

**Plectosporium Blight (Microdochium blight)**

A three year rotation with crops other than cucurbits is advised. It is important to achieve maximum foliage coverage with the fungicide application. Once symptoms appear on petioles or after fruit form, apply one of the following and repeat every 7 to 10 days:

- chlorothalonil--2.0-3.0 pt 6F/A, or OLF, or
- Mancozeb--2.0-3.0 lb 75DF/A, or
- Quadris Top 10.0-14.0 fl oz 2.7 F/A

A spray schedule that rotates Cabrio or Flint with chlorothalonil will also provide control.

**Scab**

Use resistant varieties when possible. Scab develops during cool periods. Begin sprays as true leaves form and repeat every 5 to 7 days:

- chlorothalonil--2.0-3.0 pt 6F/A or OLF

**Phytophthora Blight**

Multiple practices should be used to minimize the occurrence of this disease. Rotate with crops other than peppers, eggplants, tomatoes, lima and snap beans, and other cucurbits for as long as possible. Preplant fumigants will also suppress disease. Fields should be adequately drained to ensure that water does not accumulate around the base of the plant. Mefenoxam (Ridomil Gold or Ultra Flourish) or metalaxyl (MetaStar) should be applied pre-plant for early season control. Once the canopy closes, subsoil between the rows to allow for faster drainage following rainfall. When conditions favor disease development, apply one of the the following with fixed copper at labeled rates (for suppression only):

- Revus--8.0 fl oz 2.08F/A (rotate with another effective, registered fungicide), or
- Ranman--2.75 fl. oz. 400 SC/A *plus* an organosilicone or non-ionic surfactant, see label for details. Do not apply with copper, or
- Presidio--3.0-4.0 fl oz 4F/A
- Forum--6.0 oz 4.18SC/A, or
- Gavel--1.5-2.0 lb 75DF/A, or
- Tanos--8.0-10.0 oz. 50WDG/A

Materials with different modes of action (i.e. FRAC codes) should always be alternated to reduce the chances for fungicide resistance development.

**Varieties (continued)**

Varieties <sup>1</sup>	Geno-type <sup>2</sup>	DE	MD	NJ	PA	VA	WV
<b>Yellow</b>							
<i>Main Season</i>							
GSS0966 (Bt) (GMO)	sh <sub>2</sub>	D		N	P	V	
Incredible (BWR)	su, se				P	V	WV
Summer Sweet 7210	sh <sub>2</sub>	D	M	N	P		WV
<i>Processing</i>							
Champ	su, se		M	N	P		WV
Bonus	su, se	D	M	N	P		WV
Melody	su, se			N			
Dynamo	su	D		N			
Rival	su, se	D		N	P		
<b>White</b>							
<i>Medium Early</i>							
Silver Princess	su, se			N	P	V	WV
White Out	su, se	D		N	P		
Xtra-Tender 372a	se, sh <sub>2</sub>					V	WV
White Saturn	sh <sub>2</sub>			N	P		
Sweet Ice	su, se, sh <sub>2</sub>	D	M	N	P	V	WV
<i>Main Season</i>							
WSS0987 (Bt) (GMO)	sh <sub>2</sub>	D		N	P	V	
Ice Queen	sh <sub>2</sub>	D	M	N	P	V	WV
Argent	su, se	D	M	N	P	V	WV
Silver King	su, se	D	M	N	P	V	WV
<b>Bicolor</b>							
Sensor	su, se		M	N	P	V	WV
BC0805 (Bt) (GMO)							
triple	su, se, sh <sub>2</sub>			N	P	V	
BSS0977 (Bt) (GMO)	sh <sub>2</sub>			N	P	V	
BC0809	se						WV
Avalon*	su, se, sh <sub>2</sub>			N	P	V	WV
Charisma	se				P		WV
Montauk	se						WV
Temptation	su, se		M	N	P	V	WV
Providence	su, se, sh <sub>2</sub>	D			P	V	WV
Sweet Rhythm	su, se, sh <sub>2</sub>		M		P		
Delectable	su, se				P		WV
Awesome	se, sh <sub>2</sub>			N			
Obsession	sh <sub>2</sub>				P		

<sup>1</sup> ALL SWEET CORN VARIETIES ARE HYBRIDS. Varieties (except bicolor) are listed alphabetically within maturity class. Bicolor corns are listed by maturity, earliest first.

<sup>2</sup> se = Sugary enhanced, sh<sub>2</sub>= Super sweet, su = sugary. (see Table "Sweet Corn Genetics and Isolation Requirements" below)

Letters in parentheses indicate disease resistance possessed by varieties. See the "Abbreviations" section in front portion of this publication.

**Recommended Nutrients Based on Soil Tests**

Before using the table below, refer to important notes in Plant Nutrient Recommendations in Section B, Soil And Nutrient Information. These notes provide additional suggestions to adjust rate, timing and placement of nutrients depending on soil type cation exchange capacity and existing fertility levels.

**SWEET CORN**

<b>Varieties</b>							
Varieties <sup>1</sup>	Geno-type <sup>2</sup>	DE	MD	NJ	PA	VA	WV
<b>Yellow</b>							
<i>Early</i>							
Sundance (BWMS)	su	D	M	N	P	V	WV
<i>Medium Early</i>							
Bodacious	se			N	P	V	WV
Tuxedo	se			N	P		WV

(table continued next column)

Fresh Market Sweet Corn	Pounds N per Acre	Soil Phosphorus Level			Soil Potassium Level		
		Low	Med	Opt.	Low	Med	Opt.
	125-150 <sup>1</sup>	160 <sup>1</sup>	120 <sup>1</sup>	80 <sup>1</sup>	160 <sup>1</sup>	160 <sup>1</sup>	80 <sup>1</sup>
	40-60 <sup>2</sup>	120 <sup>2</sup>	100 <sup>2</sup>	60 <sup>2</sup>	120 <sup>2</sup>	100 <sup>2</sup>	60 <sup>2</sup>
	20 <sup>3</sup>	40 <sup>3</sup>	20 <sup>3</sup>	20 <sup>3</sup>	40 <sup>3</sup>	20 <sup>3</sup>	20 <sup>3</sup>
	50-75 <sup>4</sup>	0	0	0	0	0	0

<sup>1</sup>Total amount nutrient recommended; growers producing vegetables on soils with high clay contents should reduce the recommended nitrogen and potassium rates by 20% and increase the phosphorus rate by 25%.

<sup>2</sup>Broadcast before plowing

<sup>3</sup>Band-place with planter

<sup>4</sup>Sidedress when corn is 12-18 inches tall

**Note:** For early plantings when soil temperatures are low, band 20 pounds of P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O per acre when soil test levels are above optimum. On very light sandy soils, sidedress 40 pounds of nitrogen (N) per acre when corn is 6 inches tall and another 40 pounds of nitrogen (N) per acre when the corn is 12-18 inches tall.

Processing Sweet Corn	Pounds N per Acre	Soil Phosphorus Level			Soil Potassium Level		
		Low	Med	Opt.	Low	Med	Opt.
	125-175 <sup>1</sup>	120 <sup>1</sup>	80 <sup>1</sup>	60 <sup>1</sup>	120 <sup>1</sup>	80 <sup>1</sup>	60 <sup>1</sup>
	55-80 <sup>2</sup>	80 <sup>2</sup>	60 <sup>2</sup>	40 <sup>2</sup>	80 <sup>2</sup>	60 <sup>2</sup>	40 <sup>2</sup>
	20 <sup>3</sup>	40 <sup>3</sup>	20 <sup>3</sup>	20 <sup>3</sup>	40 <sup>3</sup>	20 <sup>3</sup>	20 <sup>3</sup>
	50-75 <sup>4</sup>	0	0	0	0	0	0

<sup>1</sup>Total amount nutrient recommended; growers producing vegetables on soils with high clay contents should reduce the recommended nitrogen and potassium rates by 20% and increase the phosphorus rate by 25%.

