

# UPPER COAST CROP IMPROVEMENT NEWSLETTER

Matagorda

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## TPMA Website

The Upper Coast Crop Improvement newsletter and other Extension IPM Program newsletters from across the state can be viewed at the Texas Pest Management Association website at [www.tpma.org](http://www.tpma.org).

## Upper Coast IPM Program Sponsors

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## Cotton Insect Situation

During the past week (5/22-5/26), growth stages of cotton in Jackson, Matagorda, and Wharton counties ranged from first square through the first week of bloom.

Aphid numbers ranged from being non-existent to low in fields that were monitored during the past week. In older cotton fields, numbers of aphids were increasing. However, beneficial insects and parasitism was increasing as well. Also, the cotton aphid fungus was observed in one field (see next section on aphid fungus).

Fleahopper numbers were lower in numbers compared to the previous week. Fleahopper numbers averaged 3.4% across all fields. Individual field numbers ranged from 0 to 17% per 100

plant terminals. Only eight percent of the fields monitored were at threshold levels justifying an insecticide application to be made.

Bollworm egg and larvae counts ranged from 0 to 1% and 0 to 4%, respectively.

Minute pirate bugs and lady beetles were the most prevalent beneficial insects found.

## Cotton Aphid Fungus

During the past week, the cotton aphid fungus (*N. fresenii*) was observed in a cotton field near Mackey in Wharton County. Careful scouting to detect the fungus can be used to predict epizootics and possibly avoid the need for aphicides.

*N. fresenii* is one of the most important natural enemies of the cotton aphid. Widespread outbreaks of this fungus, called epizootics, often occur when aphid numbers began to build and can eliminate aphid infestations in 7-10 days. Epizootics can occur during relatively dry weather. This fungus only attacks aphids.

Cotton aphids recently killed by this fungus are covered with a velvety white or light gray growth. Close examination will show the dead aphids are still attached to the leaf with their mouthparts. Soon, other fungi begin to appear on the dead aphid, giving it a fuzzy olive-brown appearance. Fungus-killed aphids should not be confused with aphid "skins" which are white and shriveled or with parasitized aphids. *N. fresenii* is found from Georgia to central Texas.

Cotton aphids infected with *N. fresenii* produce fungal spores which land on leaves. The sticky spores attach 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 on the wind. A single aphid can

release 3,000 spores and up to 60,000 spores per cubic meter of air have been reported at night in cotton fields during epizootics. Resting spores survive in the soil. Winged apids, infected yet still alive, can also carry the fungus.

### **Phoma Stem Blight on Cotton**

On May 11<sup>th</sup>, Phoma stem blight was found in a couple of cotton fields located in Matagorda County by Dr. Tom Isakeit, Extension Plant Pathologist. He considers this an unusual disease outbreak and it may never occur again. Since his initial findings, Phoma has been found in a few other fields located in Matagorda County.

Areas of the field that were affected displayed a circular pattern of post-emergence damping-off symptoms or in fields that were affected at a later stage of growth were showing a true stem blight (collapsed tissue with lighter coloration and wilting of leaves) and typically the presence of pycnidia in these lesions. When **older plants** are affected, only the upper portion of the plant is affected. Lesions and pycnidia can be found above the cotyledons with a good hand lens or microscope. There was no root rot or lesions on the lower stem or the below the cotyledons.

Phoma stem blight appears to have been found on **several different varieties** in Matagorda County.