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 Requirements[1]

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.

Fertilizing

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

Preplant: N: 60 pounds per acre. P_2O_5: 0 to 100 pounds per acre. K_2O: 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 + K_2O 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).

Pesticide Use in Greenhouses

Before using any pesticide, always read the product label for mention of greenhouse restrictions. See Selected Information About Recommended Fungicides (page 79), Selected Information About Recommended Herbicides (page 69), and Selected Information About Recommended Insecticides (page 54).

Disease Control

Recommended Controls

Anthracnose of Corn - Colletotrichum Fungus

Crop rotation Rotate between crop families to reduce disease inoculum buildup.

Aproach® (picoxystrobin) 3-12 fl. oz. per acre. Use 3-6 fl. oz. rate for single application for early disease control between V4 and V7. Use the 6-12 fl. oz. rate for repeated applications for continued season long control between VT and R3. See label. REI: 12-hour. PHI: 7-day.

azoxystrobin formulations (azoxystrobin) Most formulations are 6-15.5 fl. oz. per acre for anthracnose and 6-9 fl. oz. per acre for rust. REI: 4-hour. PHI: 7-day.

Elatus® (azoxystrobin, benzovindiflupyr (solatenol)) 5-7.3 oz. per acre. REI: 12-hour. PHI: 7-day.

Headline® (pyraclostrobin) 6-12 fl. oz. per acre. REI: 12-hour. PHI: 7-day.

Headline AMP® (pyraclostrobin, metconazole) 10-14.4 fl. oz. per acre. REI: 12-hour. PHI: 20-day.

Priaxor® (fluxapyroxad, pyraclostrobin) 4-8 fl. oz. per acre. REI: 12-hour. PHI: 7-day.

Quilt® (azoxystrobin, propiconazole) 10.5-14 fl. oz. per acre. REI: 12-hour. PHI: 14-day.

Quilt Xcel® (azoxystrobin, propiconazole) 10.5-14 fl. oz. per acre. Use lower rate for early season applications. See label. REI: 12-hour. PHI: 14-day.

Stratego® (propiconazole, trifloxystrobin) 10 fl. oz. per acre. REI: 12-hour. PHI: 14-day.

Northern Corn Leaf Blight of Corn - Exserohilum or Helminthosporium Fungus

Crop rotation Rotate between crop families to reduce disease inoculum buildup.

Aproach® (picoxystrobin) 3-12 fl. oz. per acre. Use 3-6 fl. oz. rate for single application for early disease control between V4 and V7. Use the 6-12 fl. oz. rate for repeated applications for continued season long control between VT and R3. See label. REI: 12-hour. PHI: 7-day.

azoxystrobin formulations (azoxystrobin) Most formulations are 6-15.5 fl. oz. per acre for anthracnose and 6-9 fl. oz. per acre for rust. REI: 4-hour. PHI: 7-day.

chlorothalonil formulations (chlorothalonil) REI: 12-hour.

Elatus® (azoxystrobin, benzovindiflupyr (solatenol)) 5-7.3 oz. per acre. REI: 12-hour. PHI: 7-day.

Headline® (pyraclostrobin) 6-12 fl. oz. per acre. REI: 12-hour. PHI: 7-day.

Headline AMP® (pyraclostrobin, metconazole) 10-14.4 fl. oz. per acre. REI: 12-hour. PHI: 20-day.

mancozeb formulations (mancozeb) REI: 24-hour. PHI: 7-day.

Priaxor® (fluxapyroxad, pyraclostrobin) 4-8 fl. oz. per acre. REI: 12-hour. PHI: 7-day.

propiconazole formulations (propiconazole) Labeled formulations include Propimax EC®, Propiconazole 3.6 EC®, Propiconazole 41.8% EC®, Tilt®. REI: 12-hour. PHI: 14-day.

Quilt® (azoxystrobin, propiconazole) 7-14 fl. oz. per acre. REI: 12-hour. PHI: 14-day.

Quilt Xcel® (azoxystrobin, propiconazole) 10.5-14 fl. oz. per acre. Use lower rate for early season applications. See label. REI: 12-hour. PHI: 14-day.

Stratego® (propiconazole, trifloxystrobin) 10 fl. oz. per acre. REI: 12-hour. PHI: 14-day.

tebuconazole formulations (tebuconazole) Labeled formations include Monsoon®, Orius 3.6F®, Onset 3.6L®, Tebuconazole 3.6F®, Toledo 3.6F®, Vibe®. REI: see label. PHI: 7-day.

Northern Corn Leaf Spot of Corn - Bipolaris Fungus

Crop rotation Rotate between crop families to reduce disease inoculum buildup.

Aproach (picoxystrobin) 3-12 fl. oz. per acre. Use 3-6 fl. oz. rate for single application for early disease control between V4 and V7. Use the 6-12 fl. oz. rate for repeated applications for continued season long control between VT and R3. See label. REI: 12-hour. PHI: 7-day.

azoxystrobin formulations (azoxystrobin) Most formulations are 6-15.5 fl. oz. per acre for anthracnose and 6-9 fl. oz. per acre for rust. REI: 4-hour. PHI: 7-day.

chlorothalonil formulations (chlorothalonil) REI: 12-hour.

Elatus® (azoxystrobin, benzovindiflupyr (solatenol)) 5-7.3 oz. per acre. REI: 12-hour. PHI: 7-day.

Headline® (pyraclostrobin) 6-12 fl. oz. per acre. REI: 12-hour. PHI: 7-day.

Headline AMP® (pyraclostrobin, metconazole) 10-14.4 fl. oz. per acre. REI: 12-hour. PHI: 20-day.

mancozeb formulations (mancozeb) REI: 24-hour. PHI: 7-day.

Priaxor® (fluxapyroxad, pyraclostrobin) 4-8 fl. oz. per acre. REI: 12-hour. PHI: 7-day.

propiconazole formulations (propiconazole) Labeled formulations include Propimax EC®, Propiconazole 3.6 EC®, Propiconazole 41.8% EC®, Tilt. REI: 12-hour. PHI: 14-day.

Quilt® (azoxystrobin, propiconazole) 7-14 fl. oz. per acre. REI: 12-hour. PHI: 14-day.

Quilt Xcel® (azoxystrobin, propiconazole) 10.5-14 fl. oz. per acre. Use lower rate for early season applications. See label. REI: 12-hour. PHI: 14-day.

Stratego® (propiconazole, trifloxystrobin) 10 fl. oz. per acre. REI: 12-hour. PHI: 14-day.

tebuconazole formulations (tebuconazole) Labeled formations include Monsoon®, Orius 3.6F®, Onset 3.6L®, Tebuconazole 3.6F®, Toledo 3.6F®, Vibe®. REI: see label. PHI: 7-day.

Rust of Multiple Crops - Puccinia Fungus

Variety selection Plant resistant hybrids. 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 prevalent in the planting.

Aproach® (picoxystrobin) 3-12 fl. oz. per acre. Use 3-6 fl. oz. rate for single application for early disease control between V4 and V7. Use the 6-12 fl. oz. rate for repeated applications for continued season long control between VT and R3. See label. REI: 12-hour. PHI: 7-day.

azoxystrobin formulations (azoxystrobin) Most formulations are 6-15.5 fl. oz. per acre for anthracnose and 6-9 fl. oz. per acre for rust. REI: 4-hour. PHI: 7-day.

chlorothalonil formulations (chlorothalonil) REI: 12-hour.