<sup>2</sup>Broadcast before plowing

<sup>3</sup>Band-place 2 inches below and 2 inches to the side of seed with planter

<sup>4</sup>Sidedress 2 weeks after emergence

Apply 1 - 2 pounds of boron (B) per acre with broadcast fertilizer. See Table B-10 for more specific boron recommendations.

**Note:** For early plantings when soil temperatures are low, band 20 pounds of P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O per acre when soil test levels are above optimum. A pre-sidedress nitrogen test is effective in determining the need for sidedress nitrogen on sweet corn. See below for information on the use of the pre-sidedress nitrogen test.

### Sweet Corn Genetics and Isolation Requirements

Variety Class	Genes Present	Variety Examples	Kernel Properties	Grow apart from class(es) <sup>1</sup>
Normal	<i>su</i>	*Silver Queen *Stowells Evergreen	100% normal	*Supersweet *Augmented Shrunken
Sugary Enhanced (heterozygous)	<i>su, se (1 copy)</i>	*Silverado *Argent	75% normal 25% sugary enhanced	*Supersweet *Augmented Shrunken
Sugary Enhanced (homozygous)	<i>su, se (2 copies)</i>	*Table Sweet™ varieties *Silver King, Sugar Snow II *Imaculata, *Brilliance	100% sugary enhanced	*Supersweet *Augmented Shrunken
Supersweet	<i>sh<sub>2</sub></i>	*Snow White *Boreal *Millenium	100% supersweet	*Normal *Sugary Enhanced (all) *Synergistic (all)
Synergistic (Heterozygous <i>se</i> with <i>sh<sub>2</sub></i> )	<i>su, se (1 copy), sh<sub>2</sub> (1 copy)</i>	*Sweet Breed™ varieties	56% normal 19% sugary enhanced 25% supersweet	*Supersweet *Augmented Shrunken
Synergistic (Homozygous <i>se</i> with <i>sh<sub>2</sub></i> )	<i>su, se (2 copies), sh<sub>2</sub> (1 copy)</i>	*TripleSweet™ varieties *Cinderella	75% sugary enhanced 25% tender supersweet	*Supersweet *Augmented Shrunken
Synergistic (Homozygous <i>se</i> with <i>bt<sub>2</sub></i> )	<i>su, se (2 copies), bt<sub>2</sub> (1 copy)</i>	*Misquamicut *Avalon	75% sugary enhanced 25% tender supersweet	*Supersweet *Augmented Shrunken
Augmented Shrunken	<i>se (2 copies), sh<sub>2</sub> (2 copies)</i>	*Gourmet Sweet™ varieties *Multisweet™ varieties *Xtra-Tender™ varieties	100% tender supersweet	*Normal *Sugary Enhanced (all) *Synergistic (all)
Mirai™	<i>su, se (2 copies), sh<sub>2</sub> (2 copies)</i>	*Mirai 002	100% tender supersweet	None necessary

<sup>1</sup>To avoid starchy kernels, isolate by ≥ 500 feet or ≥ 12 days in silking.

All sweet corn must be isolated from field and popcorn varieties by a distance of at least 500 feet.

The sweetness of the corn kernel is determined by both the tassel and silk parent, while the tenderness is determined entirely by the silk parent. Therefore, any pollen from varieties other than the one planted in the field may interfere with sweetness, for example field and popcorn. Certain sweet corn varieties must also be isolated from other sweet corn by greater than 500 feet or 12 days difference in silking date. The table above may be used to determine which corn varieties must be isolated from each other during pollination.

Super sweet (sh<sub>2</sub>) varieties are more difficult to establish than other types of sweet corn. Handle seed gently and use plateless planters to prevent damage to seed. Soil temperature and soil moisture should be optimum to reduce seed decay and obtain good stands.

### Seed Treatment

Request that seed be treated with fungicides, see the disease control section for more information. See insect control section for seed treatments available for seed corn maggot and wireworm control.

### Seeding and Spacing

Seed is sown as early as the last week in March on the light, sandy soils. Use a cold-tolerant variety for early plantings. Successive plantings can be made into early July. Corn is drilled in the field at the rate of 12 to 15 pounds per acre at about 1 inch deep. The smaller eared early varieties are planted in rows 36 inches apart and about 8 to 10 inches between plants in the row. The two-eared varieties and the later large-eared varieties are planted 36 inches between rows and 10 to 12 inches apart in the row. Recommended planting rates are between 14,500 and 19,000 plants per acre.

### Pre-sidedress Soil Nitrogen Test (PSNT)

A soil test (PSNT) to determine the need for sidedress nitrogen on sweet corn has been developed. The test is effective for sweet corn grown on soils with loamy-textured, high organic matter or where manure has been applied. Sandy soils with low organic matter are known to have low nitrogen availability without using the PSNT. Contact your local county Extension agent for information on sampling and using the PSNT (NJ only).

### Mulching

The use of clear plastic mulch will improve stands, conserve moisture, and produce earlier maturity. Corn is seeded in the usual manner except 10 to 20 days earlier in double rows 14 inches apart and on 5- to 6-foot centers. Apply herbicide and then cover with clear, 4-foot-wide plastic. Allow plastic to remain over plants for 30 days after emergence, then cut and remove plastic from field. Plants can then be cultured in the usual manner. Before using this system, it is recommended that a test be run to determine if nematodes are present. If nematodes are present in the soil, control measures are necessary before the above procedure can be used. Use a cold-tolerant variety to avoid uneven stand and uneven vigor.

### Weed Control

Identify the weeds in each field and select recommended herbicides that control those weeds. See Tables E-2 and E-3.

Match preplant incorporated and preemergence herbicide rates to soil type and percent organic matter in each field.

Apply postemergence herbicides when crop and weeds are within the recommended size and/or leaf stage.

Find the herbicides you plan to use in the Herbicide Resistance Action Committee's (HRAC) **Herbicide Site of Action Table E-7** and follow the recommended good management practices to minimize the risk of herbicide resistance development by weeds in your fields.

### Conservation Tillage

Consider production goals, sweet corn variety, date of planting, soil fertility practices, insect control, planting equipment, mulch, and weed species in the field when considering a conservation tillage program. Consult state Cooperative Extension and agricultural specialists for advice.

Paraquat *plus* S-metolachlor *plus* atrazine--0.3-0.6 lb/A *plus* 0.96-1.91 lb/A *plus* 1-2 lb/A. Apply 1.2 to 2.4 pints per acre Gramoxone Inteon 2SC *plus* 1 to 2 pints per acre Dual II Magnum 7.64E *plus* 1.1 to 2.2 pounds per acre atrazine 90DF (or other atrazine formulations). Add surfactant as indicated on the Gramoxone Inteon 2SC or OLF label. Use this combination when existing vegetation includes small annual grasses and/or broadleaf weeds. Gramoxone Inteon 2SC or OLF will control existing vegetation, Dual II Magnum will provide residual annual grass control, and atrazine will provide residual annual broadleaf weed control. (See atrazine restrictions under the "Early Emergence" section).

Glyphosate *plus* S-metolachlor *plus* atrazine--0.75-1.5 lb acid equivalent/A *plus* 0.96-1.91 lb/A *plus* 1-2 lb/A. Apply the appropriate acid equivalent rate of Glyphomax Plus, Roundup products or Touchdown products, or OLF (Other Labeled Formulations) *plus* 1 to 2 pints per acre Dual II Magnum 7.64E *plus* 1.1 to 2.2 pounds per acre atrazine 90DF (or other atrazine formulations). Use this combination when existing vegetation includes dense, well-established annual weeds and/or perennial weeds. Roundup Ultra Max will control existing vegetation in 1 to 3 weeks. Perennial weeds must be treated at the proper growth stage to obtain effective control. (See label for application time and rate.) Dual II Magnum will provide residual annual grass control, and atrazine will provide residual annual broadleaf control. (See atrazine restrictions under the "Early Emergence" section.)

