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University of Wisconsin Garden Facts

**Provided to you by:**

# Hornworms

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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 easily identified by their blue-green color and large size. When fully grown they can reach up to 4 inches in length. The caterpillars have seven (tobacco) or eight (tomato) white stripes on each side of their body. 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.

Tobacco hornworm

**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 four 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 pale green, spherical eggs singly on the lower leaf surface of tomato plants. Upon hatching, the larvae begin feeding immediately and continue to feed for about one month before dropping from the plant to pupate. There is only one generation per year.

**Control** Rarely do hornworms cause enough damage to warrant the use of insecticides. Because of their large size they are easily removed from the plant by hand. Trichogrammid wasps offer natural control by parasitizing hornworm eggs. Braconid wasps often lay their eggs on the bodies of hornworms. Upon egg hatch, the larval brachonids feed inside the caterpillar. If left unharmed, these parasitized caterpillars will produce wasps that can parasitize other hornworms, thereby providing a continual source of biological control.

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

**For pesticide recommendations:** See UW-Extension Bulletin A3422 or contact your County Extension Agent.

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