Hornworms take aim at garden tomatoes

K-State horticulture expert has tips for fending off the pesky invader

By Taylor Jamison, K-State Research and Extension news writer

MANHATTAN, Kan. – To the dismay of many gardeners, hornworms are rather fond of garden tomatoes.

“The larva feeds on the leaves and stems of the tomato plant, leaving behind dark green or black droppings,” said Kansas State University horticulture expert Ward Upham.

Hornworms are a common insect invader of home gardens, Upham said. Though they favor tomatoes, they are also known to feed on eggplants, peppers and potatoes. In their adult moth stage they are relatively harmless to the garden. However, in their larval stage, they can be quite damaging to plants.

Upham said the larval hornworm appears as a long, pale green caterpillar. It grows to an impressive 3.5-4 inches in length. Hornworms may differ in appearance of their stripes and horn. Two distinct types most commonly found in Kansas include:

- Tobacco Hornworm, characterized by seven white diagonal stripes and a red horn.
- Tomato Hornworm, characterized by v-shaped markings and a blue or black horn.

Over a month’s time, the hornworm goes through about 4 or 5 different larval stages where it changes in color and size, according to Upham. It reaches its biggest size in the later stages, and soon after it will drop down in soil to pupate. Even so, they can be difficult to spot amongst foliage.

“Missing foliage is often the first clue that you have an interloper,” Upham said.
“Handpicking is the most effective way to protect a small home garden from these unwelcome guests.”

If hornworms prove too difficult to handpick, Upham suggests a variety of insecticides, including Bt, spinosad, and cyfluthrin. He urged gardeners to closely follow guidelines related to the harvest interval, or the number of days between when the spray is applied to fruit harvest.

“Keep watch for hornworms that may be infected with parasites,” Upham said. “Small braconid wasps will lay their parasitic eggs on the hornworm. The eggs will then morph into a cocoon and appear as small white projections protruding from the hornworm’s body.”

If hornworms are infected with parasites, Upham said they should be left alone. Upon emergence from the cocoons, the newborn wasps will kill the hornworms and seek others to parasitize – making them a natural control method.

Upham and his colleagues in K-State’s Department of Horticulture and Natural Resources produce a weekly Horticulture Newsletter with tips for maintaining home landscapes. The newsletter is available to view online or can be delivered by email each week.

Interested persons can also send their garden- and yard-related questions to Upham at wupham@ksu.edu, or contact your local K-State Research and Extension office.

# # #

Sidebar
Curled leaves on tomatoes are usually temporary

A frequent concern gardeners see in the summer months is curling tomato plant leaves.

Along with the characteristic rolling of the sides of the leaves, the leaf may also increase in thickness and appear leathery.

K-State horticulture expert Ward Upham explains why tomato plants undergo this rolling spectacle.

“When the tomato plant grows vigorously in mild, spring weather, top growth often exceeds root development,” he said. “As soon as the first few days of warm, dry summer weather hit, the plant ‘realizes’ it has a problem and tries to reduce its leaf area by rolling leaves.”

Although unpleasant to look at, leaf rolling is a harmless, temporary condition. Within a week or so the plant will return to its normal condition.

-30-

FOR PRINT PUBLICATIONS: Links used in this story
K-State Research and Extension local offices, [www.ksre.ksu.edu/about/stateandareamaps.html](http://www.ksre.ksu.edu/about/stateandareamaps.html)

K-State Research and Extension is a short name for the Kansas State University Agricultural Experiment Station and Cooperative Extension Service, a program designed to generate and distribute useful knowledge for the well-being of Kansans. Supported by county, state, federal and private funds, the program has county extension offices, experiment fields, area extension offices and regional research centers statewide. Its headquarters is on the K-State campus in Manhattan. For more information, visit [www.ksre.ksu.edu](http://www.ksre.ksu.edu). K-State Research and Extension is an equal opportunity provider and employer.

**Story by:**
Taylor Jamison
[mtjamison@ksu.edu](mailto:mtjamison@ksu.edu)

**For more information:**
Ward Upham
785-532-6173
[wupham@ksu.edu](mailto:wupham@ksu.edu)