pts. MSO, or 2 pts. COC per acre. UAN or AMS optional, see label. For use only on Poast [®] -tolerant sweet corn varieties. Such varieties are clearly labeled. Varieties not tolerant to Poast [®] will be killed. May repeat applications up to 3.0 pts. Poast [®] total per acre per season. 30-day PHI.

¹For specific weeds controlled by each herbicide, check Table 21 on page 39.


²Rates given are for overall coverage. For band treatment, reduce amounts according to the portion of acre treated.

Insect Control

Insects Controlled	Treatment	Comments
Corn Leaf Aphids	Heavy infestations of corn leaf aphids are often limited to early-season plantings that develop on late whorl to early-tassel sweet corn. During this time, several beneficial organisms (including, lady beetles, minute pirate bugs, and parasites) will keep these infestations in check. Although infestations can exceed 100 aphids per plant on more than 50% of the plants, pollination is rarely affected. Fresh market growers may need to spray to avoid aphid colonies on the husks or sticky honeydew (excreted by aphids) on the husks. Choose products that will control both caterpillar pests (corn earworm, European corn borer, fall armyworm) and aphids if both are a problem.	
	Lannate SP [®] at 0.25-0.5 lb. per acre.	Do not exceed 6.3 lbs. a.i. per acre per crop. 0-day PHI for ears. 3-day PHI for forage.
	PennCap-M [®] at 2-3 pts. per acre.	Do not exceed 12 pts. per acre per season. 5-day PHI.
Corn Rootworms	Aztec 2.1G [®] at 6.7 oz. per 1,000 linear ft. of row.	Apply in a 7-inch band over the row and behind the planter shoe in front of the press wheel.
	Brigade 2EC [®] at 0.3 fl. oz. per 1,000 linear ft. of row.	Apply in a minimum of 3 gallons of finished spray as a 5-7 inch band over an open seed furrow (T-band). Do not exceed 0.1 lb. a.i. per acre per season at plant application. 30-day PHI.
	Capture LFR [®] at 0.39-0.49 fl. oz. per 1,000 linear ft. of row at planting.	See label. RUP.
	Counter 15G [®] at 6-8 oz. per 1,000 linear ft. of row.	If few or no rootworm beetles were present in the field the previous year, then there is little chance of a damaging infestation. If sweet corn was grown in the field the previous year and a regular spray schedule was followed during silking, then there is little chance of a damaging infestation. Do not exceed 1 application per acre per crop.
	Force 3G [®] at 4-5 oz. per 1,000 linear ft. of row.	Apply as a T-band or in furrow. Do not exceed 1 application per crop.
	Force CS [®] at 0.46-0.57 fl. oz. per 1,000 linear ft. of row at planting.	See label. RUP.
	Fortress 5G [®] at 3.0-4.5 oz. per 1,000 linear ft. of row.	Apply as a T-band over the row or in furrow at planting. Do not exceed 1 application per acre per season.
Lorsban 15G [®] at 8 oz. per 1,000 linear ft. of row.	If few or no rootworm beetles were present in the field the previous year, then there is little chance of a damaging infestation. If sweet corn was grown in the field the previous year and a regular spray schedule was followed during silking, then there is little chance of a damaging infestation. Do not exceed 13 lbs. per acre per crop.	

