



European Corn Borer

Introduction

The European corn borer (ECB, family *Pyralidae*, order *Lepidoptera*) arrived in North America during the early 1900s, probably in broom corn imported from Hungary and Italy for the manufacture of brooms. First noticed near Boston in 1917, ECB has since become one of the most destructive pests of corn throughout the US. Broken tassels, collapsed stalks, feeding signs on leaves and borings in stalks and ears are signs of the presence of ECB.

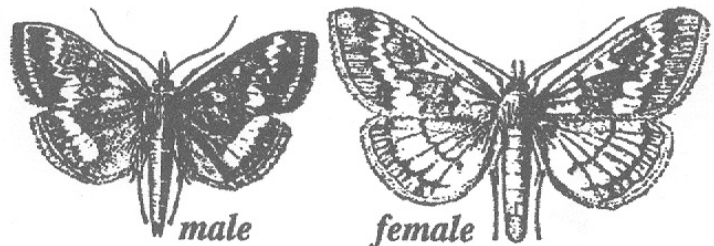
ECB also feeds on the stalks, fruits and tubers of several other vegetables, including peppers, potatoes, beans, beets, celery, tomatoes and other vegetable crops. It also attacks chrysanthemums.

The European corn borer overwinters as a mature larva in corn stalks or in the stems, stubble and debris of other host plants. Buff-colored moths begin to emerge in early June and deposit eggs in masses on the underside of leaves. Females may lay up to 500-600 eggs in clusters of 20-30 eggs. Egg masses are white and flat with individual eggs overlapping like fish scales. Eggs hatch in three to seven days, depending on the temperature. Newly-hatched larvae are pale yellow-gray with black head and are 1/15-inch long.

When fully grown, European corn borer larvae vary in color from gray to tan and reach one inch in length. They have brown heads and several rows of small spots running the length of the body. A second European corn borer generation occurs in late July and August.

Description

The full-grown larva is 3/4 -1 inch long and is flesh-colored with brown spots running the length of the body. The brown pupa is surrounded by a flimsy cocoon. The adult moths have a wing span of about one inch. The wings are usually folded tent-like over the body. The males have mosaic markings in bronze, yellow and beige. The females are slightly larger than the males, have similar markings, and are paler in color.



The female lays her eggs in groups that look like fish scales on the undersides of corn leaves along the midrib. The eggs change color throughout the growing season as they develop.

Life Cycle

In Southern NH there are two generations of the ECB per year, but only one generation in the northern half of the state. ECB larvae overwinter in corn stubble and corn refuse. In the spring the larvae pupate, the moths emerging from June to August. The second generation typically occurs in August.

Each female will lay an average of 500-600 eggs, which hatch in about a week. The young larvae begin to feed on corn leaves making small holes and leaving a sawdust-like frass. After migrating into the growing whirl of leaves, the larvae eventually bore into the forming tassels, causing the tassels to break over when mature. As the larvae continue to grow they eventually bore into stalks. Mature larvae pupate in the cavities and some emerge as adult moths to start the second generation in August.

Control

Prevention and non-chemical controls

Because ECB overwinters as mature larvae in corn stalks and stubble, removing or tilling under all crop refuse is important in controlling this pest. Crop rotation is also important. *Bacillus thuringiensis* sprays are very effective in the late whorl stage.

Chemical control

There are many chemical pesticides registered to control ECB. If you use one, be sure the label lists the pest and the crop you intend to treat. The two most critical times to spray are in the late whorl stage, just before the tassel appears, and the fresh silking stage. During the late whorl stage, aim sprays down the whorl. During silking, the fresh new silks are the target. Bt products are less effective on the silks.

Stop! *Read the label on every pesticide container each time before using the material. Pesticides must be applied only as directed on the label to be in compliance with the law. All pesticides listed in this publication are contingent upon continued registration. Contact the Division of Pesticide Control at (603) 271-3550 to check registration status. Dispose of empty containers safely, according to NH regulations.*

*Fact sheet reviewed and amended by Dr. Alan Eaton, UNH Cooperative Extension Entomology Specialist.
August 2009.*

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