



Hornworms

K.A. Delahaut



Hornworm

Tomato hornworms (*Manduca quinquemaculata*) and tobacco hornworms (*M. sexta*) are large, blue-green worms with a spine protruding from their rear ends. They feed on tomatoes late in the season.

Appearance

Hornworms are easy to identify by their blue-green color and large size. When fully grown they can reach up to 4 inches in length. The caterpillars have 7 (tobacco) or 8 (tomato) white stripes on each side of their bodies. A large red or black spine protrudes from the posterior end of the worm, giving rise to the name "hornworm." Adults are large, heavy-bodied

hawkmoths with a wingspan of up to 5 inches. They become active in July and are often mistaken for hummingbirds due to their large size and quick movements.

Symptoms and effects

Hornworms primarily feed on tomato leaves and fruit. While feeding on the latter, they may leave scars on green fruit. Hornworms can devour up to 4 times their weight in food each day. Although they are capable of defoliating a tomato plant, they are usually noticed before this occurs. Hornworms rarely cause economic damage to tomatoes in Wisconsin.

Life cycle

Tomato hornworms overwinter as pupae in the soil. The adults emerge in late June and lay a single pale green, spherical egg on the lower leaf surface of tomato plants. Upon hatching, the larvae begin feeding immediately and continue to feed for about 1 month before dropping from the plant to pupate. There is only one generation of hornworms per year.

Control

Hornworms rarely cause enough damage to warrant the use of insecticides. Because of their large size they are easy to remove by hand. Trichogrammid wasps offer natural control by parasitizing hornworm eggs. Braconid wasps often lay their eggs on the bodies of hornworms. When the eggs hatch, the larval braconids feed inside the caterpillar. If left unharmed, these parasitized caterpillars will produce wasps that can repeat the process on other hornworms, thereby providing a continual source of biological control.

Commercial tomato growers with large acreages of tomatoes should monitor their fields and treat them if an average of more than two hornworms per plant is detected. There are several insecticides available to control the tomato hornworm. Refer to the University of Wisconsin–Extension publication *Commercial Vegetable Production in Wisconsin* (A3422) for a list of insecticides.

Author: K. A. Delahaut is an outreach specialist with the Integrated Pest Management Program at the University of Wisconsin–Madison and the University of Wisconsin–Extension, Cooperative Extension.

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