Elatus® (azoxystrobin, benzovindiflupyr (solatenol)) 5-7.3 oz. per acre. REI: 12-hour. PHI: 7-day.

Headline® (pyraclostrobin) 6-12 fl. oz. per acre. REI: 12-hour. PHI: 7-day.

Headline AMP® (pyraclostrobin, metconazole) 10-14.4 fl. oz. per acre. REI: 12-hour. PHI: 20-day.

mancozeb formulations (mancozeb) REI: 24-hour. PHI: 7-day.

Priaxor® (fluxapyroxad, pyraclostrobin) 4-8 fl. oz. per acre. REI: 12-hour. PHI: 7-day.

propiconazole formulations (propiconazole) Labeled formulations include Propimax EC®, Propiconazole 3.6 EC®, Propiconazole 41.8% EC®, Tilt®. REI: 12-hour. PHI: 14-day.

Quilt® (azoxystrobin, propiconazole) 10.5-14 fl. oz. per acre. REI: 12-hour. PHI: 14-day.

Quilt Xcel® (azoxystrobin, propiconazole) 10.5-14 fl. oz. per acre. Use lower rate for early season applications. See label. REI: 12-hour. PHI: 14-day.

Stratego® (propiconazole, trifloxystrobin) 10 fl. oz. per acre. REI: 12-hour. PHI: 14-day.

tebuconazole formulations (tebuconazole) Labeled formations include Monsoon, Orius 3.6F®, Onset 3.6L®, Tebuconazole 3.6F®, Toledo 3.6F®, Vibe®. REI: see label. PHI: 7-day.

Smut of Corn - Ustilago Fungus

Some hybrids tend to have fewer infections. Use past experience to choose successful hybrids. Avoid mechanical damage to corn plant. Avoid plant stresses that affect pollen production and silk emergence.

Variety selection Plant resistant hybrids.

Southern Corn Leaf Blight of Corn - Bipolaris Fungus

Crop rotation Rotate between crop families to reduce disease inoculum buildup.

Aproach® (picoxystrobin) 3-12 fl. oz. per acre. Use 3-6 fl. oz. rate for single application for early disease control between V4 and V7. Use the 6-12 fl. oz. rate for repeated applications for continued season long control between VT and R3. See label. REI: 12-hour. PHI: 7-day.

azoxystrobin formulations (azoxystrobin) Most formulations are 6-15.5 fl. oz. per acre for anthracnose and 6-9 fl. oz. per acre for rust. REI: 4-hour. PHI: 7-day.

chlorothalonil formulations (chlorothalonil) REI: 12-hour.

Elatus® (azoxystrobin, benzovindiflupyr (solatenol)) 5-7.3 oz. per acre. REI: 12-hour. PHI: 7-day.

Headline® (pyraclostrobin) 6-12 fl. oz. per acre. REI: 12-hour. PHI: 7-day.

Headline AMP® (pyraclostrobin, metconazole) 10-14.4 fl. oz. per acre. REI: 12-hour. PHI: 20-day.

mancozeb formulations (mancozeb) REI: 24-hour. PHI: 7-day.

Priaxor® (fluxapyroxad, pyraclostrobin) 4-8 fl. oz. per acre. REI: 12-hour. PHI: 7-day.

propiconazole formulations (propiconazole) Labeled formulations include Propimax EC, Propiconazole 3.6 EC, Propiconazole 41.8%EC, Tilt. REI: 12-hour. PHI: 14-day.

Quilt® (azoxystrobin, propiconazole) 7-14 fl. oz. per acre. REI: 12-hour. PHI: 14-day.

Quilt Xcel® (azoxystrobin, propiconazole) 10.5-14 fl. oz. per acre. Use lower rate for early season applications. See label. REI: 12-hour. PHI: 14-day.

Stratego® (propiconazole, trifloxystrobin) 10 fl. oz. per acre. REI: 12-hour. PHI: 14-day.

tebuconazole formulations (tebuconazole) Labeled formations include Monsoon®, Orius 3.6F®, Onset 3.6L®, Tebuconazole 3.6F®, Toledo 3.6F®, Vibe®. REI: see label. PHI: 7-day.

Stewart's Wilt of Corn - Pantoea Bacteria

Use an insecticide or seed treatment to control the flea beetles that transmit Stewart's wilt. Insecticide treatments are more likely to be necessary in season following a mild winter and when using susceptible varieties.

Variety selection Plant wilt-resistant, or partially resistant hybrids.

Viruses of Multiple Crops - Multiple Pathogens

Variety selection Virus diseases include maize dwarf mosaic, chlorotic dwarf, wheat streak mosaic. Plant resistant or partially resistant varieties. Control Johnson grass and volunteer wheat.

Weed Control

Recommended Controls

Burndown or Directed/Shielded

glyphosate formulations (glyphosate) 0.75-3.75 lbs. acid equivalent (ae) per acre. Use formulations of 3 lbs. ae per gal. (4 lbs. isopropylamine salt per gal.) at 1-5 qts. per acre, or formulations containing 4.5 lbs. ae per gal. (5 lbs. potassium salt per gal.) at 0.66-3.3 qts. per acre. Broadcast before or after planting but before crop emerges, or apply up to 0.75 lb. acid equivalent between crop rows with wipers, hooded or shielded sprayers after corn is 12 inches tall. Use low rate for annuals and higher rates for perennials. See label for suggested application volume and adjuvants. REI: 4-hour. PHI: 7-day.

paraquat formulations (paraquat) 2-4 pt. per acre of 2 lb. per gal. formulation or 1.3-2.7 pt. per acre of 3 lb. per gal. formulation. Add 1 qt. COC (1% v/v) or 0.5 pt. NIS (0.25% v/v) per 25 gals. of solution. Apply before or after seeding but before crop emerges. Or apply after crop emergence and use a hooded or shielded sprayers to prevent spray from contacting crop. Or wait until corn is more than 10 inches tall and apply between rows using directed spray that reaches no higher than 3 inches up the corn stalk. Corn plants contacted by spray may be injured or killed. Certified applicators must successfully complete an EPA-approved training program before mixing, loading, and/or applying paraquat. REI: 24-hour. *RUP.*

Preemergence Broadleaf and Grass Weeds

acetochlor formulations (acetochlor)

Harness® (acetochlor) 1.5-3.0 pts. per acre.

Surpass EC® (acetochlor) 1.5-3.75 pts. per acre.

TopNotch® (acetochlor) 2-3 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. REI: 12-hour.

acetochlor plus atrazine formulations (acetochlor, atrazine)

Breakfree ATZ® (acetochlor, atrazine) 2.2-3.4 qts. per acre.

Breakfree ATZ Lite® (acetochlor, atrazine) 1.6-3 qts. per acre.

Degree Xtra® (acetochlor, atrazine) 2.9-3.7 qts. per acre.

FulTime® (acetochlor, atrazine) 2.5-5 qts. per acre.

Harness Xtra® (acetochlor, atrazine) 1.8-3.3 qts. per acre.

Harness Xtra 5.6L® (acetochlor, atrazine) 1.4-3 qts. per acre.

Keystone® (acetochlor, atrazine) 2.2-3.4 qts. per acre.