See "**Conventional Tillage**" section for useful early emergence and postemergence weed control recommendations.

### Conventional Tillage

#### Preplant Incorporated

Butylate--3-6 lb/A. Apply 3.75 to 7.33 pints per acre of Sutan+ 6.7EC. Incorporate immediately 2 to 3 inches deep by disking twice with disk blades set to run 4 to 6 inches deep to prevent Sutan+ loss by evaporation. The second disking may be delayed for up to 8 hours. Corn may be planted immediately after herbicide incorporation. Primarily controls annual grasses, yellow nutsedge, and certain broadleaf weeds. Combine with atrazine to improve broadleaf weed control.

#### Preplant Incorporated or Preemergence

Alachlor--1.5-3 lb/A. Apply 1.5 to 3 quarts Micro-Tech or 2.3 to 4.6 lb Partner 65DF. Primarily controls annual grasses and certain broadleaf weeds, including pigweed, nightshade, and galinsoga, and suppresses yellow nutsedge when preplant incorporated. Combine with atrazine to improve control of

other broadleaf weeds. Also available as a jug-mix with atrazine sold as Bullet.

S-metolachlor--0.96-1.91 lb/A. Apply 1 to 2 pints per acre Dual II Magnum 7.64E (or OLF). Primarily controls annual grasses, controls or suppresses yellow nutsedge, and suppresses certain broadleaf weeds. Use preplant incorporated to improve yellow nutsedge control. Combine with atrazine or Extrazine to improve control of most broadleaf weeds. Also available as jug-mixes with atrazine sold as Bicep II Magnum and Bicep II Magnum Lite. **Other generic versions of metolachlor and s-metolachlor may be available, and may or may not be labeled for use in the crop and may or may not include the safener for corn.**

Atrazine--1-1.5 lb/A. Apply 1 to 1.5 quarts atrazine 4FL (or OLF). Primarily controls broadleaf weeds. Combine with Micro-Tech, Partner, or Dual II Magnum to improve control of annual grasses. Use the lowest recommended rate when combined with an annual grass herbicide or to reduce the risk of herbicide residues which may affect certain crops planted the following year. Also sold as jug-mixes, with alachlor sold as Bullet, and with s-metolachlor sold as Bicep II Magnum and Bicep II Magnum Lite.

**RESTRICTIONS: Do not double-crop the season atrazine or any atrazine-containing products are used. Grass cover crops can be established after corn harvest** provided the recommended rate of atrazine was not exceeded. Moldboard plowing before planting a crop sensitive to atrazine will minimize the risk of injury from atrazine residue. **See label for specific crop rotation restrictions.**

### Preemergence

Mesotrione--0.094 lb/A. Apply 3 fluid ounces of Callisto 4SC per acre. Primarily controls common lambsquarters and many other annual broadleaf weeds, including triazine resistant biotypes, but Callisto is weak on ragweed and morninglory species. Combine with Micro-Tech, Partner, or Dual II Magnum to control annual grasses. Temporary injury, appearing as whitening of the foliage after emergence, may occur. Rainfall or irrigation after planting and treatment, but before emergence, increases the likelihood of crop injury. Cold weather that slows corn growth will also retard recovery from injury following preemergence treatments. Sweet corn varieties differ in sensitivity to mesotrione. The majority of varieties exhibit slight injury symptoms when weather conditions after application are favorable. Certain varieties are tolerant, while others exhibit more noticeable injury. Although no variety was severely injured by the recommended rate, postemergence application is preferred when weather conditions that favor injury occur at planting.

Severe crop injury may occur if an organophosphate or carbamate insecticide is applied within 7 days of Callisto. Lexar and Lumax are labeled jug-mixes that contain mesotrione or s-metolachlor and atrazine. Camix is a labeled jug-mix that contains mesotrione and s-metolachlor. The mesotrione rate applied when the jug-mixes are used may be higher than the recommended rate, which may increase the risk of crop injury and herbicide carryover. **See the sweet corn section of the Callisto label for additional use precautions.**

### Spike

Pendimethalin--0.71-0.95 lb/A. Apply 1.5 to 2.0 pints Prowl H<sub>2</sub>O per acre or OLF (Other Labeled Formulations). Primarily controls annual grasses, and certain annual broadleaf weeds, including triazine resistant common lambsquarters. Combine with atrazine to improve the control of other broadleaf weeds. Cold wet conditions after application increase the risk of crop injury. Choose a different weed control program when cold wet conditions after application are anticipated. Plant the sweet corn seed a *minimum* of one and one-half inches deep. Shallow planting increases the risk of crop injury. Do NOT use Prowl when planting sweet corn varieties that do not tolerate planting depths of greater than one and one-half inches. Sweet corn tolerance to Prowl is due to placement. Do NOT mechanically incorporate or attempt to replant a sweet corn field treated with Prowl. The risk of crop injury will be increased by moving the herbicide into the root zone of the crop by the tillage.

### Early Emergence

Atrazine--1-2 lb/A. Apply 1 to 2 quarts per acre Atrazine 4L (or OLF). Primarily controls broadleaf weeds. Apply postemergence when weeds and corn are up to 2 inches tall. Add oil concentrate to be 1% of the spray solution. Do NOT exceed the maximum rate per acre per year listed on the label for your soil's erodibility class. Also available as a jug-mix with bentazon, sold as Laddok S-12.

**RESTRICTIONS:** When this and other atrazine treatments are used, do not double-crop during this season. Cover crops after corn are satisfactory providing the recommended rate of atrazine is not exceeded. Mold-board plowing before planting grain or vegetables the following spring will minimize the risk of atrazine residue injury.

Halosulfuron--0.023-0.031 lb/A. Apply 0.5 to 0.66 dry ounces Sandea 75WG to control yellow nutsedge and broadleaf weeds, including common cocklebur, redroot pigweed, smooth pigweed, ragweed species, and velvetleaf. Spray before corn reaches 8 inches in height, or use drop nozzles when corn is over 8 inches tall to avoid spraying the foliage and into the whorl. Sandea applied postemergence will not control common lambsquarters or eastern black nightshade, and will only suppress morningglory species. Always add nonionic surfactant to be 0.25 percent of the spray solution (1 quart per 100 gallons of spray solution). Susceptible broadleaf weeds usually exhibit injury symptoms within 1 to 2 weeks of treatment. Typical symptoms begin as yellowing in the growing point that spreads to the entire plant, and is followed by death of the weed. Injury symptoms are similar when yellow nutsedge is treated, but may require 2 to 3 weeks to become evident and up to a month for the weed to die. Corn varieties may vary in sensitivity to Sandea. Use caution when treating new varieties. DO NOT apply to "Jubilee". Sandea is an ALS inhibitor. Herbicides with this mode of action have a single site of activity in susceptible weeds. The risk of the development of resistant weed populations is high when herbicides with this mode of action are used continuously and exclusively to control a weed species for several years or in consecutive crops in a rotation. Integrate mechanical methods of control and use herbicides with a different mode of action to control the target broadleaf weeds when growing other crops in the rotation. **DO NOT use if**

**organophosphate (OP) insecticides have been applied to the crop, or the risk of crop injury may increase.**

Carfentrazone--0.008 lb/A. Apply 0.5 fluid ounces per acre Aim 2EC or Aim 1.9EW before corn reaches 8 inches in height to control seedling broadleaf weeds including pigweed species, common lambsquarters, morningglory species, eastern black nightshade, and velvetleaf. Aim will not control ragweed species. Tank-mix with atrazine at reduced rates or another broadleaf weed herbicide to increase the spectrum of weeds controlled. Always add nonionic surfactant to be 0.25 percent of the spray solution (1 quart per 100 gallons of spray solution). Expect to see speckling on the crop foliage after application. Initially the injury may appear to be substantial, but it is not systemic and corn outgrows the injury rapidly. Variety sensitivity to Aim may vary. Use caution when treating new varieties. Weather conditions may affect the degree of injury observed. Injury may be more severe during periods of warm, cloudy weather with high humidity and plentiful soil moisture when corn growth is rapid and "soft." To reduce the risk of crop injury, use drop nozzles when corn is over 8 inches tall to avoid spraying the foliage and into the whorl.

