The University of Georgia
Cooperative Extension
College of Agricultural and Environmental Sciences

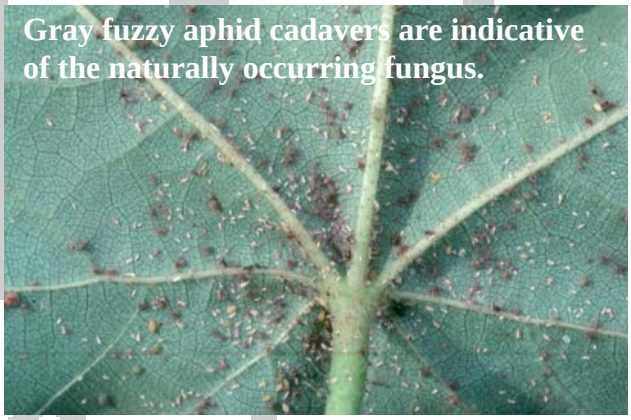
July 10, 2008

COTTON PEST MANAGEMENT NEWSLETTER #6

COTTON SITUATION: The Georgia Weekly Crop Progress and Condition Report for the week ending July 6th listed the crop as 66 percent squaring and 15 percent setting bolls which are slightly behind the 5 year averages of 74 and 25 percent respectively. Crop conditions continue to vary depending on available moisture. Where adequate moisture is available, crop growth and fruit retention appears good.

INSECT SITUATION: Aphid populations have significantly increased in many areas of the state; a few early reports of the aphid fungus have been received. Corn earworm and tobacco budworm pheromone trap captures in Tifton significantly increased during the past seven days. A few reports of spider mites have been received. Treatments for stink bugs were made on some early planted fields this week.

Aphids: Aphid populations were slow to build compared with previous years, however they appear to be making up for lost time as numbers have significantly increased in many areas. Although not widespread, we have received a few early reports of the naturally occurring fungus infecting aphids and causing populations to crash in parts of southwest Georgia (Scott Brown in Colquitt County and Edd Harrison in Mitchell County). Aphids typically build to moderate to high numbers before we see populations crash due to the fungal epizootic. In addition to high aphid numbers, high humidity is also conducive for sporulation and spread of the fungus.


Gray fuzzy aphid cadavers are indicative of the naturally occurring fungus.

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.

Research conducted in Georgia during the past 10 years does not show a consistent yield response when aphids are controlled. However, each year there are a limited number of fields which would probably benefit from an aphid insecticide application. Aphids are a stress inducing pest, feeding on and removing plant sap. Very high aphid infestations can slow plant growth, especially when plants are under other stresses (i.e. moisture stress). Removal of the stress associated with a heavy aphid infestation may help plants endure other plant stresses. Late emerging cotton should be monitored closely, especially if no at-plant systemic thrips insecticide

was used at planting. In addition to thrips control, Temik, Cruiser, and Gaucho Grande also provide some level of aphid control during early season. Heavy aphid populations on late emerging cotton may delay maturity which could be a concern this fall. Before treating a field with insecticide for aphids, be sure there is no indication of the aphid fungus in the field.

Yellowing terminal due to heavy aphid feeding.

Leaves heavily infested with aphids often cup downward.

