

July 6, 2006

COTTON PEST MANAGEMENT NEWSLETTER #4

COTTON SITUATION: The Georgia Weekly Crop Progress and Condition Report for the week ending July 2nd listed the crop as 75 percent squaring and 23 percent setting bolls. The crop has declined during the past two weeks in many areas due to lack of moisture and excessive heat.

INSECT SITUATION: Aphids are beginning to crash in the southernmost counties due to the naturally occurring fungus. Spider mites are becoming more prevalent in some areas of south GA. Corn earworm and/or tobacco budworm eggs and small larvae are being reported at light to moderate levels. A few early-planted fields have reached the boll damage threshold for bugs, whereas others have not needed to be treated.

Aphids: Aphid populations are finally beginning to crash in southernmost Georgia. The fungal epizootic or crash is occurring 7-10 days later than during recent years. We have observed the aphid fungus as far north as Colquitt County. Scouts should be observant for gray fuzzy aphid cadavers when monitoring fields. Once the fungus is detected in a field, aphid populations will generally crash in about a week. In some areas, producers have treated aphids much more than normal. The neonicotinoid insecticides have generally performed well.

Grayish, fuzzy aphids are indicative of the naturally occurring fungus which causes aphid populations to crash.



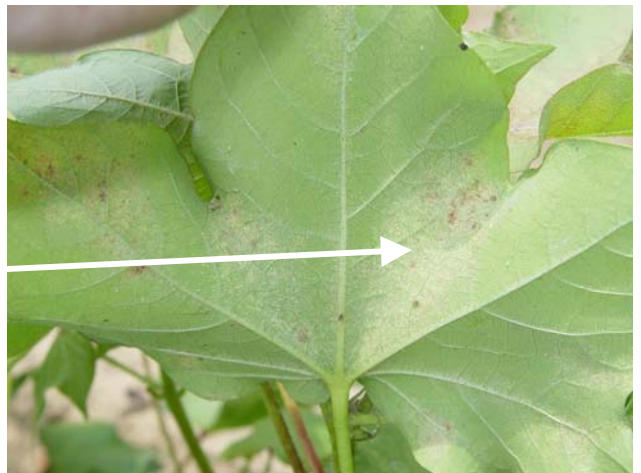
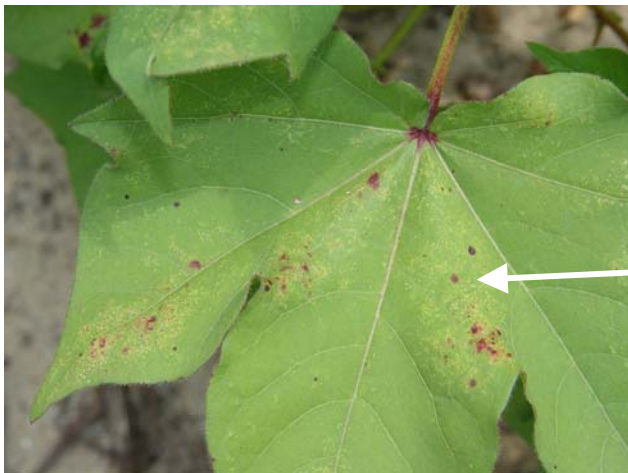
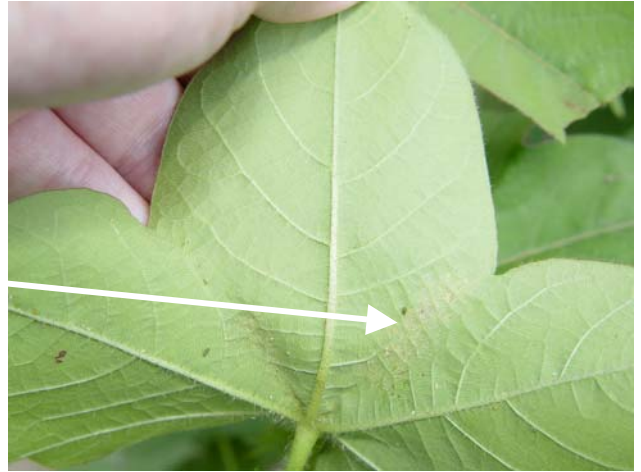
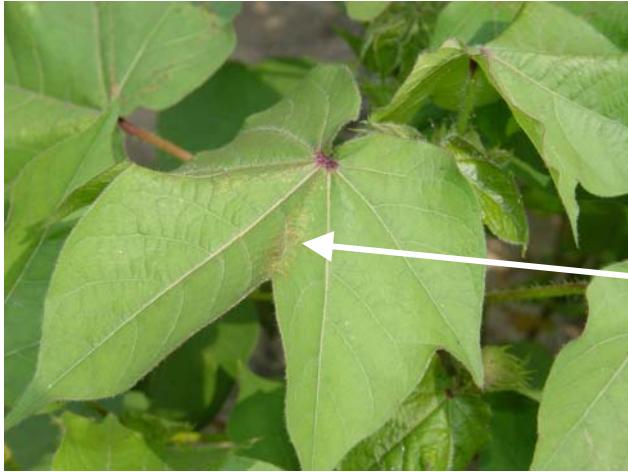
Spider Mites: Spider mite infestations are favored by hot, dry weather. These tiny arthropods (actually more closely related to spiders than insects), which feed on the underside of leaves, are barely visible to the naked eye and are best seen with the aid of a 10X hand lens. Spider mites will initially feed near the main leaf veins or on folds of leaves. Initial injury symptoms include localized tan or yellowish areas on the upper surface of the leaf. If mite damage is suspected, a hand lens should be used to confirm their presence by examining the area on the lower surface of the leaf beneath the symptomatic areas. As damage becomes more severe, these areas will turn reddish or necrotic. Severe infestations can cause immature leaf drop. Spider mites have a relatively short life cycle (less than 10 days) and populations can increase rapidly. Initial mite infestations are often localized near field margins or other source areas within a field such as a light pole or pivot point. Treatment of spider mite “hot spots” will likely slow their spread. Scouts should avoid small areas of fields that are infested with spider mites so as not to spread the problem throughout the field.