Tembotrione--0.082 lb/A. Apply 3 fluid ounces of Laudis per acre postemergence to control many annual broadleaf weeds, including common lambsquarters and triazine-resistant broadleaf weed biotypes, and many annual grasses. Add methylated seed oil (MSO) or concentrate (COC) to be 1% of the spray solution (1 gallon per 100 gallons of spray solution). In addition, the label requires the addition of nitrogen liquid fertilizer (1.5 quarts per acre) or AMS (1.5 pounds per acre). Tank mix with 0.25 to 1 lbs ai/A of atrazine for improved control and to broaden the spectrum of weed control. Research results support the use of at least 0.5 lb ai/A of atrazine. Do not apply tank-mixes of Laudis and atrazine to corn greater than 12 inches tall. Do not use postemergence if Callisto, Lumax or Lexar was used preemergence. Do not tank-mix with Callisto. Laudis will control/suppress most annual grass species, but may not control certain grass species or grasses larger than the maximum recommended size when treated. Fall panicum is not controlled by Laudis. Most broadleaf weeds should be treated before they are 6 inches tall and grass weeds should be treated before 2 inches in height. Laudis has up to an 18 month replant restriction for many vegetables.

Topramezone--0.016-0.022 lb/A. Apply 0.75 to 1.0 fluid ounces of Impact 2.8SC per acre postemergence to control many annual broadleaf weeds, including common lambsquarters and triazine-resistant broadleaf weed biotypes, and annual grasses. Add oil concentrate (COC) to be 1% of the spray solution (1 gallon per 100 gallons of spray solution). In addition, the label requires nitrogen fertilizer (liquid or AMS). Tank-mix with 0.25 to 1 lbs ai/A of atrazine for improved control and to broaden the spectrum of weed control. Research results support the use of at least 0.5 lb ai/A of atrazine. DO NOT apply tank-mixes of Impact and atrazine to corn greater than 12 inches tall. DO NOT use postemergence if Callisto, Lumax or Lexar was used preemergence. DO NOT tank-mix with Callisto. Impact will control/suppress crabgrass and most other annual grass species, but may not control certain grass species or grasses larger than the maximum recommended size when treated.

Most broadleaf weeds should be treated before they are 6 inches tall and grass weeds should be treated before 2 inches in height. Use the higher recommended rate to suppress or control panicum species or in rescue applications where the target weeds have grown beyond the size indicated on the label. Impact has an 18 month replant restriction for most vegetables.

### Postemergence

(Annual grass control will be minimal.)

Atrazine--1-2 lb/A. Apply 1 to 2 quarts per acre Atrazine 4L (or OLF). See atrazine in **Early Postemergence** section.

Bentazon--0.75-1 lb/A. Apply 1.5 to 2 pints per acre Basagran 4SC. See label for susceptible broadleaf weeds; results are better when weeds are young. Will provide partial control of yellow nutsedge. Grasses will NOT be controlled. Cultivation within 10 to 14 days will increase control. Also available as a jug-mix with atrazine sold as Laddok S-12.

2,4-D Amine--0.25-0.5 lb/A. Use 0.5 to 1 pint 4EC. Apply after corn and weeds emerge. Use drop nozzles when corn is over 8 inches tall to avoid spraying the foliage or into the whorl of the corn. Warm, wet weather at application may increase the possibility of crop injury. Use the lower recommended rate when these conditions prevail. Delay cultivation for 8 to 10 days after treatment to avoid damaging corn due to temporary brittleness sometimes caused by 2,4-D. Sweet corn varieties differ in 2,4-D tolerance. Super sweet varieties may be more sensitive than other varieties. Injury will be less when the minimum recommended rate is used. Use with caution on new varieties.

Do not apply from tasseling to dough stage. At high rates, 2,4-D may cause temporary injury to corn.

Do not use a sprayer to apply 2,4-D that will be used to spray sensitive crops postemergence.

Ester formulations, although labeled, are more subject to volatilization and movement to sensitive crops and, therefore, are not recommended.

Clopyralid--0.047-0.25 lb/A. Apply 2 to 10.5 fluid ounces of Stinger 3A per acre in one or two applications to control certain annual and perennial broadleaf weeds when sweet corn is less than 18 inches tall. Stinger controls weeds in the Composite and Legume plant families. Common annuals controlled include galinsoga, ragweed species, common cocklebur, groundsel, pineappleweed, clover, and vetch. Perennials controlled include Canada thistle, goldenrod species, aster species, and mugwort (wild chrysanthemum). Stinger is very effective on small seedling annual and emerging perennial weeds less than 2 to 4 inches tall, but is less effective and takes longer to work when weeds are larger. Use 2 to 4 fluid ounces to control annual weeds less than 2 inches tall. Increase the rate to 4 to 8 fluid ounces to control larger annual weeds. Apply the maximum rate of 10.5 fluid ounces, in one or split into two applications to suppress or control perennial weeds. Do not exceed 10.5 fluid ounces in one year. Spray additives are not needed or required by the label, and are not recommended. Observe a minimum preharvest interval (PHI) of 30 days. Stinger is a postemergence herbicide with residual soil activity. Observe follow-crop restrictions, or injury may occur from herbicide carryover.

Mesotrione--0.094 lb/A. Apply 3 fluid ounces of Callisto

4SC per acre. Primarily controls common lambsquarters and many other annual broadleaf weeds, including triazine resistant biotypes, but Callisto is weak on ragweed and morningglory species. Always add nonionic surfactant to be 0.25% of the spray solution (1 quart per 100 gallons of spray solution), but DO NOT add oil concentrate, liquid fertilizer, or AMS, or tank-mix Callisto and bentazon (Basagran), or severe crop injury may be observed. Temporary minor injury, appearing as whitening of the new foliage, may occur. The crop will quickly outgrow minor injury with no effect on yield or earliness. Sweet corn varieties differ in sensitivity to mesotrione. The majority of varieties may exhibit slight injury symptoms. Certain varieties are tolerant while others exhibit more noticeable injury. No variety was severely injured by the recommended rates applied with nonionic surfactant. DO NOT tank-mix Callisto with organophosphate or carbamate insecticides, or apply if the crop was treated with Counter or Lorsban, or severe crop injury may occur. Lexar and Lumax are labeled jug-mixes that contain mesotrione or s-metolachlor and atrazine. Camix is a labeled jug-mix that contains mesotrione and s-metolachlor. The mesotrione rate applied when the jug-mixes are used may be higher than the recommended rate, which may increase the risk of crop injury and herbicide carryover. **See the sweet corn section of the Callisto label for additional use precautions.**

Nicosulfuron--0.031 lb/A. Apply 0.9 dry ounces of Accent Q per acre as a broadcast or with drop nozzles as a directed spray as an early postemergence rescue treatment to control emerged annual grasses. Treat sweet corn with a broadcast spray or with drop nozzles as a directed spray up to 12 inches tall or up to and including 5 leaf collars, or as a directed spray with drop nozzles only to sweet corn up to 18 inches tall. Do not treat sweet corn more than 18 inches tall to control many annual grasses and certain annual broadleaf weeds. Tank-mix with atrazine to increase the spectrum of weeds controlled. Add nonionic surfactant to be 0.25% of the spray solution (1 quart per 100 gallons of spray solution). Accent is safe to apply to certain varieties, injures others, and kills certain sweet corn varieties. Contact your DuPont Crop Protection Sales Representative for information on local sweet corn varieties that have been evaluated for tolerance to Accent. Crop injury may be apparent within 1 to 2 weeks of application as yellowing and death of sweet corn foliage, beginning with the youngest leaves first, or the injury may not be observed until harvest. Injury at harvest is seen as a constriction at the top, middle, or bottom of the ear, depending on the time of application. Late postemergence applications are more likely to result in ear injury than early postemergence applications. Accent is an ALS inhibitor. Herbicides with this mode of action have a single site of activity in susceptible weeds. The risk of the development of resistant weed populations is high when herbicides with this mode of action are used continuously and exclusively to control a weed species for several years or in consecutive crops in a rotation. Integrate mechanical methods of control and use herbicides with a different mode of action to control the target broadleaf weeds when growing other crops in the rotation. **DO NOT use if organophosphate (OP) insecticides have been applied to the crop, or the risk of crop injury may increase.**