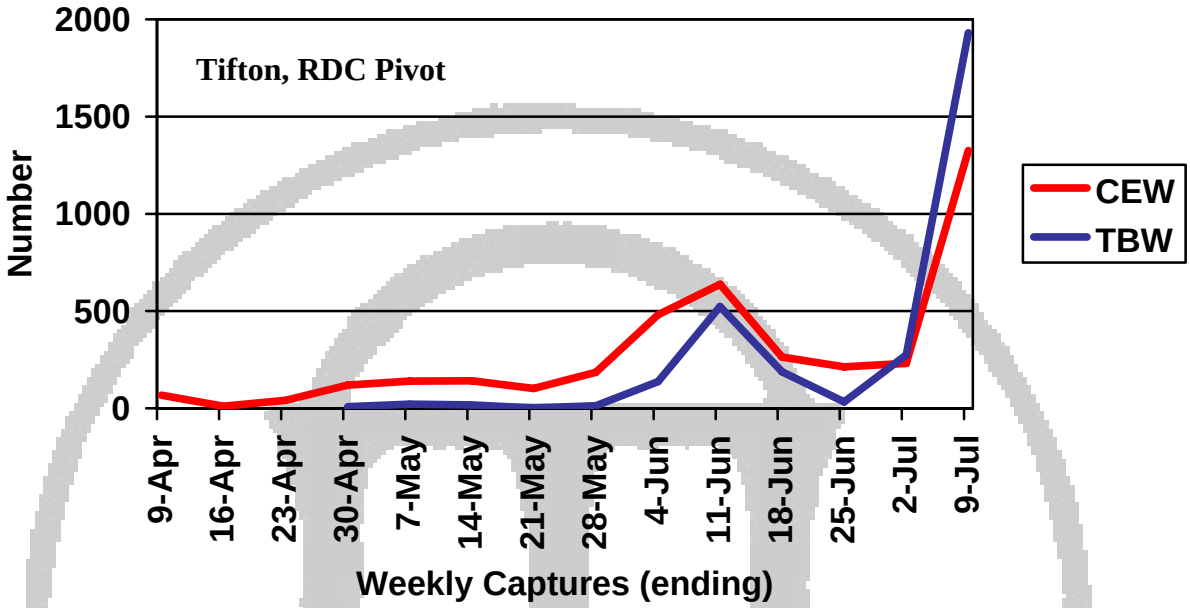
Honeydew (a sugary aphid excretion) accumulates on leaves of heavily infested plants (left). A fungus or "sooty mold" will often grow on the honeydew if heavy accumulations remain on leaves for several days (right). Rainfall and/or irrigation will wash the honeydew from leaves.

Tobacco Budworm and Corn Earworm (non-Bt Cotton): The majority of non-Bt cotton planted in Georgia is planted in 5% unsprayed or embedded refuges. However, there are some acres which are planted in the 20% sprayed refuge and are being managed for tobacco budworm (TBW) and corn earworm (CEW). Pyrethroids will not provide acceptable control of TBW due to resistance issues; non-pyrethroids should be used for control of TBW. It is important for scouts to monitor moth activity when walking non-Bt fields. Although moths are most active at night, some moths will be flushed during the day when walking

TBW moth
J. Michael Moore

CEW moth
Steve L. Brown

fields. These moth flushes give us some idea of the species makeup of eggs recently laid. Non-pyrethroid insecticides which control TBW will also control CEW. Due to the high populations of TBW observed to date, we would expect TBW to comprise a significant portion of small larvae observed in non-Bt cotton at this time me.



TBW and CEW complete a generation in about 4 weeks. The chart above illustrates pheromone trap captures of TBW and CEW per week on the UGA Tifton Campus. Moth activity will vary by location; often we observe TBW and CEW activity peak in southernmost counties first.

Corn Earworm (Bt Cotton): Bt cotton provides excellent control of TBW and good control of CEW. However, insecticides are sometimes needed for control of CEW in Bt cotton. CEW moths are or will be emerging from corn fields soon (other host plants). Scouts should be monitoring all cotton closely for CEW eggs and larvae. CEW are often initially observed in Bt cotton in blooms or under bloom tags. Small CEW larvae are more likely to survive in a Bt cotton bloom compared with a Bt cotton terminal. CEW larvae which reach 1/4 inch in length (about three days of age) on Bt cotton are likely to continue developing and cause boll damage. Bt cotton should be treated when 8 CEW larvae 1/4 inch in length or greater are found per 100 plants. In addition to searching the terminal for larvae and eggs, scouts should also monitor at least one bloom, a bloom tagged boll, and a small boll. Be sure to look underneath bloom tags for larvae and/or damage. Pyrethroids at medium to high rates should be used for control of CEW. Low rates should be avoided.

Stink Bugs: Stink bug treatments were applied to some early planted fields this week. Numbers continue to be higher than the last two seasons and stink bug scouting should be a priority as cotton begins to bloom. To date brown stink bug has been the most common stink bug observed in cotton. However, the percentage of southern green stink bugs is increasing. OP insecticides such as Bidrin and methyl parathion provide good control of both southern green and brown stink bugs. Pyrethroids will provide good control of southern green stink bugs but only fair control of brown stink bugs. During the coming weeks, producers may encounter situations where brown stink bugs and CEW are at threshold levels. In these situations, a tank-mix of an OP and a pyrethroid 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 and additional cotton production information is also posted on the UGA Cotton Homepage at:
http://www.ugacotton.com

Sincerely,

Phillip Roberts
Extension Entomologist