



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

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COTTON PEST MANAGEMENT NEWSLETTER #4

COTTON SITUATION: The Georgia Weekly Crop Progress and Condition Report for the week ending July 1st listed the crop as 39 percent squaring and 4 percent setting bolls which are significantly below the five year averages of 71 percent squaring and 22 percent setting bolls. There is a tremendous range of cotton development across the state, and even in the same field in some dryland instances. As a whole this is going to be a late maturing crop and we will likely be managing insect pests into late September.

INSECT SITUATION: Insects continue to be light in most cotton. Aphids are the most common pest present but are still localized and sporadic in many counties. Pheromone trap captures of corn earworm and tobacco budworm have been low and little activity has been observed or reported in cotton (this could change in a matter of days). Plant bug numbers have also been low and fruit retention looks good in most fields. Spider mites are present in some fields and should be monitored closely.

Aphids: Aphids have been slow to develop this season. In many areas aphid infestations remain isolated. However, populations appear to be spreading; small areas within many fields have detectable aphids and these will eventually spread across the entire field. To date few fields have been treated for aphids. In recent years we have observed the fungus which causes aphid populations crash first appear in late June or early July. When will we see the fungus in 2007? Time will tell, but we expect that aphid populations will be much higher than current levels before we see populations crash. This fungus only reproduces on aphids and to generate high numbers of fungal spores to cause populations to crash we first need aphids. Monitor fields with high populations for gray fuzzy aphid cadavers which are indicative of the fungus. Once the fungus is observed in the field we would expect aphid populations to crash in about a week.



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

Several insecticides are available which will provide good control of aphids. However, research conducted in Georgia cannot consistently demonstrate a yield response to treating aphids.

Decision to treat aphids with insecticide must be made on a field by field basis. Consider aphid numbers and the general condition of the plant. If aphid numbers are high and plant growth is slowed due to aphid damage, treatment should be considered.

Plant Bugs: We have received few reports of poor square retention and plant bug populations as a whole appear to be low. States in the Mid-South are reporting high plant bug numbers and multiple sprays have already been made for plant bugs. We are fortunate in Georgia that plant bugs are not a common pest; however we should monitor square retention in all fields and be observant for plant bugs. There are individual fields or farms which will experience economic populations and require treatment. That is why we scout and treat on an as needed basis.

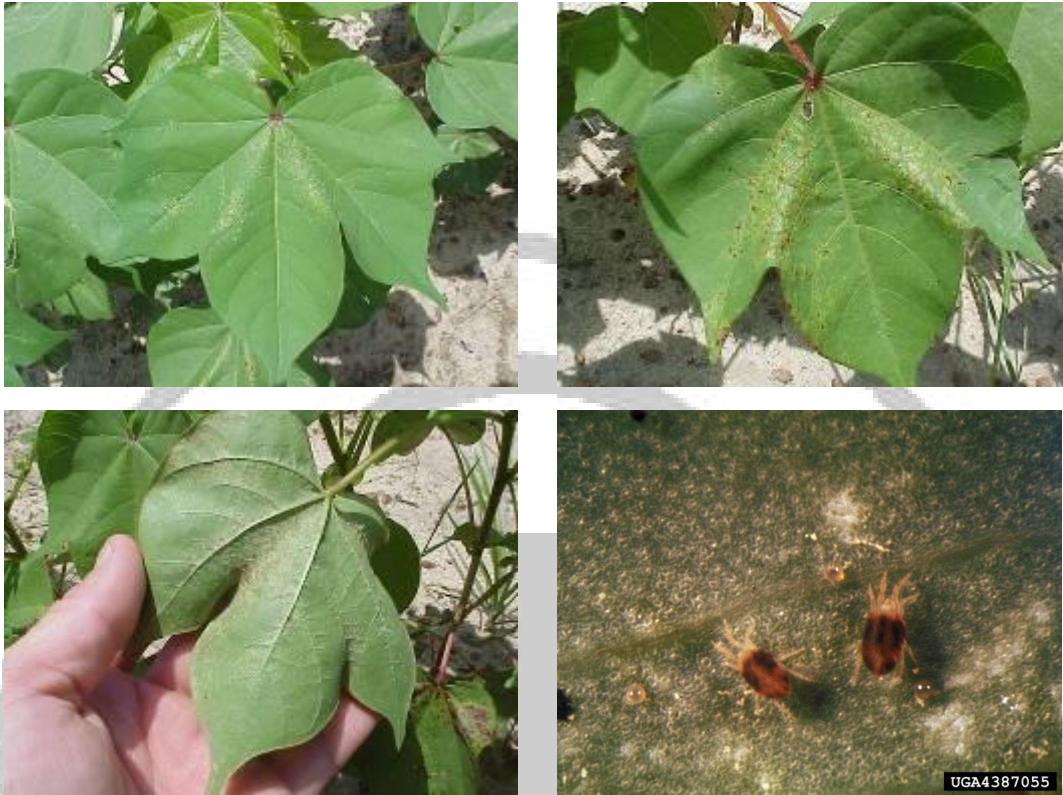
Tobacco Budworm: July 4th is normally the week we expect to see tobacco budworm in cotton. Due to the high percentage of Bt cotton planted (Bt cotton provides excellent control of tobacco budworm), tobacco budworm is only a pest on a limited number of acres (non-Bt). On non-Bt cotton tobacco budworm is our primary pests. Tobacco budworm is resistant to pyrethroid insecticides and alternative insecticides such as Tracer, Steward, or Denim should be used. To date trap captures of tobacco budworm have been low.

Corn Earworm: Corn earworm pheromone trap captures have also been low. Populations appear to be varied across the state based on observation of infested corn ears. Bt cotton provides good control of corn earworm, but supplemental treatment with insecticide is needed in some situations. In recent years we have measured changes in the susceptibility of corn earworm to pyrethroids; corn earworm is becoming more difficult to control with pyrethroids. During 2005 and 2006 we observed reduced field efficacy in some areas when pyrethroids were used for control of corn earworm. In most situations, acceptable but not excellent control of corn earworm in Bt cotton was observed with multiple applications of pyrethroids. We cannot predict if this problem will develop further or if, when, or where it may occur.

Recommendations for control of corn earworm in 2007 include the use of medium to high rates of pyrethroids for low to moderate infestations (avoid low rates). Under heavy pressure, consider adding an ovicide or another larvicide with the pyrethroid. Efficacy of pyrethroid sprays should be evaluated three days after application. If poor control of corn earworm is observed and other factors of poor control (coverage, rate, timing of application) can be ruled out, a non-pyrethroid insecticide should be used.

Spider Mites: Spider mites are present in some fields. Avoid unneeded insecticide applications to conserve natural controls. Monitor these populations closely. Spider mites infest the undersides of leaves and are very small. A hand lens will be needed to see the mites. Early damage symptoms include discoloration, bronzing, or reddening along the main leaf veins or folds of leaves.

Spider Mite Images



Top left: early damage symptoms (bronzing discoloration on leaf folds) from spider mites.
Top right: older and more severe spider mite damage (reddening).
Bottom left: underside of leaf in top right photo, note damage in folds of leaf and near leaf veins.
Bottom right: magnified view of spider mites and eggs (photo by Mississippi State University Archives, ipmimages.org)

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

Putting knowledge to work

COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES, COLLEGE OF FAMILY AND CONSUMER SCIENCES, WARNELL SCHOOL OF FOREST RESOURCES, COLLEGE OF VETERINARY SCIENCES

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