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Sweet Corn Insect Pests
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Cooperative Extension Service
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AG FACTS

Sweet Corn Insect Pests

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Seed corn maggots injure seeds of a variety of crops, including corn, beans and cucurbits. They overwinter as small, brown pupae in the soil. Adult flies (fig. 1) emerge in late April to May. They are attracted for egg laying to soils that are high in decomposing organic matter, including plowed-down cover crops and animal manure. The eggs are laid on or beneath the soil surface. The larvae feed on decomposing plant material in the soil and also on seeds of corn, beans, cucurbits, etc. (fig. 2). Seeds may be attacked before or shortly after germination. Injury may kill seeds or prevent them from emerging. If sprouting seeds are attacked, cotyledons and new leaves may show injury above ground. Damage is especially common in cool weather because the seed corn maggot is well adapted to cool temperatures and seeds germinate slowly and are exposed longer to injury. There may be three or more generations per year. Monitoring for this insect is not practical, so seed treatment is generally recommended.

European corn borers are the most serious pests of sweet corn in Michigan. They overwinter as mature larvae primarily in field corn and weed residue. Moths (fig. 3) emerge in late May to June, and mating occurs in grassy and weedy areas. The females move into peppers, sweet corn and other crops to lay eggs. Eggs (fig. 4) are usually laid on the undersides of the leaves. Larvae may feed down inside the leaf whorl (fig. 5) or attack stalks (fig. 6) and ears (fig. 7). There are usually two peaks of moth activity (see figure). Timing of adult activity and crop injury can vary by two weeks or more from year to year, depending on the weather. A third generation of corn borers may occur in southern Michigan or during years with unusually warm spring and summer weather.

European corn borer eggs, larvae and stalk damage can be monitored visually, early in the season. Adult moth activity can be monitored with pheromone (sex attractant) lures and traps located in grassy areas adjacent to fields. Preventive treatment is usually required as soon as ears begin to form.

Corn earworms (also called tomato fruitworms) do not overwinter in Michigan. The moths (fig. 8) migrate into the state from the south. They often arrive in mid- to late August, but arrival may be as early as June or as late as September. Sweet corn is their most common host, but damage can occur to tomatoes, snap beans and other crops. Eggs (fig. 9) are laid singly on the corn silk. Small larvae begin feeding near the tips of the ears and move to other parts of the ears or even to different ears as they grow (fig. 10).

Corn earworm eggs can be monitored visually, although they are difficult to see. Adult flight can be monitored using pheromone (sex attractant) lures and traps.

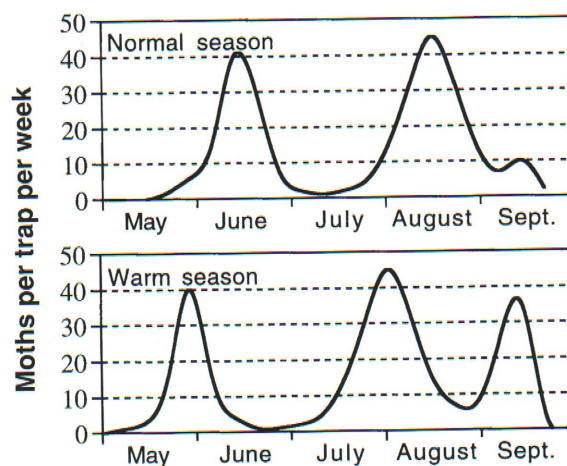
Correctly identifying corn earworm larvae is important, since they are more difficult to control than European corn borers.

Corn leaf aphids (fig. 11) (1/16-inch long, bluish-green) are generally found in the whorl or tassel area of the plant. Corn leaf aphids may appear as early as mid-June and are most abundant in warm, dry weather. They produce large quantities of honeydew, which is high in sugar, and sooty mold develops on the honeydew. The aphids, honeydew and sooty mold may contaminate the ears and make them unmarketable. The honeydew may also attract corn earworm moths for egg laying. Like other aphids, corn leaf aphids are attacked by numerous natural enemies such as lady beetles and tiny wasps. Excessive spraying with insecticides toxic to natural enemies may increase aphid problems. Corn leaf aphids can be easily monitored visually as a part of a scouting program.