Keystone LA® (acetochlor, atrazine) 1.6-3 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. See label for details. Do not apply to light textured soils specified in the label where ground water is at 30 ft. or less. REI: 12-hour. PHI: 45-day for forage uses. *RUP.*

Acuron® (atrazine, mesotrione, s-metolachlor, bicyclopyrone) 2.5 qts. per acre on soil with less than 3% organic matter; 3 qts. per acre on soil with more than 3% organic matter. For control of most broadleaf and grass weeds. Control may be reduced on soils with >10% organic matter. Do not apply after sweet corn has emerged or severe crop injury may occur. 18-month replant restriction for all crops except corn types (no restrictions); small grains (4 months); dry beans, potato, and soybean (10 months). Contains atrazine so state restrictions for atrazine apply. REI: 24-hour. PHI: 45-day for grazing or forage feeding, 60-day for forage harvest. *RUP.*

Anthem ATZ® (atrazine, pyroxasulfone, fluthiacet-methyl) 1.5-4 pts. per acre. Adjust rate based on % organic matter in soil and soil texture, and pre or postemergence use, see label. Preplant surface applications are not recommended for sweet corn. For processing sweet corn only when used postemergence. Apply post from crop emergence through V4 growth stage. Add an adjuvant such as a NIS or a silicone-based surfactant at 8 fl. oz. per 25 gals. of spray solution, or add COC or MSO at 1-2 pts. per acre for best activity. In addition to an adjuvant, you can add UAN at 1-2 qts. per acre or spray grade AMS at recommended-use rates to the spray solution. Before applying to corn, confirm that your line has Anthem selectivity with your seed company or supplier to avoid injury to sensitive lines. Avoid postemergence application when crop foliage is wet or prior to or after a rain because a crop response can occur. However, the crop will recover. Do not apply if crop is under stress and do not irrigate within 4 hours of a postemergence application. Do not make more than 1 application to spring corn. See label for crop rotation intervals. REI: 12-hour. PHI: 45-day. *RUP.*

Anthem Maxx® (pyroxasulfone, fluthiacet-methyl) 2.5-6.5 fl. oz. per acre. Adjust rate based on % organic matter in soil and soil texture, and pre or postemergence use, see label. Preplant surface applications are not recommended for sweet corn. For processing sweet corn only when used postemergence. Apply post from crop emergence through V4 growth stage. Add an adjuvant such as a NIS or a silicone-based surfactant at 8 fl. oz. per 25 gals. of spray solution, or add COC or MSO at 1-2 pts. per acre for best activity. In addition to an adjuvant, you can add UAN at 1-2 qts. per acre or spray grade AMS at recommended-use rates to the spray solution. Before applying to corn, confirm that your line has Anthem selectivity with your seed company or supplier to avoid injury to sensitive lines. Avoid postemergence application when crop foliage is wet or prior to or after a rain because a crop response can occur. However, the crop will recover. Do not apply if crop is under stress and do not irrigate within 4 hours of a postemergence application. REI: 12-hour. PHI: 40-day.

atrazine (atrazine) Use 4L formulations at 1-2 qts. per acre. Use 90W formulations at 1.1-2.2 lbs. per acre. To control small, emerged broadleaves, include 1 qt. of COC per acre. Apply before planting and incorporate, after planting before corn emerges, or after emergence before corn is 12 inches tall. Potential for carryover in soil and injury to following crops. Consult label for details. Do not exceed 1.6 qts. of 4L or 1.77 lbs. of 90W per acre before corn emerges on highly erodible soils with low residue; do not exceed 2.5 qts. or 2.77 lbs. total per acre per year. REI: 12-hour. *RUP.*

dimethenamid-p plus atrazine formulations (dimethenamid-p, atrazine)

Commit ATZ® (atrazine, dimethenamid-p) 2.5-4.6 pts. per acre.

Commit ATZ Lite® (dimethenamid-p, atrazine) 2.0 to 3.5 pts. per acre.

Guardsman Max® (dimethenamid-p, atrazine) 2.5-4.6 pts. per acre.

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 inches 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. REI: 12-hour. PHI: 50-day. *RUP.*

Dual Magnum® or Dual II Magnum® (s-metolachlor) 1-2 pts. per acre. Use lower rate on coarse soils. Apply before planting and incorporate, or apply after planting but before corn emerges. May also be applied as a directed spray between rows when corn is 5-40 inches tall. Incorporate to control nutsedge. May be mixed with atrazine, see label for details. Do not exceed 3.9 pts. per acre per year. REI: 24-hour. PHI: 30-day.

Lexar® or Lexar EZ® (atrazine, s-metolachlor, mesotrione) 3 or 3.5 qts. per acre. 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 NIS at 0.25% v/v. Note organophosphate insecticide precautions. Do not use these products if topramezone (such as Impact®) or other products containing mesotrione (such as Callisto®) have been or will be applied the same growing season. Do not exceed 3.5 qts. of Lexar® per acre per year. PHI: 60-day. *RUP.*

Lumax® or Lumax EZ® (s-metolachlor, atrazine, mesotrione) Use Lumax® at 2.5 or 3 qts. per acre. Use Lumax EZ® at 2.5 or 3 qts. per acre. 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 NIS at 0.25% v/v. Note organophosphate insecticide precautions. Do not use this products if topramezone (such as Impact®) or other products containing mesotrione (such as Callisto®) have been or will be applied the same growing season. Do not exceed 3 qts. of Lumax® or 3.25 qts. of LumaxEZ® per acre per year. REI: 24-hour. PHI: 60-day. *RUP.*

Outlook® (dimethenamid-p) 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 inches tall. Apply preemergence for best activity. Do not exceed 21 fl. oz. of Outlook per acre per year. REI: 12-hour. PHI: 50-day.

pendimethalin formulations (pendimethalin) Use Prowl H2O® and Satellite Hydrocap® at 2-4 pts. per acre or Prowl 3.3EC at 1.8-4.8 pts. per acre. Use low rates on coarse soils with low organic matter. Apply after planting but before corn emerges, or after emergence until corn is 20-24 in. tall or shows 8 leaf collars. Plant corn at least 1.5 inches 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 before and after corn emergence. REI: 24-hour.

s-metolachlor formulations (s-metolachlor) products containing 7.6 lbs. a.i. per gal. at 1-2 pts. per acre. 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 inches tall. Incorporate to control nutsedge. May be mixed with atrazine, see label for details. Do not exceed 3.9 pts. per acre per year. REI: 24-hour.

s-metolachlor plus atrazine formulations (atrazine, s-metolachlor)

Bicep II Magnum® 1.3-2.6 qts. per acre.

Bicep II Magnum FC® 1.3-2.6 qts. per acre.

Bicep Lite II Magnum® 0.9-2.2 qts. per acre.

Charger Max ATZ® 1.3-2.6 qts. per acre.

Charger Max ATZ Lite® 0.9-2.2 qts. per acre.

Cinch ATZ® 1.3-2.6 qts. per acre.

Cinch ATZ Lite® 0.9-2.2 qts. per acre.

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 inches tall. May also be applied as a directed spray between rows when corn is 5-12 inches 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. REI: 24-hour. PHI: 30-day. *RUP.*

Zidua® (pyroxasulfone) 1.0-4.0 oz. per acre. Apply before or after planting and before crop emergence, or at spiking up to V4 (4 leaf collars visible). May be incorporated. Will not control emerged weeds. May be tank-mixed or applied sequentially with many other products. Seed at least 1 inch deep. Do not exceed 2.75 oz. per acre per season on coarse soils. Do not exceed 5 oz. per acre per season on other soils. REI: 12-hour. PHI: 37-day.

