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# **Cotton Insights Newsletter**

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# **Crop Update**

As usual, the month of May has been quite a roller coaster. After a somewhat cool start, much of the month of May thus far has been hot and windy. Low temperatures have not generally been a concern for most growers until the past few days. Very difficult dry soil conditions, high relentless winds, and high temperatures have been supplanted by significant rainfall in many fields and a haymaker cold front plunging low temperatures into the upper 30s to low 40s. High temperatures have been way down too, with many locations in our region in the 50s and 60s. Forecasts indicate that temperatures should become more seasonal but on the slightly cooler side of that. The majority of irrigated cotton acres was planted in the past three weeks, and these were subjected to considerable cold temperatures and in some places wet conditions after the storms rolled through. These fields may have challenges with respect to seedling vigor and health. Growers should also be on point concerning thrips pressure. Hopefully we won't have a lot of issues with that pest, but any green vegetation, particularly wheat, may be a sink for population build up of thrips, and as this vegetation dries down, the thrips will be on the move.

## Thrips Control - Manage for Earliness

Some early planted cotton is emerging, but recent extremely cool temperatures have reduced growth rate. Warmer temperatures should help drive growth. Thrips damage is generally more pronounced under cool temperature conditions. Stacking the thrips damage on top of cool temperatures compounds the problem. These tiny insects 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.

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.

- 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

## 2019 Insect and Mite Pest Control Suggestions for Cotton

- Suhas Vyavhare and David Kerns with Texas A&M AgriLife Extension have posted an
  abbreviated version of the state-wide guide on the Lubbock Center website. This version
  gets "down to business" with respect to the various insect pests often encountered in
  Texas. For photographs of the various insects, see the "long version guide" discussed on
  the front page of this newsletter.
- This guide provides a quick reference table which includes several foliar insecticide options for various pests. Thrips information is found on page 3 of the guide. To download this guide, click on the link below:
   <a href="https://lubbock.tamu.edu/files/2019/08/2019-Cotton-Insect-Control-Suggestions">https://lubbock.tamu.edu/files/2019/08/2019-Cotton-Insect-Control-Suggestions</a> ENTO090.pdf

#### Herbicide-Insecticide Tank Mix Concerns

- If considering a tank mix of herbicides and thrips control products, make sure the products considered are approved for the specific herbicides you are using.
- For a complete list of record keeping requirements, tank-mix partners, additives, approved spray nozzles, etc. that are currently allowed for dicamba-based herbicides labeled for XtendFlex cotton, visit the respective websites below for the latest information.
- Note that as of February 22, 2021, FeXapan, was discontinued by Corteva, therefore it is no longer available. For more information on this click on the following link: <a href="https://www.corteva.us/products-and-solutions/crop-protection/fexapan.html">https://www.corteva.us/products-and-solutions/crop-protection/fexapan.html</a>

- XtendiMax Herbicide with VaporGrip Technology: http://www.xtendimaxapplicationrequirements.com/Pages/default.aspx
- Engenia Herbicide Tank Mix website: https://www.engeniaherbicide.com/tank-mix.html
- Tavium Plus VaporGrip Technology: <a href="http://www.syngenta-us.com/herbicides/tavium-tank-mixes">http://www.syngenta-us.com/herbicides/tavium-tank-mixes</a>
- For 2,4-D choline based herbicides labeled for use in Enlist cotton see the links below:
- Enlist One: <a href="https://www.enlist.com/en/approved-tank-mixes/enlist-one.html">https://www.enlist.com/en/approved-tank-mixes/enlist-one.html</a>
- Enlist Duo: https://www.enlist.com/en/approved-tank-mixes/enlist-duo.html

# Weed Control Programs for Texas High Plains Cotton Growers Publication Available

 A team of weed scientists at the Texas A&M AgriLife Research and Extension Center at Lubbock has generated a quick reference table for weed control options in cotton containing various technologies. Before committing to any herbicide application, refer to the actual product label. To access this publication, click on the following link: https://lubbock.tamu.edu/files/2020/02/Cotton-Circular.pdf