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# **Cotton Insights Newsletter**

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## Thrips Thoughts - Texas A&M AgriLife Extension Entomology Publication

Thrips are tiny insects that feed on cotton leaves and are problematic from emergence through about the 5<sup>th</sup> leaf stage. This damage can result in lost leaf area and possible stunting at a time when the plant needs to be growing quickly, particularly in short season environments. These insects will likely be plentiful in 2019, due to the abundant spring rainfall we have received. There are plenty of alternate hosts for the pest currently growing in ditches. Damage seems to be more pronounced under cool temperature conditions, which results in cotton having poor growth rate anyway. Stacking the thrips damage on top of that just compounds the problem.

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

Thrips photographs and discussion can be found beginning on page 7. Extremely important comments from this great publication are reproduced below.

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- Thrips are slender, straw-colored insects about 1/15 inch long. Adults are capable of drifting long distances in the wind.
- They attack leaves, leaf buds, and very small squares, causing a silvering of the lower leaf surface, deformed or blackened leaves, and loss of the plant terminal.
- Under some conditions, heavy infestations may reduce stands, stunt plants, and delay fruiting and maturity.
- Thrips damage is most evident during cool, wet periods when seedling cotton plants are growing slowly.
- Rain, blowing sand, wind, residual herbicide damage, and seedling diseases can worsen thrips damage.

#### **Management and Decision Making**

- Insecticide seed treatments have become an industry standard.
- Seed treatments usually provide thrips control until the two-to-three true-leaf stage.
- In areas with a history of frequent, heavy thrips infestations, consider using systemic insecticides in addition to treated seed.
- Foliar sprays are often applied too late to prevent damage, and research shows that applying foliar sprays after significant thrips damage occurs does not increase yields.

#### Growers who may need to use post-emergence sprays should:

- Scout fields twice a week as the cotton emerges.
- Begin inspections once the cotton reaches about 50 percent stand emergence.
- Randomly select 25 plants from four regions of the field and inspect them, looking for adult and immature thrips.
- Look carefully through the terminal growth, picking it apart with a pencil lead, toothpick, or another pointed object, uncurling all of the leaves. Thrips often hide in tight locations, especially during rainy, windy conditions.
- Look at the tops and undersides of each leaf, paying particular attention to the area where the leaf veins intersect the central leaf vein.
- Thrips can migrate in large numbers from adjacent weeds or crops, especially as small grains dry down, causing significant damage in just a few days.
- Pay attention to immature thrips, because their populations can increase rapidly through in-field reproduction as seed treatments become ineffective.
- Thrips development, from egg to adult, takes from 2 to 3 weeks.
- Infestations at the cotyledon and one-leaf stage often reduce yield more than later infestations.

#### **Chemical Control and Action Thresholds**

- Preventive in-furrow or seed treatments usually provide adequate thrips control until the second true-leaf stage. However, under adverse growing conditions, a foliar treatment may still be necessary.
- Base the decision to apply an insecticide on the number of thrips present and the stage of
  plant development. As plants add more leaves, the number of thrips per plant needed to
  justify an insecticide application increases.
- Treat fields from cotyledon to first true-leaf stage when one or more thrips per plant are present.
- Resistance to neonicotinoids has been confirmed in thrips species in other parts of the Cotton Belt, but, so far, not in Texas.

#### **Thrips Action Threshold:**

Cotton stage	Action threshold
Emergence to 1 true leaf	1 thrips per plant
2 true leaves	2 thrips per plant
3 true leaves	3 thrips per plant
4 true leaves	4 thrips per plant
5 -7 true leaves	Treatment rarely justified

For specific rate recommendations of various products that are labeled for thrips control refer to product labels or see page 31 of the publication.

### Products labeled for foliar application include:

Product name	Active ingredients
Bidrin 8EC	dicrotophos
Acephate 90 Prill	acephate
Orthene 97	acephate
Radiant SC	spinetoram
Dimethoate 4E	dimethoate