Sap beetles (fig. 12) (1/4-inch long, black usually with cream colored spots) are sometimes a problem in sweet corn. They are attracted to overripe or rotting fruit or plant sap. Injury to sweet corn by corn earworm, European corn borer, or birds will attract sap beetles. They can be controlled with insecticides but are best managed by identifying the primary source of injury and attraction. The dusky sap beetle (rare in Michigan) can directly attack healthy sweet corn. Its larvae feed on the ear, usually damaging only one or two kernels.

For insecticide recommendations, commercial growers should consult MSU Extension bulletin E-312, *Control of Insects, Diseases and Nematodes on Commercial Vegetables*. Home gardeners, consult bulletin HYG-001, *Home Insect Pest Management Guide*.

Thanks to Art Wells and Don Cress for their contributions to earlier versions of this bulletin.



European corn borer flight activity for normal and warm seasons.

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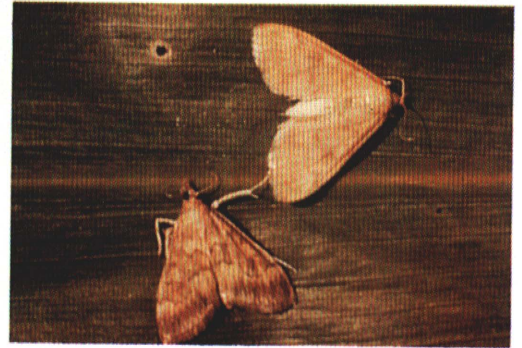
Sweet Corn Insect Pests



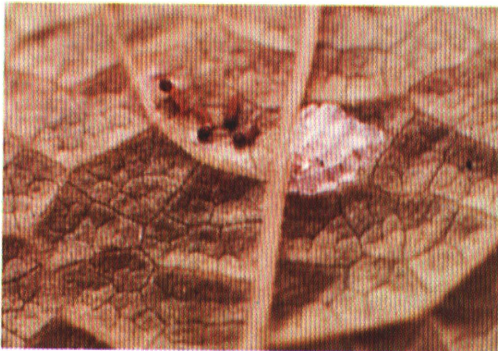
1. Seed corn maggot adult



2. Seed corn maggot in corn seed



3. European corn borer adults



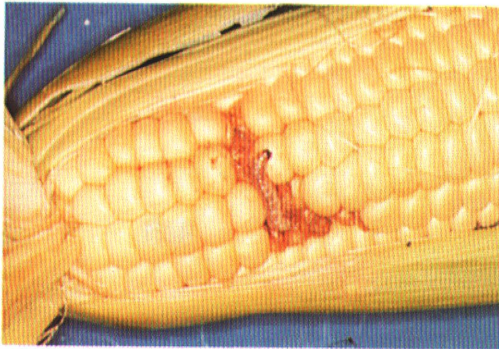
4. European corn borer egg mass and larvae



5. European corn borer larva (arrow) and damage to corn leaf



6. Broken tassel due to European corn borer



7. European corn borer in ear



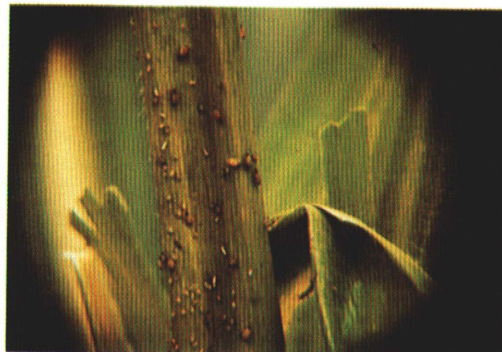
8. Corn earworm adult



9. Corn earworm egg (arrow)



10. Corn earworm larva



11. Corn leaf aphids



12. Sap beetle