The decision of when to treat spider mites is difficult. Our threshold states, “treat when mites are spreading.” If mite injury is detectable in most areas of a field, treatment should be considered. It is also important to know if fields are infested with low levels of mites. There may be opportunity to utilize an insecticide such as bifenthrin to control mites when also targeting other pests such as corn earworm. Unneeded sprays in mite-infested fields could potentially flare mites. In fields heavily infested with mites, true miticides should be used.



Two spotted spider mites and eggs, ipmimages.org. A hand lens should be used to confirm the presence of spider mites feeding on the underside of leaves showing damage symptoms.

The following images illustrate the corresponding upper (left) and lower (right) leaf surfaces of leaves infested with varying levels of spider mites.



Cotton heavily infested with spider mites.



Corn Earworm and Tobacco Budworm: Mixed populations of corn earworm (CEW) and tobacco budworm (TBW) have been reported in several areas of the state. Scouts should be observant for moth activity to aid in determining which is the primary species. Pyrethroid insecticides will not provide consistent control of TBW due to pyrethroid resistance.

Corn Earworms and Pyrethroids: Late in the 2005 season, we observed CEW populations which were difficult to control with pyrethroids. Larval collections from fields following 2-3 pyrethroid sprays suggested an increase in tolerance to the pyrethroid insecticides. Adult vial tests conducted during September (survival of moths in pyrethroid treated vials) also suggested an increase in tolerance to the pyrethroids. Survival of CEW in pyrethroid treated vials during May and June of 2006 in Tift and Mitchell Counties has been less than observed during September of 2005. This was expected due to less exposure of CEW to pyrethroids during those months. As exposure of CEW to pyrethroids increases, we may observe an increase in survival due to selection. Dr. Stormy Sparks, in cooperation with several county agents, has also conducted several larval bioassays evaluating susceptibility of CEW to pyrethroids. Results to date suggest that susceptibility of CEW to pyrethroids varies by location.

Medium to high rates of pyrethroids are recommended for control of CEW. However, it will be important to stay informed of how pyrethroids are performing in your area. Remember that many other factors may influence insecticide performance. However, if pyrethroid resistance does become an issue we need to recognize it.

Boll Feeding Bugs: We have received a few reports of some early-planted fields (3rd to 4th week of bloom) exceeding the 20% boll damage threshold. We have also received reports of fields of similar planting dates with little boll damage from bugs. Scout and treat on an “as needed” basis. Pyrethroids will provide good control of southern green stink bug but only fair control of brown stink bug. In situations where a pyrethroid needs to be used for CEW, and brown stink bugs are present in high numbers, a tank mix of a pyrethroid and a low rate of another stink bug insecticide would be a good option.

INSECT UPDATES: Check the **Cotton Insect Hotline (1-800-851-2847)** for updates on current insect conditions. The Cotton Pest Management Newsletter is also posted on the UGA Cotton Homepage at: <http://www.ugacotton.com>

Sincerely,

Phillip Roberts
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