Insects Controlled	Treatment	Comments
Corn Rootworms (continued)	Mocap 15G® at 8 oz. per 1,000 linear ft. of row.	Do not exceed 1 application per acre per crop. Do not place in the furrow or in direct contact with the seed.
	Thimet 20G® at 4.5-6 oz. per 1,000 linear ft. of row.	
	Warrior II® at 0.96-1.6 fl. oz. per acre.	Do not exceed 7.68 fl. oz. per acre per season. 7-day PHI. RUP.
Corn Rootworm Adults	Most of the insecticides listed for control of European corn borer, corn earworm, and armyworms also control corn rootworm beetles. Those that do <i>not</i> control corn rootworm beetles are Belt®, Coragen®, Entrust®, Intrepid®, Radiant®, and SpinTor®.	Corn rootworm adults may prevent pollination by feeding on green silks. Treat when silks are being clipped.
Cutworms	Ambush 25W® at 6.4-12.8 oz. per acre.	Do not exceed 1.2 lbs. a.i. per acre per season. 1-day PHI.
	Asana XL® at 5.8-9.6 fl. oz. per acre.	Do not exceed 0.5 lb. a.i. per acre per season. 1-day PHI.
	Baythroid 2E® at 0.8-1.6 fl. oz. per acre.	Do not exceed 28 fl. oz. per acre per season. 0-day PHI.
	Brigade 2EC® at 2.1-6.4 fl. oz. per acre.	Do not exceed 12.8 fl. oz. per acre per season. 1-day PHI.
	Lorsban 4E® at 1-2 pts. per acre.	Most effective when soil is moist. If ground is dry, cloddy, or crusty, shallow incorporation before (or soon after) treatment may improve control. 35-day PHI.
	Mustang MAX® at 2.24-4.0 fl. oz. per acre.	Do not exceed 0.15 lb. a.i. per acre per season. 3-day PHI.
	Pounce 25WP® at 6.4-12.8 oz. per acre.	Do not exceed 1.2 lbs. a.i. per acre per season. 1-day PHI.
Warrior II® at 1.28-1.92 fl. oz. per acre.	Do not exceed 30.72 fl. oz. per acre per season. 1-day PHI. RUP.	
European Corn Borers, Corn Earworms, Fall Armyworms	Ambush 25W® at 6.4-12.8 oz. per acre.	Do not exceed 1.2 lbs. a.i. per acre per season. Control is poor when temperatures are above 90°F. 1-day PHI.
	Asana XL® at 5.8-9.6 fl. oz. per acre. Corn earworms only.	Do not exceed 0.5 lb a.i. per acre per season. 1-day PHI.
	Baythroid 2E® at 1.6-2.8 fl. oz. per acre.	Do not exceed 28 fl. oz. per acre per season. 0-day PHI.
	Belt SC® at 2-3 fl. oz. per acre.	Do not exceed 12 fl. oz. per acre per season. 1-day PHI.
	Brigade 2EC® at 2.1-6.4 fl. oz. per acre.	Do not exceed 12.8 fl. oz. per acre per season. 1-day PHI.
	 Coragen® at 3.5-5 fl. oz. per acre.	Do not exceed 15.4 fl. oz. per acre per season. 1-day PHI.
	 Entrust® at 0.5-2 oz. per acre.	More effective for European corn borers than corn earworms. Do not exceed 9 oz. per acre per season. Observe resistance management restrictions. 1-day PHI.
 Intrepid 2F® at 4-8 fl. oz. per acre. European corn borers only.	Do not exceed 64 fl. oz. per acre per season. 3-day PHI.	
Thresholds <i>European Corn Borers</i> More than 10 moths per night in a black light traps while corn is in late whorl stage <i>Corn Earworms</i> More than 10 moths per night in pheromone traps while green silks are present <i>Fall Armyworms</i> Moths being caught in pheromone traps or larval damage present while corn is in late whorl stage	Lannate SP® at 0.25-0.5 lb. per acre. European corn borers only.	Do not exceed 6.3 lbs. a.i. per acre per crop. 0-day PHI for ears. 3-day PHI for forage.
	Larvin 3.2® at 20-30 fl. oz. per acre.	Do not exceed 300 fl. oz. per acre per season. 0-day PHI.
	Mustang MAX® at 2.8-4.0 fl. oz. per acre.	Do not exceed 0.15 lb. a.i. per acre per season. 3-day PHI.
	PennCap-M® at 2-3 pts. per acre. European corn borers only.	Do not exceed 12 pts. per acre per season. 5-day PHI.
	Pounce 25WP® at 6.4-12.8 oz. per acre.	Do not exceed 1.2 lbs. a.i. per acre per season. Control is poor when temperatures are above 90°F. 1-day PHI.
	 Radiant SC® at 3-6 fl. oz. per acre.	Do not exceed 6 applications per season. 1-day PHI.
Sevin XLR PLUS® at 1.5-2 qts. per acre.	Do not exceed 8 applications or 16 qts. per acre per season. 2-day PHI.	

 This is a reduced-risk pesticide. See pages 23-24 for details.

 May be acceptable for use in certified organic production. Check with your certifier before use.

