

August 3, 2006

COTTON PEST MANAGEMENT NEWSLETTER #8

COTTON SITUATION: The Georgia Weekly Crop Progress and Condition Report for the week ending July 30th listed the crop as 90 percent setting bolls. This is slightly ahead of the 5 year average of 82 percent. Thirty-seven percent of the crop is rated poor or very poor, 37 percent fair, and 24 percent good. Crop maturity is accelerated in many areas.

INSECT SITUATION: Depending on location, pests and infestation levels vary significantly. Corn earworm, tobacco budworm, and fall armyworms continue to be reported. Boll damage from bugs is erratic. Some fields have not required treatment whereas others have been treated one or two times. Spider mites continue to be reported at low to moderate levels. Watch this pest closely as populations of spider mites can increase rapidly. Silverleaf whiteflies have been reported in a few fields in Tift and Colquitt counties.

Corn Earworm: During the last two weeks corn earworm infestations have been high in some areas. Supplemental insecticide treatments have been needed in some Bollgard fields. We would anticipate CEW numbers to increase again soon since a generation is completed in about 4 weeks. Pyrethroids at medium to high rates continue to be the preferred treatment for CEW escapes in Bollgard cotton. In some areas a single application failed to provide adequate control. There may be several reasons for this. First, temperatures have been high and can potentially affect applications. Every effort should be made to avoid making sprays during the hottest part of the day. Second, most of these CEW infestations have occurred in the middle canopy of the plant. Often CEWs are observed feeding under bloom tags and may not initially be exposed to the insecticide. In time, these larvae will move to other plant parts and may then be exposed to the insecticide. Appropriate spray volumes should be used to allow good coverage and penetration of the canopy. Finally, we observed some difficulty controlling CEW late during the 2005 season and documented a change in susceptibility of CEW to pyrethroids. If CEWs are less susceptible to pyrethroids than during recent years, timing of sprays, rates, coverage, etc. become more critical for a successful treatment.

Fall Armyworm: Fall armyworm infestations have been sporadic but have mostly been reported west of interstate 75. Fall armyworms can be difficult to control, especially if infestations are not detected early. Pyrethroids at high rates provide fair to good control of small larvae (1/8 inch in length). As FAW larvae size they become much more difficult to control. FAW will initially infest blooms and/or bolls. One to two-day old larvae observed in pink blooms are indistinguishable from CEW. However, FAW larvae of this size are more susceptible to pyrethroids compared with larger larvae. It is possible some of these small larvae infesting blooms are CEW. When small larvae infest bolls in the lower to mid canopy, they will often feed on the inner surface of boll bracts for several days. This type feeding creates a window pane effect on the bract. As the larvae develop they will eventually penetrate the

base of the boll. If FAW are suspected, treatment should be considered if 20 percent of the blooms are infested.

Silverleaf Whiteflies: Low populations of silverleaf whitefly (SLWF) have been observed on cotton in Colquitt and Tift Counties. Historically, SLWF has been a localized pest in these two counties. Infested fields should be monitored closely. Rainfall events will generally suppress populations, but if we continue to experience dry conditions in the coming weeks, the risk of whitefly buildup will increase.

Adult SLWF is a small (about 1/20 inch in length) moth-like insect with solid white wings. Eggs are oblong, pointed, and yellowish brown. Newly hatched SLWF or “crawlers” move about the undersides of leaves searching for a suitable site to attach. Once attached, SLWF will complete its life cycle feeding on plant sap as a flattened oval nymph. The pupal stage has prominent red eye spots. As little as 18 days is required to complete a generation. Both adult and immature SLWF feed on the lower leaf surface by sucking plant sap. Whiteflies produce honeydew similar to aphids. In addition to problems associated with honeydew and sooty mold on foliage and open bolls, premature defoliation may occur when high populations are present.

Cultural practices such as destroying crop residues that harbor SLWF will help reduce overall population buildup. Conserving natural enemies (predators and parasites), planting smooth leaf varieties, and avoiding late planting are ways to reduce the risk of whitefly problems. However, when and if the problem develops, insecticides will be needed to reduce yield loss.

Knack insect growth regulator has been a consistent treatment for management of SLWF. Knack has a long residual and is slow acting (i.e. it must be put out early for optimal performance). Female SLWF treated with Knack will lay sterile eggs. Knack will control immature SLWF when they pupate (red-eye stage), however established nymphs will continue to feed until pupation. Knack will not provide good control when applied as a rescue treatment on an out of control population.

Additional options for SLWF control include contact insecticides. Assail at 1.7-2.3 ozs/acre has provided good control during recent years but will not provide as much residual control as Knack. Tank mixes of Danitol or Capture plus Orthene can provide temporary relief. Thiodan will also provide temporary knock down of adults. Multiple applications of contact insecticides will be needed if and when reinfestation of fields occurs.

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
Extension Entomologist