

VEGETABLE CROPS

INSECTS OF CORN Corn Earworm

Cooperative Extension New York State Cornell University

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corn earworm

Heliothis zea (Boddie)

Introduction

The corn earworm feeds on a number of crops worldwide and is named for the host crop. When it feeds on corn, as in the Northeast, it is the corn earworm; in the South when it feeds on cotton it is the cotton bollworm; and when it feeds on tomatoes it is the tomato fruitworm. Its damage is severe in southern states because it survives the winter and attacks crops throughout the growing season. The adults migrate northward annually, arriving in the northeastern United States

and Canada from mid-July to late August depending on weather and wind patterns. There are one or two generations a year in the northeastern states depending on the time of arrival and temperature in late summer and early fall. The corn earworm is a general feeder, attacking many cultivated crops and weeds. It causes serious injury to tomatoes, tobacco, cotton, and soybeans, as well as corn.

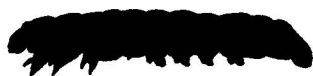
Adults

The adult is a yellowish-brown moth with a wingspan of 1½ inches (37 mm) (fig. 1). The moth belongs to the same group as the common armyworm moth, which it resembles. The moths vary in color; in general the front wings are a light

Actual Size



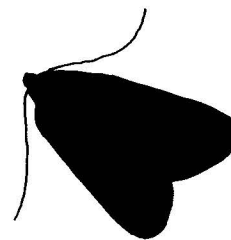
Egg



Larva



Pupa



Adult



tannish brown, marked with dark gray irregular lines and a dark area near the tip of the wing. The irregular lines often shade into an olive green. The hind wings are whitish with some irregular darker markings. The eyes are a light green color. The adult, when feeding on corn, prefers to lay its eggs on fresh corn silks.

Eggs

The adult moths fly during warm, cloudy, moist evenings mainly at dusk. They lay their white, hemispherical eggs on fresh corn silks. The eggs are about one-half the diameter of a pin head. While a single moth may lay more than 1,000 eggs, they are laid singly on corn silks (fig. 2). Depending on temperature, eggs hatch in 2-10 days.

Larvae

The larva (worm) or caterpillar has a tan head and is 1 ½ inches (37 mm) long when fully grown. Prominent alternating light and dark stripes run lengthwise of the body (fig. 3). The larvae vary greatly in color from a light green or pink to brown or nearly black and are lighter on the underparts. The skin of the insect is somewhat coarse and has many small thorn-like projections. The corn earworm larva should not be confused with the European corn borer larva which seldom exceeds 1 inch (25 mm) in length and is a dirty white color with a dark brown or black head.

The worm stage is the only damaging stage of this insect.

Pupae

When the larvae are full grown they leave the corn ears and drop or crawl to the ground where they burrow. The larva excavates a small, smooth-walled cell, usually 3-5 inches in

the soil, then transforms into the resting or pupal stage (fig. 4). The moth will emerge 10-25 days later depending on temperature. The development from egg to adult usually takes about 30 days in midsummer.

Damage

The newly hatched worms pass through the "silk channel" of the developing ear, feeding along the way to the kernels, where feeding continues until development is complete. Corn attacked by corn earworm larvae will have large clusters of moist fecal matter at the tip in the husk and in the silk channel. The kernels, especially near the tip of the ear, will be eaten down to the cob. In heavy, uncontrolled infestations nearly 100 percent of the ears will be infested. By cutting off the silks, pollination is prevented and poor ear fill may result. The presence of a single large worm with associated fecal matter in the tip of the ear is repulsive to the consumer and very troublesome to the commercial corn processor. In field corn, molds may develop that are toxic to livestock.

Control

Consult your local extension recommendations to determine which pest management practices are most effective in your area.

Evaluating Populations

The egg of the corn earworm is difficult to find on corn varieties with light colored silks. Varieties with dark or purple silks make egg counting much more practical. The adult moth is attracted to blacklight traps. Therefore, a network of light traps is useful in determining when and at what population levels this moth is in flight.

Quantity Discount Available

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