

# Corn Earworm

## *Heliothis zea*

<i>Order:</i>	Lepidoptera (butterflies and moths)
<i>Family:</i>	Noctuidae (noctuid moths)
<i>Metamorphosis:</i>	Complete (egg-larva-pupa-adult)
<i>Mouthparts:</i>	Chewing in nymphs and siphoning in adults



Larva of **CORN EARWORM**, *Heliothis zea*, on an ear of corn, see color print, Fig. 14, on publication B-1013.

The corn earworm is one of the most serious corn pests in the United States. It also damages tobacco, cotton, tomatoes, and legumes. The larvae are also known as tomato fruitworms when they occur on tomatoes and cotton bollworms when they occur on cotton.

### Body Form

*Eggs:* Eggs are pale yellow, turning darker as hatching approaches. They are rounded and have ridges running from the base to the top of the egg.

*Larvae:* Full-grown larvae are approximately 2 inches in length. Their heads are yellowish, and their bodies are striped lengthwise with alternating light and dark coloration. The background color of the body can vary from green to black. Numerous dark bumps arise from the body surface, each capped with a spine. There are three pairs of true legs, dark in color, near the head and five pairs of fleshy prolegs. One pair of prolegs is located near the anus, and the rest are along the length of the body.

*Adults:* The adult wingspan measures up to 1½ inches in width. The wings are folded along the back when at rest, and the forewings are the dominant feature when viewed from above. The forewings are tan and faintly banded with darkish zones.

### Life History

Most corn earworms overwinter as pupae in soil south of the 40-degree north latitude line. Adults emerge in the spring. Migration to more northerly latitudes occurs at this time. Females lay eggs on the foliage of host plants, sometimes selectively near developing fruiting bodies such as the silk of corn. Larvae emerge and initially feed near the hatching site. They can burrow into developing corn ears, tomato fruit, cotton bolls, and the fruiting bodies of other host plants. Two to seven generations occur per year, depending on climate and host plant suitability. Only one to two generations per year will occur in northerly latitudes like Wyoming.

## **Plant Injury**

Early season larvae feed on the new growth of a plant and may destroy the growing tip. This feeding causes a shredded appearance in damaged foliage. This damage is normally not seen in Wyoming because stands are usually well established before moths migrate into the area. Later-season larvae feed on corn silks, interfering with pollination. They also feed on developing kernels. This feeding causes direct loss by ruining the ears and indirect loss by allowing the entry of molds and disease organisms. In tomatoes, larvae cause fruit drop and fruit decay.

## **Management**

Management will depend on the use of the crop. There will be a greater need to control this insect when the corn is grown for direct human consumption than when grown for feed. But damage can be substantial in feed corn; a high percentage of ears can become infested. Insecticide use can be timed when female moths are actively laying eggs on the silk of corn (or near the fruiting bodies of other host plants). Economic justification to apply an insecticide is difficult to establish. To be effective, insecticides must be applied at the silk stage when moths are laying eggs. Pheromone traps can confirm when moths are active, but it is difficult to use this information to predict the percent of ears infested by worms. Field history may help in this regard.

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*Issued in furtherance of cooperative extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Glen Whipple, director, Cooperative Extension Service, University of Wyoming, Laramie, Wyoming 82071.*

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