Preemergence Broadleaf Weeds

Callisto® (mesotrione) 6-7.7 fl. oz. per acre preemergence, 3 fl. oz. per acre postemergence. Processing and fresh market varieties. Some varieties may be severely injured. If weeds are present, add 1 qt. COC (1% v/v) or 0.5 pt. NIS per 25 gal. of spray solution (0.25% v/v). Do not add UAN or AMS when applying to emerged sweet corn. Adding atrazine at 0.25-0.5 lb. of a.i. per acre for post applications, or 0.75 lb. a.i. per acre for pre applications will improve weed control. Note organophosphate insecticide precautions. Do not exceed 0.24 lb. mesotrione per acre per year (7.7 fl. oz. Callisto®) from all sources. REI: 12-hour. PHI: 45-day.

halosulfuron formulations (halosulfuron) 2/3-1 oz. per acre for products with 75% active ingredient. Apply over the top or with drop nozzles from the spike through layby stages. Has some soil residual activity. 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. Products include Sandea®, Permit®, Profine®. REI: 12-hour. PHI: 30-day.

Postemergence Broadleaf and Grass Weeds

atrazine formulations (atrazine) See recommendations in the Preemergence Broadleaf and Grass Weeds section of this chapter.

Accent Q® (nicosulfuron) 0.45-0.90 oz. per acre. Use 1 qt. of COC or 8 fl. oz. of NIS per 25 gals. of spray solution. Apply broadcast or with drop nozzles on corn up to 12 inches tall or up through 5 leaf collars. For corn 12-18 inches tall use drop nozzles. Do not apply to corn more than 18 inches 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. REI: 4-hour.

Impact® (topramezone) 0.5-0.75 fl. oz. per acre. Add MSO or COC and urea ammonium nitrate (UAN), ammonium phosphate (10-34-0), or ammonium sulfate. See label for additive rates. Tank-mixing with atrazine will improve efficacy and spectrum of weed species controlled. Not recommended if products containing mesotrione have been or will be applied to crop. REI: 12-hour. PHI: 45-day.

Laudis® (tembotrione) 3 oz. per acre. Apply with 1% v/v MSO plus 8.5 lb. of AMS per 100 gal. 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. REI: 12-hour.

Lexar® or Lexar EZ® (atrazine, s-metolachlor, mesotrione) See recommendations in the Preemergence Broadleaf and Grass Weeds section of this chapter.

Lumax® or Lumax EZ® (s-metolachlor, atrazine, mesotrione) See recommendations in the Preemergence Broadleaf and Grass Weeds section of this chapter.

Revulin Q® (nicosulfuron, mesotrione) 3.4 to 4.0 oz. per acre. Use with NIS after emergence until 12 inches tall or 5 leaf-collar stage. Use drop nozzles for corn between 12 and 18 inches tall. Do not apply to sweet corn taller than 18 inches or at 6 leaf-collar stage or later. Do not use AMS or UAN adjuvants. Because of the adjuvant restrictions, better results will be obtained when applied to smaller weeds. Can use COC under dry conditions to improve weed control, but may increase crop injury. 18-month replant restriction for all crops except field corn (4 months); popcorn, sweet corn, soybean, and potato (10 months). Possible hybrid sensitivity. REI: 12-hour. PHI: 45-day.

Roundup PowerMax® or Roundup WeatherMax® (glyphosate) 0.66-3.3 qts. per acre before corn emerges, or 16-22 fl. oz. per acre after corn has emerged. *Roundup Ready® sweet corn only. 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 (V-8) 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 or 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. REI: 4-hour. PHI: 30-day.

Shieldex 400SC® (tolpyralate) 1-1.35 fl. oz. per acre. Apply as a broadcast spray over corn when weeds are small. Apply to corn up to 20 inches tall and showing no more than 6 leaf collars. Controls many broadleaves and grasses. Use higher rate for larger weeds. Add NIS or COC. Many vegetables have 9 month rotational restrictions. Do not exceed 2 applications per year. REI: 12-hour. PHI: 35-day.

Postemergence Broadleaf Weeds

2,4-D formulations (2,4-D) 4L amine 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 inches tall. Do not apply to open whorls or from 2 week before tasseling through harvest. Avoid drift onto other vegetable crops. Can cause severe injury to some varieties. REI: 48-hour. PHI: 45-day.

Aim EC® (carfentrazone) 0.5-2.0 fl. oz. per acre. Apply to actively growing weeds up to 4 in. tall from prior to planting up to V-14 stage. To reduce injury, use drop nozzles to make applications in corn from V8-V14 stages or apply with a hooded-sprayer to minimize application to the whorl. Add 0.5 pt. NIS per 25 gal. of spray solution (0.25% v/v). Do not exceed 2 fl. oz. per acre per season. REI: 12-hour.

Anthem ATZ® (atrazine, pyroxasulfone, fluthiacet-methyl) See recommendations in the Preemergence Broadleaf and Grass Weeds section of this chapter.

Anthem Maxx® (pyroxasulfone, fluthiacet-methyl) See recommendations in the Preemergence Broadleaf and Grass Weeds section of this chapter.

Armezon® (topramezone) 0.5 to 1.0 fl. oz. per acre. Add MSO or COC and urea ammonium nitrate (UAN), ammonium phosphate (10-34-0), or ammonium sulfate. See label for additive rates. Not recommended if products containing mesotrione have been or will be applied to crop. REI: 12-hour. PHI: 45-day.

bentazon formulations (bentazon) Use 4L formulations at 1.5-2 pt. per acre and 5L formulations at 1.2 to 1.6 pts. per acre. Add 1 qt. of COC per 25 gals. spray solution (1% v/v). Apply to small weeds. Also controls nutsedge. Do not apply to corn that is stressed because injury may result. Combine with atrazine to broaden weed control spectrum. Do not exceed 2 lbs. of bentazon (4 pts. of 4L formulation) per acre, per season. REI: 48-hour.

Cadet® (fluthiacet-methyl) 0.6-0.9 fl. oz. per acre. *For processing sweet corn only.* Apply from 2 collars to tasseling. Controls velvetleaf and several other broadleaves. May be tank-mixed with labeled postemergence herbicides. Add COC or NIS. Do not exceed 1.25 fl. oz. per acre per year. REI: 12-hour. PHI: 40-day.

Callisto® (mesotrione) See recommendations in the Preemergence Broadleaf Weeds section of this chapter.

Callisto Xtra® (mesotrione, atrazine) 20-24 fl. oz. per acre. Apply with 8 fl. oz. of NIS or 1 qt. of COC per 25 gals. spray solution. Apply after corn emerges and before corn is 12 inches tall. Also controls large crabgrass. 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 gal. Do not exceed 0.24 lb. mesotrione or 2.5 lbs. atrazine per acre per year from all sources. Maximum one application per year. REI: 12-hour. PHI: 45-day. *RUP.*

halosulfuron formulations (halosulfuron) See recommendations in the Preemergence Broadleaf Weeds section of this chapter.

Starane Ultra® (fluroxypyr) 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. REI: 24-hour. PHI: 31-day.

Stinger® (clopyralid) 0.33-0.66 pt. per acre. Spray on actively growing weeds before corn is 18 inches tall. Controls primarily composites and nightshade. Wait 21 days between applications. Do not exceed 0.66 pt. per crop per year. REI: 12-hour. PHI: 30-day.