## Postemergence

### “Poast Protected” Sweet Corn ONLY!

Sethoxydim--0.15-0.3 lb/A. Use ONLY on sweet corn hybrids designated as “Poast Protected” ONLY! Other **sweet corn varieties will be severely injured or killed.** Apply 0.75 to 1.5 pint per acre Poast 1.5EC with oil concentrate to be 1 percent of the spray solution (1 gallon per 100 gallons of spray solution) postemergence to control annual grasses and certain perennial grasses. Applications of Poast to “Poast Protected” sweet corn may be made until the onset of pollen shed. Do NOT apply Poast after pollination has occurred. A second application of Poast may be made 10 days after the first application. For best results, treat annual grasses when they are actively growing and before tillers are present. The rate of 0.75 pints/A should only be used when annual grasses are less than 3 inches tall and temperatures and moisture are favorable for rapid growth. Use a minimum of 1 pint/A when weeds are 3 inches tall or larger, or when growing conditions are not optimum. Control may be reduced if grasses are large or if hot, dry weather or drought conditions occur. Repeated applications may be needed to control certain perennial grasses. Yellow nutsedge, wild onion, or broadleaf weeds will not be controlled. Do not tank-mix with Aim due to the potential for severe leaf burn. Volunteer “Poast Protected” sweet corn can be controlled with clethodim (Select, Select Max, or Arrow). Other postemergence grass herbicides such as Fusilade, Assure II, and Targa will NOT control volunteer “Poast Protected” sweet corn. Observe a minimum preharvest interval of 30 days and apply no more than 3 pints per acre in one season.

## Postharvest

Paraquat--0.6 lb/A. **A Special Local-Needs 24(c) label has been approved for the use of Gramoxone Inteon 2SC or OLF for postharvest desiccation of the crop in Delaware, New Jersey and Virginia.** Apply 2.4 pints per acre Gramoxone Inteon 2SC or OLF as a broadcast spray after the last harvest. Add nonionic surfactant according to the labeled instructions. Use to prepare plastic mulch for replanting, or to aid in the removal of the mulch. See the label for additional information and warnings.

## Nuisance Bird Management and Repellency

### Preharvest Treatment

Noise-producing devices are useful to scare away injurious birds. A permit is required to use an exploding device in New Jersey. Permits may be obtained from New Jersey Division of Fish and Wildlife, Clinton WMA, 7 Van Syckels Road, Hampton, NJ 08827, 908/735-8793.

Avitrol is labeled for use in sweet corn, but each state has different regulations and permit processes. Read the label carefully before use. Consult your local county Extension office for current restrictions.

## Insect Control

**NOTE:** Copies of specific insecticide product labels can be downloaded by visiting the websites [www.CDMS.net](http://www.CDMS.net) or [www.Greenbook.org](http://www.Greenbook.org). Also, specific labels can be obtained via web search engines.

### Seed Corn Maggot (SCM), Wireworms (WW)

Early season control of seed corn maggot and wireworm

can be achieved with planter-box seed treatments, commercially treated seed, or in-furrow treatments. Rescue treatments applied post-planting are not effective.

#### Seed Treatment

1. Hopper Box Treatments  
imidacloprid (Concur ST, Latitude ST or OLF)
2. Commercially Applied Seed Treatments  
abamectin+thiamethoxam (Avicta DUO)  
chlorpyrifos (**SCM only**) (Lorsban 50W or OLF)  
clothianidin (Poncho 600)  
clothianidin + bacillus firmus (Poncho/Votivo)  
imidacloprid (Gaucho 480)  
thiamethoxam (Cruiser 5FS)

#### Soil-Applied Treatment

chlorethoxyfos (Fortress 5G)  
chlorpyrifos (Lorsban 15G or OLF)  
tebupirimphos +cyfluthrin-**PA only** (Aztec 2.1G or OLF)  
tefluthrin (Force 3G or OLF)  
terbufos (Counter 15G)

#### Grubs

chlorethoxyfos (Fortress 5G)  
chlorpyrifos (Lorsban 15G or OLF)  
tebupirimphos +cyfluthrin-**PA only** (Aztec 2.1G or OLF)  
tefluthrin (Force 3G or OLF)  
terbufos (Counter 15 G)

**Cutworms** (Also see the "Cutworms" section of Soil Pests-- Their Detection and Control.)

#### Preplanting Treatment

chlorpyrifos (Lorsban 15G or OLF)

#### Planting Treatment

chlorethoxyfos (Fortress 5G)  
chlorpyrifos (Lorsban 15G or OLF)  
tebupirimphos +cyfluthrin (**PA only**) (Aztec 2.1G or OLF)  
tefluthrin (Force 3G or OLF)

#### Postplanting Treatment

beta-cyfluthrin (Baythroid XL or OLF)  
bifenthrin-**Not labeled in coastal counties**-(Brigade EC, Sniper or OLF)  
chlorpyrifos (Lorsban 15G or OLF)  
cyfluthrin (Renounce 20W, Tombstone or OLF)  
esfenvalerate (Asana XL)  
flubendiamide (Belt SC)  
gamma-cyhalothrin (Proaxis)  
lambda-cyhalothrin (Lambda-Cy, LambdaT, Silencer, Warrior II or OLF)  
permethrin (Perm-UP, Pounce 3.2EC or OLF)  
lambda-cyhalothrin + chlorantraniliprole (Voliam xpress)  
zeta-cypermethrin (Mustang MAX, Respect or OLF)  
zeta-cypermethrin + bifenthrin-**Not labeled in coastal counties** (Hero EC)

#### Corn Rootworms Larvae

Crop rotation is the most effective control. Avoid planting corn after corn, cucumbers, pumpkins, or squash. Rotation distance of even 3 feet is effective. Soil insecticides applied at planting aim to protect the root zone for about 6 to 8 weeks after application. To be effective, corn rootworm egg

hatch must occur during that time. When allowed on the label, T-band tends to be more effective than in-furrow application.

#### Planting Treatment:

chlorethoxyfos (Fortress 5G)  
chlorpyrifos (Lorsban 15G or OLF)  
tebupirimphos+cyfluthrin-**PA only**-(Aztec 2.1G or OLF)  
tefluthrin (Force 3G or OLF)  
terbufos (Counter 15G)

#### At Cultivation:

chlorpyrifos (Lorsban 4E or OLF)  
tefluthrin (Force 3G or OLF)  
terbufos (Counter 15G)

#### Corn Rootworm Adults

Insecticides used for worm control at silk will control corn rootworm adults. **Note.** Sweet corn varieties with the *Bacillus thuringiensis* genes will **NOT** control corn rootworm adults.

beta-cyfluthrin (Baythroid XL)  
bifenthrin-**Not labeled in coastal counties**-(Brigade EC, Sniper, or OLF)  
chlorpyrifos (Lorsban 4E or OLF)  
chlorpyrifos + gamma-cyhalothrin (foliar-Cobalt cyfluthrin (Renounce 20W, Tombstone, or OLF)  
esfenvalerate (AsanaXL)  
gamma-cyhalothrin (Proaxis)  
lambda-cyhalothrin (Lambda-Cy, LambdaT, Silencer, Warrior II or OLF)  
lambda-cyhalothrin + chlorantraniliprole (Voliam xpress)  
methomyl (Lannate LV or OLF)  
permethrin (Perm-Up, Pounce 3.2EC, or OLF)  
zeta-cypermethrin (Mustang MAX, Respect)  
zeta-cypermethrin + bifenthrin-**Not labeled in coastal counties** (Hero EC)

#### Corn Flea Beetle

Flea beetles transmit bacterial wilt disease (also known as Stewart's wilt) and are numerous after mild winters. Use varieties resistant to bacterial wilt disease or those listed in the Sweet Corn varieties table. Treat susceptible varieties at spike stage when 5% of the plants are infested.

