

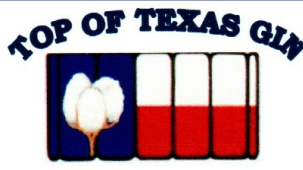


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Cotton Fleahoppers – Texas A&M AgriLife Extension Entomology Publication

Earlier planted fields are well into squaring but some late environmentally damaged fields are lagging behind. Cotton fleahoppers can build up in alternate hosts and move into cotton and feed on developing squares. Fields should be scouted and initial fruit should be protected from these insects.

There is an excellent comprehensive publication available entitled “Managing Cotton Insects in Texas” (ENTO-075, 4/19). This 38-page guide has photographs of nearly all of the insects found in Texas cotton throughout the growing season. It was generated by several Texas A&M AgriLife Extension entomologists including Dr. David Kerns (College Station), and Dr. Suhas Vyavhare (Lubbock). Thanks to all of the team members who assembled this outstanding publication.

It discusses IPM strategies, sampling techniques, labeled insecticides and rates, as well as other important information on numerous pest species. Many beneficial arthropods (good guys) are also included. If unknown insects are encountered in cotton fields, this is a great reference to aid in identification. Every Texas, Oklahoma, and Kansas cotton producer should have a color hard copy of this publication available as a handy reference.

To obtain a copy, click on the link below:

<https://lubbock.tamu.edu/files/2019/04/ENTO-075-2019.pdf>

Fleahopper photographs and discussion can be found beginning on page 10.

Extremely important comments from this great publication are reproduced below.

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- The cotton fleahopper adult is about 1/8 inch long, with piercing-sucking mouthparts and a flattened body. Adults are active flyers; they readily flit within the cotton canopy when disturbed, which makes insect sampling a challenge.
- Their eggs are not visible because the adult inserts them into the cotton plant stem. Adults are pale green to gray-green; nymphs are lighter-colored with reddish eyes.
- In both the adult and nymphal stages, cotton fleahoppers suck sap from the tender portions of the cotton plant, including small squares. Pinhead size and smaller squares are the most susceptible to cotton fleahopper damage.
- Fleahopper feeding causes squares to die and turn dark brown. These “blasted” squares dry up and fall from the plant, leaving a characteristic scar on the fruiting site.
- When fleahoppers are abundant, heavy square loss can cause poor boll set and reduce yield. The first 3 weeks of squaring are the most sensitive to cotton fleahopper feeding, particularly in dryland cotton production.
- The yield-cotton fleahopper relationship shifts with plant stage, water stress, weather, and cultivar sensitivity. Early squares are at high risk when large populations migrate into cotton from healthy stands of wild hosts that survived mild winter conditions.
- Yield reduction and development delays tend to be more pronounced in water-stressed cotton. Cotton fleahoppers can be more plentiful in vigorously growing cotton under good rainfall and irrigation, but their damage is less severe.
- **Scouting and Decision Making**
- The Table below provides action thresholds for terminal inspection.
- As the first squares appear (approximately four- to six-leaf stage), examine the main stem terminal (about 3 to 4 inches of the plant top) of 25 plants in at least four locations across the field. Sample more sites in fields larger than 80 acres.
- Scout fields for cotton fleahoppers weekly. Cotton fleahoppers move into cotton in early summer as non-crop host plants mature and become dry.
- Under wet spring conditions conducive to the rapid buildup of cotton fleahoppers in alternate hosts (such as cutleaf evening primrose, horsemint, silverleaf nightshade, and woolly croton), shorten the scouting intervals to every 3 to 4 days, especially as the alternate host plants begin maturing or undergo drought stress.
- When approaching a plant to sample, watch for adults that might fly from it. Cotton fleahoppers move quickly. Adults may fly away and immatures often hide within the plant canopy when disturbed.

Chemical Control and Action Thresholds

- For the Panhandle and South Plains, threshold ranges from 25 to 30 cotton fleahoppers per 100 plants (see Table below).
- Combine insect density with square-set during the first 3 weeks of squaring.
- After first bloom, fleahopper control is rarely justified. Insecticides applied during early bloom can result in outbreaks of aphids, bollworms, and tobacco budworms because of the destruction of predaceous insects and spiders. Avoid using broad-spectrum insecticides after the second week of squaring.

Fleahopper Action Threshold for Panhandle, South Plains, Permian Basin, Rolling Plains, and Trans Pecos:

Fleahoppers	Week of squaring	Square set
25-30 per 100 terminals (terminal inspection method)	1 st week	<90%
	2 nd week	<85%
	3 rd week	<75%
	After 1 st bloom, treatment is rarely justified	

For specific rate recommendations of various products that are labeled for thrips control refer to product labels or see page 33 of the publication.

Products labeled for foliar application include:

Product name/common name	Active ingredient
Vydate C-LV 3.77	oxamyl
Orthene 97	acephate
Acephate 90 Prill	acephate
Intruder Max 70WP/Strafer Max	acetamiprid
Carbine 50WG	flonicamid
Centric 40WG	thiamethoxam
Alias 4F	imidacloprid
Bidrin 8	dicrotophos