Postemergence Grass

Poast® (sethoxydim) 0.75-1.5 pt. per acre. *Poast Protected® sweet corn varieties only; will kill other varieties.* Poast Protected® varieties are clearly labeled. Add 1 qt. COC or MSO per 25 gal. of

spray solution (1% v/v). UAN or AMS are optional, see label. Allow at least 10 days between repeated applications. Do not exceed 3 pt. per acre per growing season. Poast Plus® may be used instead at 1.5-2.25 pt. per acre, not to exceed 4.5 pt. per acre per growing season. REI: 12-hour. PHI: 30-day.

Insect Control

Recommended Controls

Aphids

Conserve or introduce natural enemies Heavy corn leaf aphid infestations 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 parasitoids) will keep those infestations in check.

Assail 30SG® (acetamiprid) 2.1-2.9 oz. per acre. Do not exceed 4 applications per season. REI: 12-hour. PHI: 1-day.

Capture LFR® (bifenthrin) 2.8-8.5 fl. oz. per acre. REI: 12-hour. PHI: 1-day. *RUP.*

Lannate LV® (methomyl) 0.75-1.5 pts. per acre. Do not exceed 21 pts. per acre per crop. REI: 48-hour. PHI: 0-day for ears, 3-day for forage. *RUP.*

Armyworm Caterpillars

Moths being caught in pheromone traps or larval damage present when corn is in late whorl stage.

Ambush® (permethrin) 6.4-12.8 fl. oz. per acre. Do not exceed 76 fl. oz. per acre per season. Control is poor when temperatures are above 90°F. REI: 12-hour. PHI: 1-day. *RUP.*

Baythroid XL® (beta-cyfluthrin) 1.6-2.8 fl. oz. per acre. Do not exceed 28 fl. oz. per acre per season. REI: 12-hour. PHI: 0-day. *RUP.*

Besiege® (chlorantraniliprole, lambda-cyhalothrin) 6-10 fl. oz. per acre. Do not exceed 31 fl. oz. per acre per season. REI: 24-hour. PHI: 1-day. *RUP.*

Capture LFR® (bifenthrin) Soil: 0.2-0.78 fl. oz. per acre per 1,000 linear ft. row at planting. See label. Foliar: 2.8-8.5 fl. oz. per acre. REI: 12-hour. PHI: For foliar applications, 1-day. *RUP.*

Coragen® (chlorantraniliprole) 3.5-7.5 fl. oz. per acre. Do not exceed 15.4 fl. oz. per acre per season. REI: 4-hour. PHI: 1-day.

Entrust SC® (spinosad) 1.5-6 fl. oz. per acre. Do not exceed 29 fl. oz. per acre per season. Also see labels for Entrust WP®. Observe resistance management restrictions. The only cutworm labeled is the western bean cutworm. REI: 4-hour. PHI: 1-day. *OMRI-listed.*

Mustang Maxx® (zeta-cypermethrin) 2.24-4.0 fl. oz. per acre. Do not exceed 24 fl. oz. per acre per season. REI: 12-hour. PHI: 3-day. *RUP.*

Pounce 25WP® (permethrin) 6.4-12.8 oz. per acre. Do not exceed 51.2 oz. per acre per season. Control is poor when temperatures are above 90°F. REI: 12-hour. PHI: 1-day. *RUP.*

Radiant 1SC® (spinetoram) 3-6 fl. oz. per acre. Do not exceed 36 fl. oz. per acre per season. Do not make applications less than 4 days apart. The only cutworm labeled is the western bean cutworm. REI: 4-hour. PHI: 1-day.

Sevin XLR Plus® (carbaryl) 2 qts. per acre. Do not exceed 8 applications or 16 qts. per acre per season. Machine harvest only. REI: 12-hour. PHI: 2-day.

Tundra EC® (bifenthrin) Soil: 0.30-0.75 fl. oz. per 1,000 linear feet of row at planting. See label. Foliar: 2.1-6.4 fl. oz. per acre. Do not apply more than 0.2 lb. a.i. per acre per season. Do not apply more than 12.8 fl. oz. per acre per season. REI: 12-hour. PHI: 30-day for soil applications, 1-day for foliar applications. *RUP.*

Warrior II® (lambda-cyhalothrin) 1.28-1.92 fl. oz. per acre. Do not exceed 30.72 fl. oz. per acre per season. REI: 24-hour. PHI: 1-day. *RUP.*

Corn Earworm/Fruitworm Caterpillar

Corn earworms can be monitored with pheromone traps. When moths are being caught in the traps, it means they are laying eggs. 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. Corn earworms must be controlled by directing sprays at the silks so larvae will immediately contact the insecticide after hatching.

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. Do not treat separately for European corn borer and corn earworm

More than 10 moths per night in pheromone traps while green silks are present. If no field corn in the area is silking moths will lay eggs primarily on silking sweet corn. In this situation, use a threshold of 1-3 moths per pheromone trap per night.

Ambush® (permethrin) 6.4-12.8 fl. oz. per acre. Do not exceed 76 fl. oz. per acre per season. Control is poor when temperatures are above 90°F. REI: 12-hour. PHI: 1-day. *RUP.*

Asana XL® (esfenvalerate) 5.8-9.6 fl. oz. per acre. Do not exceed 96 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day. *RUP.*

Baythroid XL® (beta-cyfluthrin) 1.6-2.8 fl. oz. per acre. Do not exceed 28 fl. oz. per acre per season. REI: 12-hour. PHI: 0-day. *RUP.*

Besiege® (chlorantraniliprole, lambda-cyhalothrin) 6-10 fl. oz. per acre. Do not exceed 31 fl. oz. per acre per season. REI: 24-hour. PHI: 1-day. *RUP.*

Capture LFR® (bifenthrin) Soil: 0.2-0.78 fl. oz. per acre per 1,000 linear ft. row at planting. See label. Foliar: 2.8-8.5 fl. oz. per acre. REI: 12-hour. PHI: For foliar applications, 1-day. *RUP.*

Coragen® (chlorantraniliprole) 3.5-7.5 fl. oz. per acre. Do not exceed 15.4 fl. oz. per acre per season. REI: 4-hour. PHI: 1-day.

Entrust SC® (spinosad) 1.5-6 fl. oz. per acre. Do not exceed 29 fl. oz. per acre per season. Also see labels for Entrust WP®. Observe resistance management restrictions. The only cutworm labeled is the western bean cutworm. REI: 4-hour. PHI: 1-day. *OMRI-listed.*

Mustang Maxx® (zeta-cypermethrin) 2.24-4.0 fl. oz. per acre. Do not exceed 24 fl. oz. per acre per season. REI: 12-hour. PHI: 3-day. *RUP.*

Pounce 25WP® (permethrin) 6.4-12.8 oz. per acre. Do not exceed 51.2 oz. per acre per season. Control is poor when temperatures are above 90°F. REI: 12-hour. PHI: 1-day. *RUP.*

Radiant 1SC® (spinetoram) 3-6 fl. oz. per acre. Do not exceed 36 fl. oz. per acre per season. Do not make applications less than 4 days apart. The only cutworm labeled is the western bean cutworm. REI: 4-hour. PHI: 1-day.

OMRI-listed indicates that the product is listed by the Organic Materials Review Institute (OMRI.org) and therefore may be acceptable for use in organic production. Check with your certifier before use.

Sevin XLR Plus® (carbaryl) 2 qts. per acre. Do not exceed 8 applications or 16 qts. per acre per season. Machine harvest only. REI: 12-hour. PHI: 2-day.