**Note: Commercially-applied seed treatments (Cruiser, Gaucho, or Poncho) provide early-season protection from corn flea beetle injury.**

beta-cyfluthrin (Baythroid XL or OLF)  
bifenthrin **Not labeled in coastal counties**, (Brigade EC, Sniper, or OLF)  
carbaryl (Sevin 80S or OLF)  
chlorpyrifos (Lorsban 4E or OLF)  
chlorpyrifos + gamma-cyhalothrin (Cobalt)  
cyfluthrin (Renounce 80W, Tombstone or OLF)  
esfenvalerate (Asana XL)  
gamma-cyhalothrin (Proaxis)  
lambda-cyhalothrin (Lambda-Cy, LambdaT, Silencer, Warrior II or OLF)  
lambda-cyhalothrin + chlorantraniliprole (Voliam xpress)  
methomyl (Lannate LV or OLF)  
permethrin (Perm-UP, Pounce 3.2EC, or OLF)  
terbufos (at planting only-Counter 15G).

**Note:** may be ineffective if soil temperatures are cool.

Foliar applications of an insecticide may be necessary during this period.

zeta-cypermethrin (Mustang MAX, Respect)

zeta-cypermethrin + bifenthrin-*Not labeled in coastal counties* (Hero EC)

### Corn Leaf Aphid

esfenvalerate (Asana XL)

methomyl (Lannate LV or OLF)

### Mites

bifenthrin *Not labeled in coastal counties*, (Brigade EC, Sniper or OLF)

propargite (Comite)

spiromesifen (Oberon 2SC)

zeta-cypermethrin + bifenthrin-*Not labeled in coastal counties* (Hero EC)

### Sap Beetle (SB)

Loose-husked varieties and ears damaged by other insects are more susceptible to sap beetle attack. Varieties with long, tight silk tubes can reduce SB damage by 50%.

Begin sampling at pollen shed and treat when 5 percent of the ears have adults and/or eggs. **Note.** Insecticides used for worm control at silk may not control sap beetle infestations. Sweet corn varieties with the *Bacillus thuringiensis* genes will **NOT** control sap beetles.

bifenthrin *Not labeled in coastal counties*, (Brigade EC, Sniper, or OLF)

carbaryl (Sevin 80S or OLF) **Note:** Use carbaryl only after pollen shed is complete to prevent bee loss

esfenvalerate (Asana XL)

gamma-cyhalothrin (Proaxis)

lambda-cyhalothrin (Lambda-Cy, LambdaT, Silencer, Warrior II or OLF)

lambda-cyhalothrin + chlorantraniliprole (Voliam xpress)

methomyl (Lannate LV or OLF)

zeta-cypermethrin (Mustang MAX, Respect or OLF)

zeta-cypermethrin + bifenthrin-*Not labeled in coastal counties* (Hero EC)

### Japanese Beetle (JB)

**Note:** Insecticides used for worm control at silk may not control Japanese beetle infestations. Sweet corn varieties with the *Bacillus thuringiensis* genes will **NOT** control Japanese beetles.

beta-cyfluthrin (Baythroid XL)

bifenthrin *Not labeled in coastal counties*, (Brigade EC, Sniper or OLF)

carbaryl (Sevin 80S or OLF) **Note:** Use carbaryl only after pollen shed is complete to prevent bee loss

chlorpyrifos + gamma-cyhalothrin (foliar-Cobalt)

cyfluthrin (Renounce 20W, Tombstone or OLF)

gamma-cyhalothrin (Proaxis)

lambda-cyhalothrin (Lambda-Cy, LambdaT, Silencer, Warrior II or OLF)

lambda-cyhalothrin + chlorantraniliprole (Voliam xpress)

zeta-cypermethrin (Mustang MAX, Respect)

zeta-cypermethrin + bifenthrin-*Not labeled in coastal counties* (Hero EC)

### Grasshoppers

beta-cyfluthrin (Baythroid XL or OLF)

bifenthrin *Not labeled in coastal counties*, (Brigade EC, Sniper or OLF)

carbaryl (Sevin 80S or OLF) **Note:** Use carbaryl only after pollen shed is complete to prevent bee loss

chlorpyrifos (Lorsban 4E or OLF)

chlorpyrifos + gamma-cyhalothrin (Cobalt)

cyfluthrin (Renounce 20W, Tombstone or OLF)

esfenvalerate (Asana XL)

gamma-cyhalothrin (Proaxis)

lambda-cyhalothrin (Lambda-Cy, LambdaT, Silencer, Warrior II or OLF)

lambda-cyhalothrin + chlorantraniliprole (Voliam xpress)

zeta-cypermethrin (Mustang MAX, Respect)

zeta-cypermethrin + bifenthrin-*Not labeled in coastal counties* (Hero EC)

### Caterpillar Pests (Also see "Insect Control-Decision Making" in the following section.)

Loose husked varieties and ears with short or no silk tubes are more susceptible to worm damage.

*Bacillus thuringiensis* (Bt) (Attribute®) insect protection varieties are available which provide control of worm pests that infest corn. Bt sweet corn hybrids provide virtually 100% protection against European corn borers, thus no insecticides are needed during the whorl or tasseling stages, or even during silking if this pest is the only concern. However, corn earworm and fall armyworm are more tolerant to the expressed Bt protein, and unsprayed corn is also exposed to silk feeding by corn rootworm adults which can reduce pollination, thus insecticide sprays may be needed to ensure fresh market quality when these pests are active. Under moderate moth activity and good growing conditions, one and sometimes two applications may be warranted, depending on the ear quality standards required for marketing. When moth activity is high (late August-early September), many eggs are laid later in ear development after the expressed protein has degraded in wilted/brown silk tissue. This loss of Bt activity is also accelerated by hot, dry conditions which cause rapid desiccation of the silk tissue. As a result, earworms and armyworms have a greater chance of surviving and invading the ear. Under these conditions, up to 40% of the ears can become infested with small earworm or fall armyworm larvae, which may pose a quality problem. Spray regimes of three or four applications spaced 3-4 days apart may be required when moth activity is high. The first insecticide application in Bt sweet corn should be directed at the ear zone at 100% silking (usually 3-4 days later than the first silk spray in non-Bt corn), and applications repeated if high moth activity continues.

Corn rootworm adults, Japanese beetles, other silk-feeders, and sap beetles also can cause ear quality problems in Bt corn, because the expressed protein is not active on these insects. High rates of silk feeding prevent adequate pollination. On farms with a known history of sap beetle problems, an insecticide spray should be applied when 50 to 75% of the ears have wilted silks (the time when sap beetle larvae begin to hatch on silks). Usually one spray is enough for sap beetle control, especially for hybrids that exhibit good tip coverage. When more than 50% of ears

have fresh silks cut back by rootworm adults and the plants are still pollinating, an insecticide spray is recommended.