Insects Controlled	Treatment	Comments
European Corn Borers, Corn Earworms, Fall Armyworms (continued)	RR SpinTor 2SC® at 1.5-6 fl. oz. per acre.	More effective for European corn borers than corn earworms. Do not exceed 29 fl. oz. per acre per season. Observe resistance management restrictions. 1-day PHI.
	Voliam Xpress® at 6-9 fl. oz. per acre.	Do not exceed 31 fl. oz. per acre per season. 1-day PHI. RUP.
	Warrior II® at 1.28-1.92 fl. oz. per acre.	Do not exceed 30.72 fl. oz. per acre per season. 1-day PHI. RUP.
Flea Beetles	Plant resistant varieties.	Use varieties that are resistant to Stewart's wilt ¹ , which is vectored by flea beetles.
	Ambush 25W® at 6.4-12.8 oz. per acre.	Do not exceed 1.2 lbs. a.i. per acre per season. 1-day PHI.
	Asana XL® at 5.8-9.6 fl. oz. per acre.	Do not exceed 0.5 lb. a.i. per acre per season. 1-day PHI.
	Baythroid® at 0.8-1.6 fl. oz. per acre.	Do not exceed 28 fl. oz. per acre per season. 0-day PHI.
	Brigade 2EC® at 2.1-6.4 fl. oz. per acre.	Do not exceed 12.8 fl. oz. per acre per season. 1-day PHI.
	Lannate SP® at 0.25-0.5 lb. per acre.	Do not exceed 6.3 lbs. a.i. per acre per crop. 0-day PHI for ears. 3-day PHI for forage.
	Lorsban 4E® at 1-2 pts. per acre.	Do not exceed 15 pts. per acre per crop. 35-day PHI.
	Mustang MAX® at 2.24-4.0 fl. oz. per acre.	Do not exceed 0.15 lb. a.i. per acre per season. 3-day PHI.
	PennCap-M® at 2-3 pts. per acre.	Do not exceed 12 pts. per acre per season. 5-day PHI.
	Pounce 25WP® at 6.4-12.8 oz. per acre.	Do not exceed 1.2 lbs. a.i. per acre per season. 1-day PHI.
	Sevin XLR PLUS® at 1-2 qts. per acre.	Do not exceed 8 applications or 16 qts. per acre per season. 2-day PHI.
Warrior II® at 1.28-1.92 fl. oz. per acre.	Do not exceed 30.72 fl. oz. per acre per season. 1-day PHI. RUP.	
Seedcorn Maggots, Seedcorn Beetles, Wireworms	Plant seed that has been treated with an insecticide prior to planting. Use diazinon, a diazinon-lindane combination, or Cruiser®. Follow label directions.	Although most sweet corn seed has been treated with a fungicide, it is seldom treated with an insecticide to prevent seed and seedling damage.
	Brigade 2EC® at 0.15-0.3 fl. oz. per 1,000 linear ft. of row.	Apply in furrow or T-band. May be applied in conjunction with pop-up fertilizers. Also controls cutworms and grubs. Do not exceed 0.1 lb. a.i. per acre per season at plant application. 30-day PHI.
	Capture LFR® at 0.2-0.39 fl. oz. per 1,000 linear ft. of row at planting.	See label. RUP.
	Force CS® at 0.46-0.57 fl. oz. per 1,000 linear ft. of row at planting.	See label. RUP.
	Fortress 5G® at 3-3.75 oz. per 1,000 linear ft. of row.	Apply as a T-band over the row or in furrow at planting. Do not exceed 1 application per acre per season.

RR This is a reduced-risk pesticide. See pages 23-24 for details.

Monitoring European Corn Borer and Corn Earworm

One of the keys to successfully managing European corn borers and corn earworms on sweet corn is to determine when the insects are active. European corn borers can be monitored effectively with blacklight traps and field observations, and corn earworms can be monitored with pheromone traps. When moths are being caught in the traps, it means they are laying eggs.

Corn borer eggs are laid on leaves, usually on the undersides, in the region of the ear. Larvae feed on the leaves and later may migrate to the ears (if present).

Corn earworm moths lay their eggs directly on green silks. The larvae that hatch from those eggs will follow the silks down into the tips of the ears.

Because these two insects' egg laying behavior differ, control strategies also differ. Corn borers can be controlled by spraying during the late whorl, tasselling, and silking stages. The migrating larvae should contact a lethal dose of insecticide while moving to the ear zone. Corn earworms must be controlled by directing sprays at the silks so larvae will immediately contact the insecticide after hatching.

For corn borers, treat during the late whorl stage if 20 percent or more of the plants show larval feeding. The presence

of large numbers of moths in light traps also justifies treatment. One application during the late whorl stage, followed by additional treatments every five days up until seven days of harvest, usually provides adequate control.

For corn earworms, treatment is justified if fresh green silks are present and moths are being caught in pheromone traps. In general, the higher the moth catches, the shorter the interval between sprays. If fewer than five moths are being caught per night, a five-day spray interval should be adequate. As moth catches approach 50 to 100 per night, a two- to three-day spray interval would be more appropriate. Determining the spray interval exactly depends on many factors, including how much damage you can tolerate, the crop's value, and the cost and effectiveness of the insecticide. Stop treating for corn earworms when 90 percent of the silks are brown.

Obviously, growers should not treat separately for these two pests. Some of the insecticides recommended here are effective against both species. Choose insecticides that are more effective against the particular pest that is most prevalent at the time of application. If both pests are present, choose an insecticide that will adequately control both.

Sources of Traps

Corn Earworm and European Corn Borer Traps

Bob Poppe's Service

25738 N. 3200 East
Lexington, IL 61753
(309) 275-5477

Pheromones/Traps

Gempler's

P.O. Box 270
100 Countryside Drive
Belleville, WI 53508
(800) 382-8473
www.gemplers.com

Great Lakes IPM

10220 Church Road
Vestaburg, MI 48891-9746
(989) 268-5693
www.greatlakesipm.com

Insects Limited Inc.

16950 Westfield Park Road
Westfield, IN 46074-9374
(317) 896-9300
www.insectslimited.com

Pacific Biocontrol Corporation

620 E. Bird Lane
Litchfield Park, AZ 85340
(623) 935-0512 or (800) 999-8805
www.pacificbiocontrol.com

Scentry Biologicals, Inc.

610 Central Avenue
Billings, MT 59102
(800) 735-5323
www.scentry.com

Trece Incorporated

PO Box 129
Adair, OK 74330
(866) 785-1313
www.trece.com