Tundra EC® (bifenthrin) 2.1-6.4 fl. oz. per acre. Do not apply more than 12.8 fl. oz. per acre per season. REI: 12-hour. *RUP.*

Warrior II® (lambda-cyhalothrin) 1.28-1.92 fl. oz. per acre. Do not exceed 30.72 fl. oz. per acre per season. REI: 24-hour. PHI: 1-day. *RUP.*

Corn Rootworm Beetles

If few or no rootworm beetles were present in the field in the previous year, or you grew sweet corn in a field the previous year and followed a regular spray schedule during silking, there is little chance of a damaging infestation.

If you grew sweet corn in a field the previous year and followed a regular spray schedule during silking, then there is little chance of a damaging infestation.

Corn rootworm adults may prevent pollination by feeding on green silks. Treat when silks are being clipped.

Ambush® (permethrin) 6.4-12.8 fl. oz. per acre. Do not exceed 76 fl. oz. per acre per season. Control is poor when temperatures are above 90°F. REI: 12-hour. PHI: 1-day. *RUP.*

Baythroid XL® (beta-cyfluthrin) 1.6-2.8 fl. oz. per acre. Do not exceed 28 fl. oz. per acre per season. REI: 12-hour. PHI: 0-day. *RUP.*

Besiege® (chlorantraniliprole, lambda-cyhalothrin) 6-10 fl. oz. per acre. Do not exceed 31 fl. oz. per acre per season. REI: 24-hour. PHI: 1-day. *RUP.*

Capture LFR® (bifenthrin) Soil: 0.2-0.78 fl. oz. per acre per 1,000 linear ft. row at planting. See label. Foliar: 2.8-8.5 fl. oz. per acre. REI: 12-hour. PHI: For foliar applications, 1-day. *RUP.*

Mustang Maxx® (zeta-cypermethrin) 2.24-4.0 fl. oz. per acre. Do not exceed 24 fl. oz. per acre per season. REI: 12-hour. PHI: 3-day. *RUP.*

Pounce 25WP® (permethrin) 6.4-12.8 oz. per acre. Do not exceed 51.2 oz. per acre per season. Control is poor when temperatures are above 90°F. REI: 12-hour. PHI: 1-day. *RUP.*

Sevin XLR Plus® (carbaryl) 2 qts. per acre. Do not exceed 8 applications or 16 qts. per acre per season. Machine harvest only. REI: 12-hour. PHI: 2-day.

Tundra EC® (bifenthrin) 2.1-6.4 fl. oz. per acre. Do not apply more than 12.8 fl. oz. per acre per season. REI: 12-hour. *RUP.*

Warrior II® (lambda-cyhalothrin) 1.28-1.92 fl. oz. per acre. Do not exceed 30.72 fl. oz. per acre per season. REI: 24-hour. PHI: 1-day. *RUP.*

Corn Rootworm Larvae

If few or no rootworm beetles were present in the field in the previous year, or you grew sweet corn in a field the previous year and followed a regular spray schedule during silking, there is little chance of a damaging infestation.

If you grew sweet corn in a field the previous year and followed a regular spray schedule during silking, then there is little chance of a damaging infestation.

Corn rootworm adults may prevent pollination by feeding on green silks. Treat when silks are being clipped.

Aztec 2.1G® (cyfluthrin, phostebupirim) 6.7 oz. per 1,000 linear ft. of row. Apply in furrow in a 7-inch band over the row and behind the planter shoe in front of the press wheel. Incorporate with tines and drag chains. REI: 48-hour. *RUP.*

Brigade 2EC® (bifenthrin) 0.3 fl. oz. per 1,000 linear ft. of row. Apply in a minimum of 3 gals. of finishes spray as a 5- to 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. REI: 12-hour. PHI: 30-day. *RUP.*

Capture LFR® (bifenthrin) 0.39-0.98 fl. oz. per 1,000 linear ft. of row. Apply at planting. Apply in furrow or T-band. See label. REI: 12-hour. *RUP.*

Counter 15G® (terbufos) 6-8 oz. per 1,000 linear ft. of row. Do not exceed 1 application per acre per crop. REI: 48-hour. *RUP.*

Ethos 3D® (bifenthrin, Bacillus amyloloiquefaciens strain D-747) 0.52 to 1.05 fl. oz. per 1,000 square feet Must be applied with a 3RIVE 3D system. REI: 12-hour. *RUP.*

Force CS® (tefluthrin) 0.46-0.57 fl. oz. per 1,000 linear ft. of row. Apply at planting. Apply as T-band or in furrow. See label. Do not exceed 1 application per crop. REI: 12-hour. *RUP.*

Lorsban 15G® (chlorpyrifos) 8 oz. per 1,000 linear ft. of row. Apply as T-band over an open seed furrow behind the planter shoe and ahead of the press wheel. Do not exceed 13 lbs. per acre per crop. REI: see label.

Mocap 15G® (ethoprop) 8 oz. per 1,000 linear ft. of row. Apply in band over closed seed furrow and incorporate with tines or drag chains. Do not place in the furrow or in direct contact with the seed. Do not exceed 1 application per acre per crop. REI: 48-hour. *RUP.*

Thimet 20G® (phorate) 4.5-6 oz. per 1,000 linear ft. of row. Place in a 7-inch band over the row behind the planter shoe and in front of or behind the press wheel and lightly incorporate. REI: 48-hour. *RUP.*

Warrior II® (lambda-cyhalothrin) 0.33 oz. per 1,000 linear ft. of row. Apply in furrow or as a 5- to 7-inch band. Do not exceed 30.72 fl. oz. per acre per season. REI: 24-hour. PHI: 7-day. *RUP.*

Cutworm Caterpillars

Ambush® (permethrin) 6.4-12.8 fl. oz. per acre. Do not exceed 76 fl. oz. per acre per season. Control is poor when temperatures are above 90°F. REI: 12-hour. PHI: 1-day. *RUP.*

Asana XL® (esfenvalerate) 5.8-9.6 fl. oz. per acre. Do not exceed 96 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day. *RUP.*

Baythroid XL® (beta-cyfluthrin) 0.8-1.6 fl. oz. per acre. Do not exceed 28 fl. oz. per acre per season. REI: 12-hour. PHI: 0-day. *RUP.*

Besiege® (chlorantraniliprole, lambda-cyhalothrin) 6-10 fl. oz. per acre. Do not exceed 31 fl. oz. per acre per season. REI: 24-hour. PHI: 1-day. *RUP.*

Blackhawk® (spinosad) 1.67 to 3.3 fl. oz. per acre. Western bean cutworm only. See label. REI: 4-hour. PHI: 1-day.

Capture LFR® (bifenthrin) Soil: 0.2-0.78 fl. oz. per acre per 1,000 linear ft. row at planting. See label. Foliar: 2.8-8.5 fl. oz. per acre. REI: 12-hour. PHI: For foliar applications, 1-day. *RUP.*

Coragen® (chlorantraniliprole) 3.5-7.5 fl. oz. per acre. Do not exceed 15.4 fl. oz. per acre per season. REI: 4-hour. PHI: 1-day.

Entrust SC® (spinosad) 1.5-6 fl. oz. per acre. Do not exceed 29 fl. oz. per acre per season. Also see labels for Entrust© WP. Observe resistance management restrictions. The only cutworm labeled is the western bean cutworm. REI: 4-hour. PHI: 1-day. *OMRI-listed.*

Force CS® (tefluthrin) 0.46-0.57 fl. oz. per 1,000 linear ft. of row. Apply at planting. Apply as T-band or in furrow. See label. Do not exceed 1 application per crop. REI: 12-hour. *RUP.*

OMRI-listed indicates that the product is listed by the Organic Materials Review Institute (OMRI.org) and therefore may be acceptable for use in organic production. Check with your certifier before use.