### European Corn Borer (ECB)

Thorough spray coverage in whorls and on plants is essential. Select an insecticide that has low toxicity to bees (refer to Table D-6).

beta-cyfluthrin (Baythroid XL or OLF)  
 bifenthrin *Not labeled in coastal counties*, -(Brigade EC, Sniper, or OLF)  
 chlorantraniliprole (Coragen 1.67SC)  
 chlorpyrifos + gamma-cyhalothrin (Cobalt)  
 cyfluthrin (Renounce 20W, Tombstone or OLF)  
 esfenvalerate (Asana XL)  
 flubendiamide (Belt SC)  
 gamma-cyhalothrin ( Proaxis)  
 indoxacarb (**through tassel push only**) (Avaunt 30WDG)  
 methoxyfenozide (**for early season whorl treatment**) (Intrepid 2F)  
 lambda-cyhalothrin (Lambda-Cy, LambdaT, Silencer, Warrior II or OLF)  
 lambda-cyhalothrin + chlorantraniliprole (Voliam xpress)  
 methomyl (Lannate LV or OLF)  
 permethrin (Perm-UP, Pounce 3.2EC or OLF)  
 spinetoram (Radiant 2SC)  
 spinosad (Entrust 80W, SpinTor 2SC or OLF)  
 thiodicarb (Larvin 3.2F)  
 zeta-cypermethrin (Mustang MAX, Respect)  
 zeta-cypermethrin + bifenthrin-*Not labeled in coastal counties* (Hero EC)

### Corn Earworm (CEW)

Many insecticides are highly toxic to bees. For more information concerning toxicity of insecticides to bees, refer to Table D-6.

beta-cyfluthrin (Baythroid XL)  
 bifenthrin *Not labeled in coastal counties*, (Brigade EC, Sniper or OLF)  
 chlorantraniliprole (Coragen 1.67SC)  
 chlorpyrifos + gamma-cyhalothrin (Cobalt)  
 cyfluthrin (Renounce 20W, Tombstone or OLF)  
 esfenvalerate (Asana XL)  
 flubendiamide (Belt SC)  
 gamma-cyhalothrin (Proaxis)  
 lambda-cyhalothrin (Lambda-Cy, LambdaT, Silencer, Warrior II or OLF)  
 lambda-cyhalothrin + chlorantraniliprole (Voliam xpress)  
 methomyl (Lannate LV or OLF)  
 permethrin(Perm-UP, Pounce 3.2EC or OLF)  
 spinetoram (Radiant 2SC)  
 spinosad (Entrust 80W, SpinTor 2SC or OLF)  
 thiodicarb (Larvin 3.2F)  
 zeta-cypermethrin (Mustang MAX, Respect)  
 zeta-cypermethrin + bifenthrin-*Not labeled in coastal counties* (Hero EC)

### Fall Armyworm (FAW)

For whorl applications, direct spray over the plants so that

it penetrates leaf whorls when FAW first appears and repeat application, if necessary. For foliar spray applications, high-spray gallonage (50 to 75 gallons per acre) is necessary for effective FAW control.

beta-cyfluthrin (**first and second instar larvae only**) (Baythroid XL)  
 bifenthrin *Not labeled in coastal counties*, (Brigade EC, Sniper or OLF)  
 chlorantraniliprole (Coragen 1.67SC)  
 chlorpyrifos + gamma-cyhalothrin (Cobalt)  
 cyfluthrin (**first and second instar larvae only**) (Renounce 20W, Tombstone or OLF)  
 flubendiamide (Belt SC)  
 indoxacarb (**through tassel push only**) (Avaunt 30WDG)  
 lambda-cyhalothrin (Lambda-Cy, LambdaT, Silencer, Warrior II or OLF)  
 lambda-cyhalothrin + chlorantraniliprole (Voliam xpress)  
 methomyl (Lannate LV or OLF)  
 spinetoram (Radiant 2SC)  
 spinosad (Entrust 80W, SpinTor 2SC or OLF)  
 thiodicarb (Larvin 3.2F)

### True Armyworm

beta-cyfluthrin (Baythroid XL)  
 bifenthrin *Not labeled in coastal counties*, (Brigade EC, Sniper or OLF)  
 chlorpyrifos + gamma-cyhalothrin (Cobalt)  
**cyfluthrin (Renounce 80W, Tombstone or OLF)**  
 esfenvalerate (Asana XL)  
 flubendiamide (Belt SC)  
 lambda-cyhalothrin (Lambda-Cy, LambdaT, Silencer, Warrior II or OLF)  
 lambda-cyhalothrin + chlorantraniliprole (Voliam xpress)  
 methomyl (Lannate LV or OLF)  
 methoxyfenozide (**for early season whorl treatment**) (Intrepid 2F)  
 spinetoram (Radiant 2SC)  
 spinosad (Entrust 80W, SpinTor 2SC or OLF)  
 zeta-cypermethrin (Mustang MAX, Respect)  
 zeta-cypermethrin + bifenthrin-*Not labeled in coastal counties* (Hero EC)

Pesticide	Use Category <sup>1</sup>	Hours to Reentry <sup>2</sup>	Days to Harvest <sup>3,4</sup>
<b>INSECTICIDE</b>			
beta-cyfluthrin	R	12	0
bifenthrin (soil/foliar)	R	12	30/1
carbaryl	G	12	2
chlorantraniliprole	G	4	1
chlorothoxyfos (15G/4E)	G/R	48	AP
chlorpyrifos	G	24	21
chlorpyrifos+gamma-cyhalothrin	R	24	21
cyfluthrin	R	12	0
esfenvalerate	R	12	1
flubendiamide	G	12	1
gamma cyhalothrin	R	24	1
indoxacarb (mech./hand harvest)	G	12/14	3
lambda-cyhalothrin	R	24	1
lambda-cyhalothrin+ chlorantraniliprole+	R	24	1
methomyl	R	48	0
methoxyfenozide	G	4	3

(table continued)

Pesticide	Use Category <sup>1</sup>	Hours to Reentry <sup>2</sup>	Days to Harvest <sup>3,4</sup>
<b>INSECTICIDE</b> (continued)			
permethrin	R	12	1
propargite	R	13 days	30
spinetoram	G	4	1
spinosad	G	4	1
spiromesifen	G	12	5
tebupirimphos + cyfluthrin	R	48/72	AP
tefluthrin	R	0	AP
terbufos (soil/at cultivation)	R	48/72	AP/60
thiodicarb	R	48	0
zeta-cypermethrin	R	12	3
zeta-cypermethrin+bifenthrin	R	12	3
<b>FUNGICIDE (FRAC code)</b>			
chlorothalonil (Group M5)	G	12	14
Headline (Group 11)	G	12	7
mancozeb (Group M3)	G	12,24	7
Quadris (Group 11)	G	4	0
Quilt (Groups 11 + 3)	G	24	14
Stratego (Groups 11 + 3)	G	24	14
Tilt (Group 3)	G	24	14

See Table D-6.

<sup>1</sup> G = general, R = restricted

<sup>2</sup> Chemicals with multiple designations are based on product and/or formulation differences. **CONSULT LABEL**

<sup>3</sup> See label for days to harvest for feed, forage and/or stover. Days to harvest as listed in table are for grain/ears only.

<sup>4</sup> AP=At Plant

## Insect Control--Decision Making Fresh Market

### Whorl/Tassel Infestation

In general, insect larval feeding (ECB and FAW) during the whorl stage of sweet corn development has a greater impact on early planted, short-season varieties. For ECB on early plantings, apply first spray when 15 percent of the plants show fresh feeding signs. Additional applications may be necessary if infestation remains above 15 percent. An early tassel treatment is usually more effective than a whorl treatment because larvae are more exposed to the chemicals. The impact of infestation on mid- and late-season plantings depends on the stage of the plants when the infestation occurs. Treat for FAW during the early whorl stage when more than 15 percent of the plants are infested. During mid- to late-whorl stages, treatment for both FAW and ECB may be necessary if more than 30 percent of the plants are infested. Treat fields in early tassel stage if more than 15 percent of the emerging tassels are infested with ECB, FAW, or young CEW larvae.

### Ear Infestation

Direct sampling for CEW, FAW, and ECB during silking is not practical because of the low thresholds of ear damage. Begin treatment when 10 percent of the ears show silk. If CEW populations are heavy, it may be necessary to begin treatments when the very first silks appear. Silk sprays should continue on a schedule based on area blacklight and pheromone trap counts, geographical location, and time of year. Early in the season, silk sprays may be required on a 3- to 6-day schedule. When CEW populations are heavy, it may be necessary to treat on a 1- to 3-day schedule.

