June 17, 2004

COTTON PEST MANAGEMENT NEWSLETTER #3

COTTON SITUATION: The Georgia Weekly Weather and Crops Report for the week ending June 13th listed the crop as 98 percent planted and 31 percent squaring. Scattered showers and thunderstorms have been more common during the past week. Cotton is developing rapidly in most areas in response to heat and moisture.

INSECT SITUATION: Plant bug numbers are sporadic and low in most areas, however a few fields have been treated. Scouts should be observant for plant bugs and monitoring square retention in squaring fields. False chinch bugs have been observed in high numbers in some fields. Aphids can be observed in most fields and we expect numbers to build in the coming weeks.

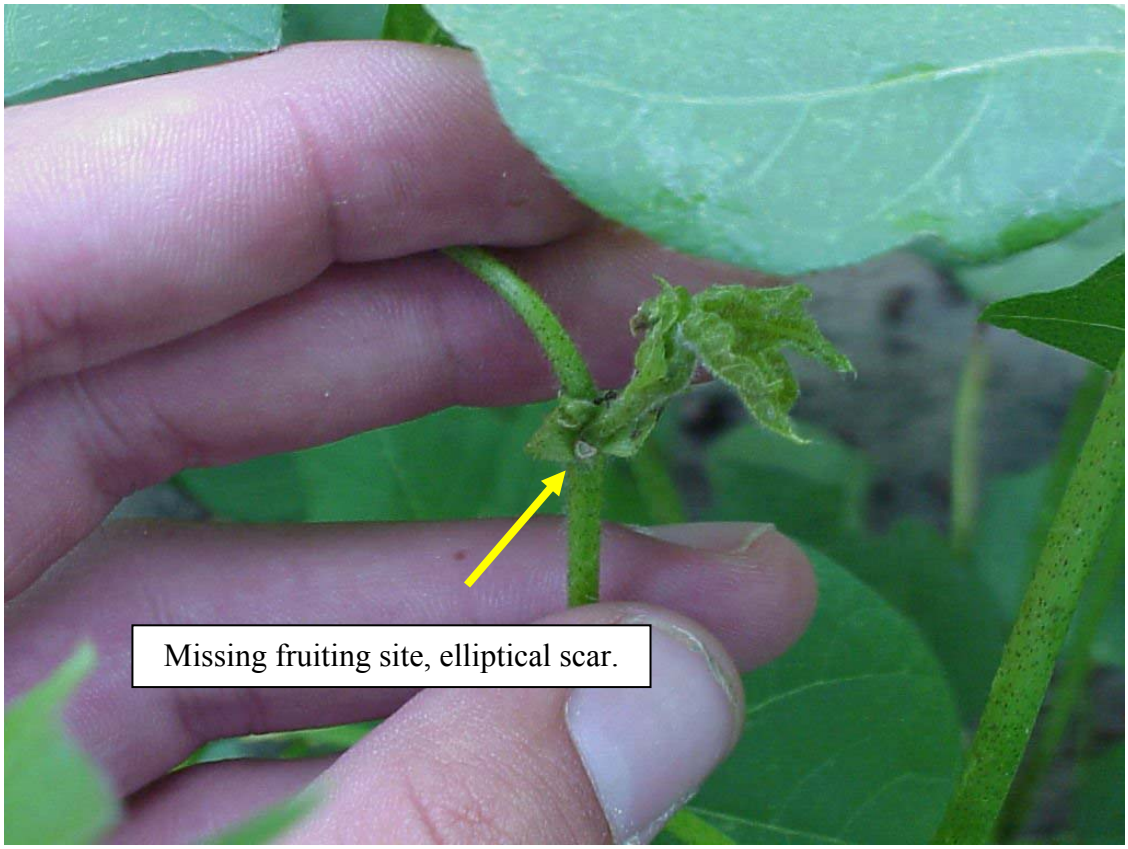
Plant Bugs: Tarnished plant bug is a potential pest of squaring cotton. Historically, plant bugs have not been a widespread pest in Georgia. However, some fields require treatment each year and all fields should be monitored for this pest. We recommend square retention counts and observation of adults and nymphs to detect problems with early fruit set and plant bugs. Treatment is recommended when plants are retaining less than 75 percent of pinhead squares and numerous plant bugs are observed. Insecticides used to control plant bugs will reduce beneficial insects and therefore caution should be used treating plant bugs in non-Bt cotton. To measure square retention, examine one fruiting position per plant (ie where a pinhead or small square should be). Observe whether the square is green, healthy and firmly attached to the plant or is abnormal or missing. Percent square retention is reported as the percent of healthy, green squares which are firmly attached to the plant. It is a good habit to periodically observe overall square retention on plants. Our objective is to retain greater than 75 percent of first position squares at first bloom.

Pinhead squares should be present when cotton has 6 to 8 true leaves. They will be found at the base of the leaf petioles where they are attached to the mainstem in the top of the plant. The small square sits atop a short stem which will ultimately elongate into a fruiting branch. However when squares are small, the square will be located among other developing structures within the terminal bud.

To locate a fruiting site to measure square retention, grasp the two smallest leaves in the plant terminal and gently pull them away from each other. Follow the petiole of either leaf to the point where it joins the mainstem. There should be a small square on a short stem attached at this point. The small square may be anywhere from an eigth to a quarter inch wide. The square should be green, the same color as the rest of the terminal growth. Healthy, undamaged squares will be green and firmly attached to the plant.

However if the square has been damaged, the plant will abort or shed it. The plant sheds a damaged square by forming an abscission layer. As the abscission layer forms, the square will become yellow, then brown or black, and finally fall from the plant. Where the square has been shed, an elliptical scar

will be seen where the square had been attached. Prior to falling from the plant, a damaged square is loosely attached to the plant and may fall from the plant when gently touched.



When a damaged pinhead square is found, it should be examined to determine the cause of the damage. In non-Bt cotton, small tobacco budworm may feed on small squares and can be recognized by a small hole chewed in the square. No external damage will be seen when plant bugs or physiological stress caused the loss.

False Chinch Bugs: False chinch bugs are "dry weather" pests and have been reported from a few areas. False chinch bugs are potential pests on small cotton (up to the fourth true leaf), however economic damage has not been observed on squaring cotton. This week in Jeff Davis County, we observed numerous (5-10) false chinch bugs per plant on squaring cotton and no apparent damage was observed. If false chinch bugs are observed at high numbers, be sure to monitor retention closely, although we do not anticipate any problems.

False chinch bugs have been reported at high numbers in some fields. Do not confuse false chinch bugs with the more damaging tarnished plant bug.

Aphids: Cotton aphids can be observed in most fields at low levels. Hot spots or small areas in fields are usually infested first. These spots will spread in the coming weeks.

Scout Schools: The final cotton scouting school will be held in Midville next week. The date, location, and contact for the training is listed below.

June **22**, 2004 SE GA Res.& Ed. Center, Midville-*Richard McDaniel* (706/554-2119)

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.griffin.peachnet.edu/caes/cotton/**

Sincerely,

Phillip Roberts
Extension Entomologist