Lorsban 4E® (chlorpyrifos) 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. REI: see label. PHI: 21-day. *RUP.*

Mustang Maxx® (zeta-cypermethrin) 2.24-4.0 fl. oz. per acre. Do not exceed 24 fl. oz. per acre per season. REI: 12-hour. PHI: 3-day. *RUP.*

Pounce 25WP® (permethrin) 6.4-12.8 oz. per acre. Do not exceed 51.2 oz. per acre per season. Control is poor when temperatures are above 90°F. REI: 12-hour. PHI: 1-day. *RUP.*

Radiant 1SC® (spinetoram) 3-6 fl. oz. per acre. Do not exceed 36 fl. oz. per acre per season. Do not make applications less than 4 days apart. The only cutworm labeled is the western bean cutworm. REI: 4-hour. PHI: 1-day.

Sevin XLR Plus® (carbaryl) 2 qts. per acre. Do not exceed 8 applications or 16 qts. per acre per season. Machine harvest only. REI: 12-hour. PHI: 2-day.

Tundra EC® (bifenthrin) Soil: 0.30-0.75 fl. oz. per 1,000 linear feet of row at planting. See label. Foliar: 2.1-6.4 fl. oz. per acre. Do not apply more than 0.2 lb. a.i. per acre per season. Do not apply more than 12.8 fl. oz. per acre per season. REI: 12-hour. PHI: 30-day for soil applications, 1-day for foliar applications. *RUP.*

Warrior II® (lambda-cyhalothrin) Soil: 0.33 fl. oz. per 1,000 ft. of row. Foliar: 1.28-1.92 fl. oz. per acre. Do not exceed 30.72 fl. oz. per acre per season. REI: 24-hour. PHI: 21-day for soil applications, 1-day for foliar applications. *RUP.*

European Corn Borer Caterpillar

European corn borers can be monitored effectively with blacklight traps and field observations. 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 borers can be controlled by spraying during the late whorl, tasseling, and silking stages. The migrating larvae should contact a lethal dose of insecticide while moving to the ear zone.

More than 10 moths per night in black light traps while corn is in late whorl stage.

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.

Ambush® (permethrin) 6.4-12.8 fl. oz. per acre. Do not exceed 76 fl. oz. per acre per season. Control is poor when temperatures are above 90°F. REI: 12-hour. PHI: 1-day. *RUP.*

Baythroid XL® (beta-cyfluthrin) 1.6-2.8 fl. oz. per acre. Do not exceed 28 fl. oz. per acre per season. REI: 12-hour. PHI: 0-day. *RUP.*

Besiege® (chlorantraniliprole, lambda-cyhalothrin) 6-10 fl. oz. per acre. Do not exceed 31 fl. oz. per acre per season. REI: 24-hour. PHI: 1-day. *RUP.*

Capture LFR® (bifenthrin) Soil: 0.2-0.78 fl. oz. per acre per 1,000 linear ft. row at planting. See label. Foliar: 2.8-8.5 fl. oz. per acre. REI: 12-hour. PHI: For foliar applications, 1-day. *RUP.*

Coragen® (chlorantraniliprole) 3.5-7.5 fl. oz. per acre. Do not exceed 15.4 fl. oz. per acre per season. REI: 4-hour. PHI: 1-day.

Entrust SC® (spinosad) 1.5-6 fl. oz. per acre. Do not exceed 29 fl. oz. per acre per season. Also see labels for Entrust WP®. Observe resistance management restrictions. The only cutworm labeled is the western bean cutworm. REI: 4-hour. PHI: 1-day. *OMRI-listed.*

Larvin® (thiodicarb) 20-40 fl. oz. per acre. Do not exceed 300 fl. oz. per acre per season. REI: 48-hour. PHI: 0-day. *RUP.*

Mustang Maxx® (zeta-cypermethrin) 2.24-4.0 fl. oz. per acre. Do not exceed 24 fl. oz. per acre per season. REI: 12-hour. PHI: 3-day. *RUP.*

Pounce 25WP® (permethrin) 6.4-12.8 oz. per acre. Do not exceed 51.2 oz. per acre per season. Control is poor when temperatures are above 90°F. REI: 12-hour. PHI: 1-day. *RUP.*

Radiant 1SC® (spinetoram) 3-6 fl. oz. per acre. Do not exceed 36 fl. oz. per acre per season. Do not make applications less than 4 days apart. The only cutworm labeled is the western bean cutworm. REI: 4-hour. PHI: 1-day.

Sevin XLR Plus® (carbaryl) 2 qts. per acre. Do not exceed 8 applications or 16 qts. per acre per season. Machine harvest only. REI: 12-hour. PHI: 2-day.

Tundra EC® (bifenthrin) 2.1-6.4 fl. oz. per acre. Do not apply more than 12.8 fl. oz. per acre per season. REI: 12-hour. *RUP.*

Warrior II® (lambda-cyhalothrin) 1.28-1.92 fl. oz. per acre. Do not exceed 30.72 fl. oz. per acre per season. REI: 24-hour. PHI: 1-day. *RUP.*

Flea Beetles

Variety selection Plant varieties that are resistant to Stewart's wilt, which is vectored by flea beetles.

Ambush® (permethrin) 6.4-12.8 fl. oz. per acre. Do not exceed 76 fl. oz. per acre per season. Control is poor when temperatures are above 90°F. REI: 12-hour. PHI: 1-day. *RUP.*

Asana XL® (esfenvalerate) 5.8-9.6 fl. oz. per acre. Do not exceed 96 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day. *RUP.*

Baythroid XL® (beta-cyfluthrin) 0.8-1.6 fl. oz. per acre. Do not exceed 28 fl. oz. per acre per season. REI: 12-hour. PHI: 0-day. *RUP.*

Besiege® (chlorantraniliprole, lambda-cyhalothrin) 6-10 fl. oz. per acre. Do not exceed 31 fl. oz. per acre per season. REI: 24-hour. PHI: 1-day. *RUP.*

Capture LFR® (bifenthrin) 2.8-8.5 fl. oz. per acre. REI: 12-hour. PHI: 1-day. *RUP.*

Lannate LV® (methomyl) 0.75-1.5 pts. per acre. Do not exceed 21 pts. per acre per crop. REI: 48-hour. PHI: 0-day for ears, 3-day for forage. *RUP.*

Lorsban 4E® (chlorpyrifos) 1-2 pts. per acre. Do not exceed 15 pts. per acre per crop. REI: see label. PHI: 21-day. *RUP.*

Mustang Maxx® (zeta-cypermethrin) 2.24-4.0 fl. oz. per acre. Do not exceed 24 fl. oz. per acre per season. REI: 12-hour. PHI: 3-day. *RUP.*

Pounce 25WP® (permethrin) 6.4-12.8 oz. per acre. Do not exceed 51.2 oz. per acre per season. Control is poor when temperatures are above 90°F. REI: 12-hour. PHI: 1-day. *RUP.*

Sevin XLR Plus® (carbaryl) 2 qts. per acre. Do not exceed 8 applications or 16 qts. per acre per season. Machine harvest only. REI: 12-hour. PHI: 2-day.

