

Cotton Insects

Thrips

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Classification and Description

Thrips are small, slender insects that belong to the order Thysanoptera. Several kinds of thrips may be observed feeding on cotton in Tennessee, but *Frankliniella* species are predominant. Adult thrips are about 1.5 - 2.0 mm long and can usually be distinguished from immature thrips by the presence of two pairs of wings that are held folded behind the back except during flight. A fringe of hairs on the posterior margin characterizes each wing, but this is not visible except under magnification. Some adults may be wingless. Depending upon the species, adult color varies from yellowish to black. Eggs are very small and inserted into the plant. Immature thrips found in cotton are usually pale yellow to straw-colored. Both immature and adult stages have modified, piercing-sucking mouthparts and feed on plant juices from the wounds made by their “beak.”

Hosts and Distribution

Most species found on cotton have a wide host range and can be found in all parts of Tennessee. Species that feed on cotton are common on many cultivated, ornamental and wild plants. Wheat will often harbor large numbers of thrips. Wild or cultivated hosts, particularly those that are maturing or

“drying down,” are potential sources of thrips infesting cotton fields.

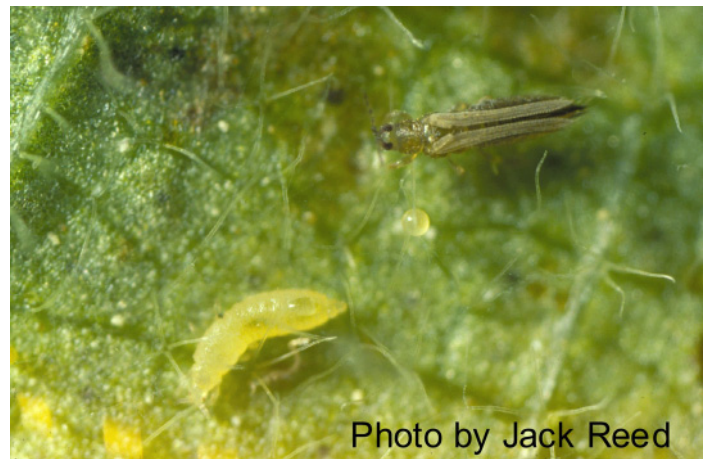


Photo by Jack Reed

Adult thrips and larva (bottom)

Life History

Thrips overwinter as larvae or adults. Most species have multiple generations per year. The first generations occur on early spring hosts. Thrips are extremely common and often disperse into cotton fields as soon as seedlings emerge. Most species take 10-30 days to develop from the egg to adult stage, although this is highly influenced by temperature. Adult females may lay 30-300 eggs.



Pest Status and Injury

Thrips are consistently among the top 3-4 economically most important pests of cotton grown in Tennessee, and they inflict economic damage to some fields on an annual basis. Damage to cotton is most common during the seedling stage because small plants are more susceptible to injury. Environmental conditions that result in poor seedling growth and vigor increase the chance of economic damage. Thrips injury often appears as small areas of silvery or whitish discoloration on leaves. Heavily infested plants will have distorted leaves. Injured leaves will curl upward, emerging leaves will have a ragged appearance and the plant terminal may be killed (resulting in a loss of apical dominance or “crazy cotton”). Seedlings may be killed if heavy infestations persist unchecked.

Management Considerations

At-planting systemic insecticides (seed treatment or in-furrow application) are generally used to prevent thrips damage. Recommended treatments and precautions concerning thrips control in cotton are available in the Tennessee Cotton Insect Control Guide (Extension PB 387). Even when at-planting insecticides are used, foliar applications of insecticide may be needed in cold, wet years. Once cotton has reached the 4th true-leaf stage, thrips control is generally no longer necessary. The presence of immature thrips indicates that at-planting insecticides are failing. The University of Tennessee threshold calls for treatment when one or more thrips are found per plant.

Photo: Courtesy of Jack Reed (Mississippi State University).

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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