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Agricultural Extension Service
The University of Tennessee
W025

Cotton Insects

Tarnished Plant Bug

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Classification and Description

The tarnished plant bug, *Lygus lineolaris* (Hemiptera: Miridae), belongs to a group of insects collectively known as plant bugs. Other plant bugs occasionally found in Tennessee include the clouded plant bug and cotton fleahopper. These cotton pests belong to a larger group of insects known as "true bugs," which includes stink bugs and a number of important predatory species (e.g., big-eyed bugs, insidious flower bug). All true bugs have a piercing-sucking mouthpart (i.e., beak).

Adult tarnished plant bugs are about ¼ inch long with a general brown color mottled by patches of white, yellow, reddish-brown or black. A light-colored "V" on the scutellum (behind the head) and two light-colored patches further back on the wings are characteristic. Eggs are about 1 mm long and are almost always embedded into plant tissue, and thus not easily found. Immature tarnished plant bugs typically vary from yellowish-green to dark green or brownish. Later nymphal instars have four dark-colored spots on their thorax and one spot in the middle of the abdomen.

Hosts, Life History and Distribution

Tarnished plant bugs have a very wide host range including many cultivated and wild plant hosts. They are widely distributed and common across the eastern United States. Important wild hosts include vetch, fleabane, horseweed (marestail), curly dock and pigweed. Winter is passed as an adult, hidden in protected areas such as under leaf litter. Adults become active in early spring. Each female will lay between 50-150 eggs. Eggs hatch in 7-12 days, and it takes about 15-25 days for nymphs to develop into adults during the summertime. Reproduction begins when adults are about 1 week old. Multiple, overlapping generations of tarnished plant bugs occur each year.

Tarnished plant bug nymph and adult (right)

Pest Status and Injury

The tarnished plant bug is the most important pest of Tennessee cotton from the time of first squaring to the initiation of bloom. This insect has become a more common mid-season problem in recent years because of a reduction in insecticides previously used to control boll weevil, bollworm and tobacco budworm. Tarnished plant bugs prefer to feed on squares. Small squares that have been fed upon will typically be shed from the plant. Excessive early-season square loss can directly reduce yields or delay crop maturity. Larger squares may remain on the plant, but evidence of plant bug feeding is subsequently evident by discoloration and anther damage on "dirty blooms." Although less common, feeding damage to terminals can also delay maturity by causing plants to lose apical dominance, resulting in "crazy cotton." After first bloom, injury to bolls from both adults and nymphs may cause cat-facing and boll injury very similar to stink bug injury. Bolls more than 14 days old are typically not preferred feeding sites and are relatively immune to injury.

Cotton square that shed due to tarnished plant bug feeding

Management Considerations and Thresholds

Cotton is most susceptible to plant bug injury during the early squaring period. Sweep-net sampling and monitoring square retention are recommended prior to bloom to determine the level of plant bug infestation. Later in the season, a drop cloth or visual sampling is more commonly done because these techniques are better at detecting nymphs. Currently recommended insecticides and thresholds can be found in the Tennessee Cotton Insect Control Guide (Extension PB 387).

For information about the management of the major field crops grown in Tennessee, visit www.utcrops.com

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store, or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label. Persons who do not obey the law will be subject to penalties.

Disclaimer Statement

Pesticides recommended in this publication were registered for the prescribed uses when printed. Pesticides registrations are continuously reviewed. Should registration of a recommended pesticide be canceled, it would no longer be recommended by the University of Tennessee. Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others which may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product.

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Agricultural Extension Service Charles L. Norman, Dean