Tundra EC® (bifenthrin) 2.1-6.4 fl. oz. per acre. Do not apply more than 12.8 fl. oz. per acre per season. REI: 12-hour. *RUP.*

Warrior II® (lambda-cyhalothrin) 1.28-1.92 fl. oz. per acre. Do not exceed 30.72 fl. oz. per acre per season. REI: 24-hour. PHI: 1-day. *RUP.*

Seed and Root Maggots

Aztec 2.1G® (cyfluthrin, phostebupirim) 6.7 oz. per 1,000 linear ft. of row. Apply in furrow in a 7-inch band over the row and behind the planter shoe in front of the press wheel. Incorporate with tines and drag chains. REI: 48-hour. *RUP.*

Brigade 2EC® (bifenthrin) 0.3 fl. oz. per 1,000 ft. of row. Apply in a minimum of 3 gals. of finishes spray as a 5- to 7-inch band over an open seed furrow (T-band). Do not exceed 6.4 fl. oz. per acre per season at plant application REI: 12-hour. PHI: 30-day. *RUP.*

Capture LFR® (bifenthrin) 0.2-0.78 fl. oz. per 1,000 linear bed ft. of row. Apply at planting. See label. REI: 12-hour. *RUP.*

Ethos 3D® (bifenthrin, Bacillus amyloloiquefaciens strain D-747) 0.21 to 1.05 fl. oz. per 1,000 linear feet of row . REI: 12-hour. *RUP.*

Force CS® (tefluthrin) 0.46-0.57 fl. oz. per 1,000 linear ft. of row. Apply at planting. Apply as T-band or in furrow. See label. Do not exceed 1 application per crop. REI: 12-hour. *RUP.*

Lorsban 15G® (chlorpyrifos) 8 oz. per 1,000 linear ft. of row. Apply as T-band over an open seed furrow behind the planter shoe and ahead of the press wheel. Do not exceed 13 lbs. per acre per crop. REI: see label.

Seed treatments (thiamethoxam, mefenoxam, fludioxonil, azoxystrobin, thiabendazole, spinosad, abamectin) Plant seed that has been treated with an insecticide prior to planting. Although most sweet corn seed has been treat with fungicide, it is seldom treated with an insecticide to prevent seed and seedling damage. Use diazinon, Cruiser®, or Poncho®. Follow label directions.

Tundra EC® (bifenthrin) 0.15-0.6 fl. oz. per 1,000 linear feet of row. Apply at planting. See label. REI: 12-hour. PHI: 30-day. *RUP.*

Seedcorn Beetles

Aztec 2.1G® (cyfluthrin, phostebupirim) 6.7 oz. per 1,000 linear ft. of row. Apply in furrow in a 7-inch band over the row and behind the planter shoe in front of the press wheel. Incorporate with tines and drag chains. REI: 48-hour. *RUP.*

Brigade 2EC® (bifenthrin) 0.3 fl. oz. per 1,000 ft. of row. Apply in a minimum of 3 gals. of finishes spray as a 5- to 7-inch band over an open seed furrow (T-band). Do not exceed 6.4 fl. oz. per acre per season at plant application REI: 12-hour. PHI: 30-day. *RUP.*

Capture LFR® (bifenthrin) 0.2-0.78 fl. oz. per 1,000 linear bed ft. of row. Apply at planting. See label. REI: 12-hour. *RUP.*

Force CS® (tefluthrin) 0.46-0.57 fl. oz. per 1,000 linear ft. of row. Apply at planting. Apply as T-band or in furrow. See label. Do not exceed 1 application per crop. REI: 12-hour. *RUP.*

Lorsban 15G® (chlorpyrifos) 8 oz. per 1,000 linear ft. of row. Apply as T-band over an open seed furrow behind the planter shoe and ahead of the press wheel. Do not exceed 13 lbs. per acre per crop. REI: see label.

Seed treatments (thiamethoxam, mefenoxam, fludioxonil, azoxystrobin, thiabendazole, spinosad, abamectin) Plant seed that has been treated with an insecticide prior to planting. Although most sweet corn seed has been treat with fungicide, it is seldom treated with an insecticide to prevent seed and seedling damage. Use diazinon, Cruiser®, or Poncho®. Follow label directions.

Tundra EC® (bifenthrin) 0.15-0.6 fl. oz. per 1,000 linear feet of row. Apply at planting. See label. REI: 12-hour. PHI: 30-day. *RUP.*

Stink Bugs

Baythroid XL® (beta-cyfluthrin) 1.6-2.8 fl. oz. per acre. Do not exceed 28 fl. oz. per acre per season. REI: 12-hour. PHI: 0-day. *RUP.*

Besiege® (chlorantraniliprole, lambda-cyhalothrin) 6-10 fl. oz. per acre. Do not exceed 31 fl. oz. per acre per season. REI: 24-hour. PHI: 1-day. *RUP.*

Capture LFR® (bifenthrin) 2.8-8.5 fl. oz. per acre. REI: 12-hour. PHI: 1-day. *RUP.*

Hero® (bifenthrin, zeta-cypermethrin) 4-10.3 fl. oz. per acre. Do not exceed 27.39 fl. oz. per acre per season. Allow 3 days between applications. REI: 12-hour. PHI: 3-day. *RUP.*

Lannate LV® (methomyl) 0.75-1.5 pts. per acre. Brown Marmorated Stink Bug only. Do not exceed 21 pts. per acre per crop. REI: 48-hour. PHI: 0-day PHI for ears, 3-day PHI for forage. *RUP.*

Tundra EC® (bifenthrin) 2.1-6.4 fl. oz. per acre. Do not apply more than 12.8 fl. oz. per acre per season. REI: 12-hour. *RUP.*

Warrior II® (lambda-cyhalothrin) 1.28-1.92 fl. oz. per acre. Do not exceed 30.72 fl. oz. per acre per season. REI: 24-hour. PHI: 1-day. *RUP.*

Wireworms

Aztec 2.1G® (cyfluthrin, phostebupirim) 6.7 oz. per 1,000 linear ft. of row. Apply in furrow in a 7-inch band over the row and behind the planter shoe in front of the press wheel. Incorporate with tines and drag chains. REI: 48-hour. *RUP.*

Brigade 2EC® (bifenthrin) 0.3 fl. oz. per 1,000 ft. of row. Apply in a minimum of 3 gals. of finishes spray as a 5- to 7-inch band over an open seed furrow (T-band). Do not exceed 6.4 fl. oz. per acre per season at plant application REI: 12-hour. PHI: 30-day. *RUP.*

Capture LFR® (bifenthrin) 0.2-0.78 fl. oz. per 1,000 linear bed ft. of row. Apply at planting. See label. REI: 12-hour. *RUP.*

Force CS (tefluthrin) 0.46-0.57 fl. oz. per 1,000 linear ft. of row. Apply at planting. Apply as T-band or in furrow. See label. Do not exceed 1 application per crop. REI: 12-hour. *RUP.*

Seed treatments (thiamethoxam, mefenoxam, fludioxonil, azoxystrobin, thiabendazole, spinosad, abamectin) Plant seed that has been treated with an insecticide prior to planting. Although most sweet corn seed has been treat with fungicide, it is seldom treated with an insecticide to prevent seed and seedling damage. Use diazinon, Cruiser, or Poncho. Follow label directions.

Tundra EC® (bifenthrin) 0.15-0.6 fl. oz. per 1,000 linear feet of row. Apply at planting. See label. REI: 12-hour. PHI: 30-day. *RUP.*