Applications during the low populations can be terminated up to 5 days before last harvest. During heavy populations and high temperatures, treatments will need to be made

according to the legal "days to harvest" of the chemical. For best control during heavy infestations, maximize the gallonage of water per acre, use a wetting agent, and make applications during the early morning. If irrigation or rains wash off the spray within 24 hours after an application, repeat treatment as soon as the foliage dries.

For more precise timing of silk sprays, use blacklight and pheromone traps to determine the actual moth activity on your farm. **Monitoring data from pheromone and blacklight traps are available on the websites:** [www.pestwatch.psu.edu](http://www.pestwatch.psu.edu) and [www.mdipm.umd.edu](http://www.mdipm.umd.edu). Contact your county Extension agent or consult your state pest management newsletter for more information on these techniques.

## Processing

### Whorl/Tassel Infestation

The ECB is the major whorl pest in early planted corn. Larvae that hatch prior to tassel emergence feed on the whorl leaves and cause yield losses. Decisions to treat whorl infestations are based on the percentage of "infested" plants with light (LD), moderate (MD), or heavy (HD) feeding damage.

"Infested" plants are classified as: light damage (LD less than 10 percent of the leaf area is affected), moderate damage (MD = 10 to 50 percent of the leaf area is affected), and heavy damage (HD = all leaves are damaged). Treat if the market value of the expected yield loss exceeds twice the cost of a whorl application. Expected yield loss is calculated as  $0.08 \times LD + 0.24 \times MD + 0.44 \times HD$ . Count only damaged plants with live larvae.

### Ear Infestation

The four insects that normally infest the ears of corn grown for processing are the ECB, CEW, SB, and FAW. Decisions to treat are based on the percentage of ears that are potentially damaged by a combination of these pests that occur during the silking period. A primary ear on a plant is potentially damaged if: (1) the plant has one or more ECB or FAW egg masses on it, (2) there are one or more CEW or SB eggs in the silk of the primary ear, or (3) young larvae of any of the four species are feeding in the silk of the ear.

When 50 percent of the corn in a field is silking, treat if 5 percent of the plants in silk meet one or more of the above criteria. At 100 percent silking (about 16 to 18 days before harvest), treat if 10 percent of the plants fall into one or more of the above categories. At 100 percent brown silking (10 to 12 days from harvest), treat if 20 percent of the ears have larvae feeding on the silks or in the silk tube.

When overall moth activity is high, fixed-treatment schedules according to blacklight trap catches should be used. Moth units are calculated by multiplying the average number of CEW moths in a region over 5 days times 5 and adding the value of the average number of corn borer moths in a region over 5 days. If moth units fall between 75 and 150 per 5 days, fixed schedules of 1 to 2 insecticide treatments are recommended. Fixed schedules of 2 to 5 insecticide treatments applied 3 or 4 days apart are recommended if the average number of moth units for a region exceeds 150 per 5 days. Consult your pest management specialist for more detailed information.

**Nematode Control**

Nematode control is very important to the production of this crop. See Chapter E "Nematodes" section of Soil Pests--Their Detection and Control. Use fumigants listed in the "Soil Fumigation" section or use Counter 15G or Mocap 15G. Consult labels for use directions. See seed treatment section below.

**Disease Control**

**Seed Treatment**

Request that seed be treated with one or more of the following fungicides for seedling diseases and damping-off: Allegiance, Apron XL, Dynasty, , or Maxim XL. Seed treatment with these fungicides is especially important for early seedings of Super Sweet (sh) varieties. There are several new insecticide/nematicide seed treatments for sweet corn that may be beneficial where soil insects and nematodes may be yield limiting. Request seed treated with Avicta DUO or Poncho/VOTIVO.

**Stewart's Bacterial Wilt**

Use resistant varieties where bacterial wilt is a problem. It is very important to control flea beetles early in the season. Use insecticide treated seed or an insecticide at seedling emergence. Flea beetles transmit Stewart's wilt and are numerous after mild winters. Use varieties resistant to Stewart's wilt listed in the sweet corn varieties table at the front of this section. More variety information is available at: [www.sweetcorn.uiuc.edu/index.html](http://www.sweetcorn.uiuc.edu/index.html). Treat susceptible varieties at spike stage when 5% of the plants are infested. See Insect Control Section for flea beetle control recommendations.

**Maize Dwarf Mosaic Virus (MDMV)**

MDMV is most likely to occur on corn planted after July 1. The virus is transmitted by aphids to sweet corn from infected weeds, especially Johnsongrass. For control, keep fields as weed-free as possible, maintain strict aphid control, and plant resistant varieties for fall harvest.

**Smut**

There is no real resistance to smut in sweet corn. Some varieties seem to escape infection due to differences in silk emergence and weather conditions. Since damaged tissue is more prone to infection, control corn borers as first tassel appears.

**Leaf Spots and Blights (Gray leaf spot, Northern corn leaf spot; Southern, Northern and Anthracnose leaf blights)**

For optimal control begin sprays before symptoms appear. In most years, chemical control is not needed for these diseases. Apply on a 7 to 14 day schedule.

**Alternate:**

chlorothalonil (Do not apply to corn to be processed.)--0.75-2.0 pt 6F/A (7 day schedule) or OLF, or mancozeb--1.5 lb 75DF/A (5 to 7 day schedule), or

**With one of the following:**

Quadris--9.2-15.5 fl oz 2.08SC/A, or  
Headline--9.0-12.0 fl oz 2.1EC/A (7 to 14 day schedule), or  
Tilt--2.0-4.0 fl oz 3.6 EC/A (7 to 14 day schedule), or  
Stratego--10.0 fl oz 2.08 EC/A, or

Quilt--7.0-14.0 fl oz 1.67 SC/A

Do not make more than 2 consecutive applications of one of the above fungicides before rotating to another fungicide from a different FRAC code.

**Rust**

Rust can occasionally become troublesome on susceptible hybrids. In most years chemical control measures are not warranted. However, corn warrants spraying if infection occurs prior to the whorl stage. Observe fields on a regular basis. If pustules are observed prior to the whorl stage, apply one of the following according to the described schedule:

- Quadris--6.2-9.2 fl oz 2.08SC/A (Apply on a 7 to 14 day schedule and do not make more than 2 consecutive applications without alternating with another fungicide from a different FRAC code)
- chlorothalonil (Do not apply to corn to be processed.)--0.75-2.0 pt 6F/A (7 day schedule) or OLF, or
- Headline--6.0-9.0 fl oz 2.1EC/A (7 to 14 day schedule), or mancozeb--1.5 lb 75DF/A (5 to 7-day schedule) or OLF, or
- Tilt--4.0 fl oz 3.6 EC/A (7 to 14 day schedule), or
- Quilt--10.5-14.0 fl oz 1.67SC/A, (14 day schedule as soon as symptoms are seen), or
- Stratego--10.0 fl oz. 2.08 EC/A (7 to 14 day schedule)

**SWEET POTATOES**

**Varieties**

Varieties <sup>1</sup>	DE	MD	NJ	PA	VA	WV
Beauregard <sup>2</sup> (FR)(rosy skin)	D	M	N	P	V	WV
Covington	D	M	N	P	V	WV
Evangeline (trial)			N			
Hayman (white flesh)					V	

<sup>1</sup> Varieties listed alphabetically.

<sup>2</sup> Beauregard sizes rapidly. Plant late and sample fields beginning in early September. Letters in parentheses indicate disease resistance possessed by varieties. See the "Abbreviations" section in front portion of this publication.

**Recommended Nutrients Based on Soil Tests**

**Before using the table below, refer to important notes in Plant Nutrient Recommendations in Section B, Soil And Nutrient Information. These notes provide additional suggestions to adjust rate, timing and placement of nutrients depending on soil type cation exchange capacity and existing fertility levels.**