



Whitney S. Cranshaw, Earlie Thomas<sup>1</sup>

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**Quick Facts**

For most areas of Colorado, corn earworm is the most serious pest of sweet corn. Sweet corn is attractive to corn earworm moths for egg laying from first silk emergence until silks turn brown. This is the most important time to make preventive insecticide applications. In small plantings where corn is not rotated with other crops, corn rootworm beetles may clip corn silks. Corn leaf aphid is common in sweet corn and does not affect yield but may produce excessive amounts of honeydew. Populations of this aphid usually collapse after tasseling.

feed on silk and move into ear tips. Control of corn earworm infestations requires that treatments are applied thoroughly to the crop at frequent enough intervals to kill newly hatched larvae before they enter ears. Control of corn earworm is easiest to achieve in relatively uniform plantings that are attractive to corn earworms for only a short period. In high-value plantings, insecticide treatments at least at weekly intervals may be required when heavy moth flights occur. Plantings are susceptible as soon as silks emerge. Treatments can safely be discontinued when silks turn brown and become unattractive to egg-laying moths.

Light and pheromone (sex attractant) traps are available for detecting corn earworm moths. These traps may be particularly useful for detecting moths when infestations are sporadic. Moths in traps indicates the need to treat corn that is in susceptible stages.

**Western Corn Rootworm**

Western corn rootworms lay eggs around the base of corn plants in late July, August and September. These eggs hatch the following June and larvae feed on corn roots, if present. Where corn is rotated with another crop, rootworm larvae starve. *Crop rotation is strongly recommended for corn rootworm control.*

Adult western corn rootworm beetles feed on leaves and corn silks in mid to late summer. Adult beetles cannot directly reduce yields but may extensively clip silks and interfere with pollination. Heavy beetle populations (5+/ear tip) may require treatment with insecticides if pollination has not been completed. These numbers rarely are reached except in very late plantings in a field. Adult corn rootworms are typically limited by corn earworm treatments. Where crop rotation is practiced, adult corn rootworm problems are rare.

**European Corn Borer**

In eastern Colorado, occasionally extending to the Front Range, European corn borer can be a

<sup>1</sup>Whitney S. Cranshaw, CSU assistant professor, department of entomology; Earlie Thomas, industrial hygienist, CSU environmental health service. (3/86)

Production of sweet corn requires serious consideration of insect management. Several insects, primarily corn earworm, may infest marketed ears, seriously degrading quality. Indirect pests such as corn leaf aphids and corn rootworms may occasionally need management to maintain yields.

**Corn Earworm**

Corn earworm is the most serious insect problem of Colorado sweet corn. Corn earworm larvae feed upon ear tips causing substantial ear injury. During periods of heavy egg laying, repeated insecticide treatments must be made to maintain acceptable quality.

Corn earworms do not overwinter in Colorado. The adult (moth) stage flies into the state from southern areas. The size of flights and amount of egg laying vary greatly from year to year. Typically, infestations are most severe on later sweet corn plantings because of August flights of the insect. Flights occasionally will peak in early-mid July, resulting in a more severe infestation of earlier planted corn.

Corn earworm eggs are laid on ear silks. Within three to seven days, eggs hatch, larvae

problem in sweet corn. Corn borer larvae tunnel into stalks and ears. Two generations of the insect occur in the state, but problems with ear infestation are limited largely to the second generation, which lays eggs throughout August. Where flights of corn borer moths are heavy, regular insecticide treatment may be necessary to maintain sweet corn quality. Flights can be monitored with light or pheromone traps.

### Corn Leaf Aphid

Corn leaf aphid often is abundant on sweet corn, particularly around tasseling. Heaviest populations of aphids typically occur on the top of the plant, but some infestation of wrapper leaves of ears may occur. Heavy aphid infestations produce large amounts of sticky honeydew. Honeydew and aphid cast skins on ears may produce unacceptable cosmetic injury to fresh market corn. However, aphids do not directly affect yield or quality of the corn. Aphid populations natu-

rally collapse shortly after tasseling, and insecticide controls are rarely needed. Many corn earworm treatments have little activity on corn leaf aphids.

### Insecticidal Control

Use of insecticides commonly is required to limit insect infestation of sweet corn. Thorough coverage of the ear zone is essential for good control. The timing and frequency of applications should be guided by the insect pest pressure that is present. Light or pheromone trapping of corn earworms and regular field sampling to detect pests should be a part of any sweet corn insect management program.

Use caution with insecticide applications to sweet corn. Many of the insecticides used on the crop are highly toxic to humans. Also, honeybees foraging on corn pollen are susceptible to insecticide poisoning, particularly when Sevin, Penn-cap-M, or Furadan 4F are used.

**Table 1: Insecticides labelled for use on sweet corn (December 1985).**

Treatment	Corn earworm	European corn borer	Corn Rootworm		Aphids	(P.H.I., Days)	Remarks
			Adult	Larva*			
<i>Bacillus thuringiensis</i> (Dipel, Thuricide, etc.)	X	X				(0)	Microbial insecticide that must be eaten. Generally available to homeowners.
<i>Carbaryl</i> Savit, Sevin SL, 50W, 80S, XLR+	X	X	X			(0)	High honeybee hazard. Generally available for garden use.
<i>Carbofuran</i> Furadan 4F, 15G		X		X		(7)	R. Machine harvest restriction on Furadan 4F. High honeybee and bird hazard.
<i>Chlorpyrifos</i> Lorsban 15G, 4E		X		X		(21)	
<i>Diazinon</i> Diazinon AG500, 50W, 14G	X			X		(0)	Generally available for garden use. Diazinon granule have high bird hazard.
<i>Endosulfan</i> Thiodan, Tiovel, Endocide	X				X	(0)	
<i>Fenvalerate</i> Pydrin	X	X	X			(1)	R
<i>Fonofos</i> Dyfonate				X			R. Planting time only
<i>Malathion</i> Malathion 57%, 8EC			X		X	(5)	Generally available for garden use. Liquids may cause injury during whorl and silk stage.
<i>Methomyl</i> Lannate, Nudrin	X	X				(0)	R
<i>Methyl parathion</i> Penn-cap-M	X	X	X		X	(3)	R. High bee hazard. Penn-cap-M is only labelled methyl parathion on crop.
<i>Mevinphos</i> Phosdrin, Duraphos					X	(1)	R
<i>Oxydemetonmethyl</i> Metasystox-R			X		X	(7)	
<i>Parathion (ethyl)</i> various	X	X			X	(12)	R
<i>Permethrin</i> Pounce, Ambush	X	X				(1)	R
<i>Terbufos</i> Counter					X		R

R = Restricted Use

\*Corn Rootworm larval control a planting time treatment.