

The Integrated Pest Management (IPM) Newsletter for Row Crops in the Lower Rio Grande Valley

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**Reminder: Dryland Sorghum Field Day, June 5<sup>th</sup>.** Please see the flier that was attached to last weeks newsletter.

### General Situation

The **Memorial Weekend Showers** is just what we are needing to finish out the grain sorghum crop and hopefully prevent sorghum stalks from lodging. The cotton crop will benefit dramatically from these large rains.

### Fleahoppers and Spidermites

Fleahopper populations have decreased in a majority of the IPM Scouting Fields. Spidermites continue to persist in several fields. However, this weekends rains should help to reduce some of the spidermite populations.

### Cotton Bollworm/Tobacco Budworm

Scattered bollworm larvae continue to be found in the IPM Scouting Fields. Bollworm larvae populations range from 0 to 10 per 100 plants.

### Texas Boll Weevil Eradication Report

The previous "Year to Date Reports" that we have sent out, only reflected that particular week's boll weevil captures. This week's "Year to Date Report" reflects the totals from the start of the 2007 season to the current date. Thus far, the Boll Weevil Eradication Zone has trapped 45,736 boll weevils, which is an average of 0.29 weevils/trap inspected.

We have found 0 to 5% boll weevil punctured squares in the IPM Scouting Fields, with a majority of the fields having 0% punctured squares.

### Whitefly

We have added whiteflies to the IPM Scouting Report (please see attachment). The **% of leaves infested with whitefly adults** and **% of leaves infested with whitefly nymphs** is based on the inspected of 30 leaves. The leaf is scored as infested with adult whiteflies if 3 or more adults are present. The leaf is scored as infested with whitefly nymphs if 1 or more large nymphs are present. Treatments with insecticides should be applied when 40% or more of the leaves are infested with adults and 40% or more of the leaves are infested with nymphs. Looking at the IPM Scouting Report, you can see that infestation levels are way below threshold levels.

### Cotton Aphids

Aphid populations range from 1 to 128 aphids per leaf, with the average equaling about 21 aphids per leaf. Beneficial insect populations look similar to last week, with several ladybird beetle larvae, pupa and adults, along with syrphid fly larvae and pupa being found in the fields.

### Cotton Aphid Insecticide Trial

Dr. Boris Castro and I have applied an

insecticide trial at our Hiler Research Farm. The preliminary results are attached.

### Cotton Aphid Control

We have received several reports about concerns of reduced aphid control with labeled insecticides. Examine the following items when trying to determine if there has been a control failure:

1. **Pre-treatment population and post treatment populations** - Prior to insecticide applications mark infested plants. After an insecticide has been applied return to the same plants to determine the percentage of control. Depending on the re-entry interval, the percent control should be determined at 3 and 7 days after treatment.
2. **Timing of application and environmental conditions** - Did a rain occur less than two hours after the insecticide was applied?
3. **Insecticide rate** - Was the recommended amount of insecticide applied?
4. **Type of application** - Ground applications are recommended at a rate of 15 gallons per acre. Aphids do not move around that much, therefore coverage on the upper and lower leaf is important.
5. **Rotate Chemistries** - Use insecticides with different modes of action if you have to spray more than once for aphids.

### Cotton Aphid Fungus

Be on the look out for aphids affected by the fungus, *Neozygites fresenii*. The high humidity levels and warm nights may have been enough to get the fungus going in cotton fields infested with aphids. Aphids killed by the fungus remain attached to the leaf with their mouthparts and are standing on end. Fungi will begin to appear on the dead aphid, giving it a fuzzy olive-brown appearance.

Cotton aphids infected with *Neozygites fresenii* produce fungal spores which land on leaves. The sticky spores attached to the legs of aphids as they walk across leaves. Once the spores contact an aphid, they germinate and penetrate the aphid's body. The fungus grows internally and the aphid dies in 3-4 days. The fungus then grows outside the dead aphid and shoots tiny spores which are carried in the wind. A single aphid can release 3,000 spores. The fungus completes its life cycle in 3 days, allowing rapid increase in the number of infected aphids. Cotton aphid infestations often crash 7-10 days after fuzzy aphids killed by *Neozygites fresenii* are found in a field. Careful scouting to detect the fungus earlier can be used to predict widespread outbreaks of this fungus and possibly avoid the need for insecticides. Winged aphids, infected yet still alive, can also carry the fungus.

The information on *Neozygites fresenii* was taken from Texas Cooperative Extension "Field Guide to Predators, Parasites and Pathogens Attacking Insect and Mite Pests of Cotton."

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