



The University of Georgia  
**Cooperative Extension**  
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 June 22<sup>nd</sup> listed the crop as 32 percent squaring and 1 percent setting bolls which is slightly behind the 5 year averages of 45 percent and 5 percent respectively. Soil moisture conditions were rated at 30% very short, 45% short, 24% adequate, and 1% surplus. The vast majority of cotton has been planted, some of which is yet to emerge due to dry soil conditions. In areas where adequate moisture has been received or applied through irrigation, cotton growth and fruit retention looks good.

**INSECT SITUATION:** Aphid populations have been slow to build to date, however several people have reported low numbers infesting fields. We should anticipate aphid populations to increase in the coming days/weeks. Egg counts of 50+ were reported in southwest Georgia, we believe the majority of these eggs to be tobacco budworm based on moth flushes. Tobacco budworm has been present at higher than normal populations in young peanuts. A few observations of spider mites have been reported. Stink bugs are numerous in many areas and have been present at higher than normal populations in field corn. As cotton begins to bloom, stink bug management (scouting and treating on an as needed basis) should be a priority.

**Stink Bugs:** Stink bugs are numerous across the farmscape. We have observed stink bugs in field corn, squaring cotton, prebloom and blooming soybeans, and peanuts. The majority of stink bugs observed have been brown stink bugs. However during the last week or so we have also observed an increasing number of southern green stink bugs. To date, only a small percentage of cotton is blooming. As cotton begins blooming and setting bolls scouts and growers should be monitoring fields closely for stink bugs and damage.

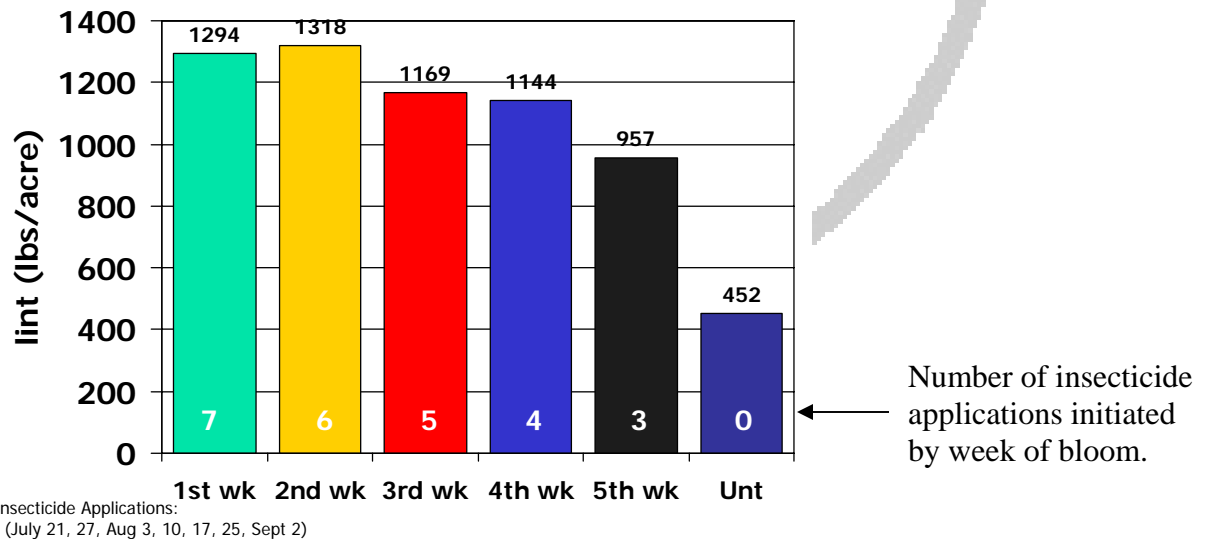
We have received several questions relative to stink bugs infesting pre-bloom cotton. Prior to bloom, stink bugs do not appear to be an economic pest of cotton. Research conducted at LSU evaluated the impact of stink bugs on preflowering cotton (Willrich et.al. 2004, J. Econ. Entomol. 97:924-933). There were no significant differences in height, height to node ratio, square retention, and flower initiation for cotton seedlings or plants with a match-head square between treatments infested with a brown stink bug adult or southern green stink bug adult and non-infested treatments. Abscission for individual large squares (pre-candle) and multiple squares (medium and small squares on the same fruiting branch) was not significantly different among treatments infested with southern green and brown stink bug adults and non-infested treatments.

In pre-bloom fields infested with stink bugs, scouts should monitor square retention closely to determine if control is needed. Our goal is to retain 80 percent of all first position squares at first

bloom. As cotton begins to bloom, stink bugs are an economic pest.

Our recommended threshold for stink bugs is when 20% of medium sized bolls (the diameter of a quarter) display internal signs of feeding and stink bugs are observed or when stink bugs exceed 1 per 6 row feet. The 20% boll injury threshold appears to be a preferred method of sampling compared with a drop cloth. However, during the first week of bloom, bolls are too small to sample for internal injury (presence of warts or callous growths on the inner surface of the boll wall and/or stained lint); bolls which are the diameter of a quarter are about 10-12 days of age. Stink bugs will feed on small bolls in the absence of medium sized bolls. Small bolls damaged by stink bugs may shed. Boll abscission typically does not occur when stink bugs damage bolls greater than 10 days of age. In fields which do not have bolls present which are the diameters of a quarter, scouts should use a drop cloth (1 bug per 6 row feet) and monitor small boll retention. If small bolls are shedding, examine the inner contents of shed bolls. Small bolls damaged by stink bugs will often have a locule(s) or portion of a locule(s) that is jelly-like. If small bolls are shedding and stink bug damage is suspected, treatment should be considered.

Growers should also consider the number of bolls present on a plant when making a treatment decision. During the first week of bloom, few bolls are present. As bloom progresses, the number of bolls per plant susceptible to stink bugs increases (i.e. potential losses to stink bugs increases). As part of a regional project funded by the Georgia Cotton Commission and Cotton Incorporated (entomologists from GA, NC, SC, AL, and VA cooperating), we had an objective of defining the susceptibility of cotton to stink bugs by week of bloom. To accomplish this objective, we initiated season long stink bug controls by week of bloom (plots treated weekly after initial application). A total of 16 trials were conducted from 2004-2007 in GA, NC, and SC. On average, there was not a yield penalty for delaying the initial spray until the third week of bloom (stink bug infestations ranged from very low to high – stink bug numbers were low in 2006 and 2007). In 2005, we conducted a trial in Tifton which had a high stink bug infestation.

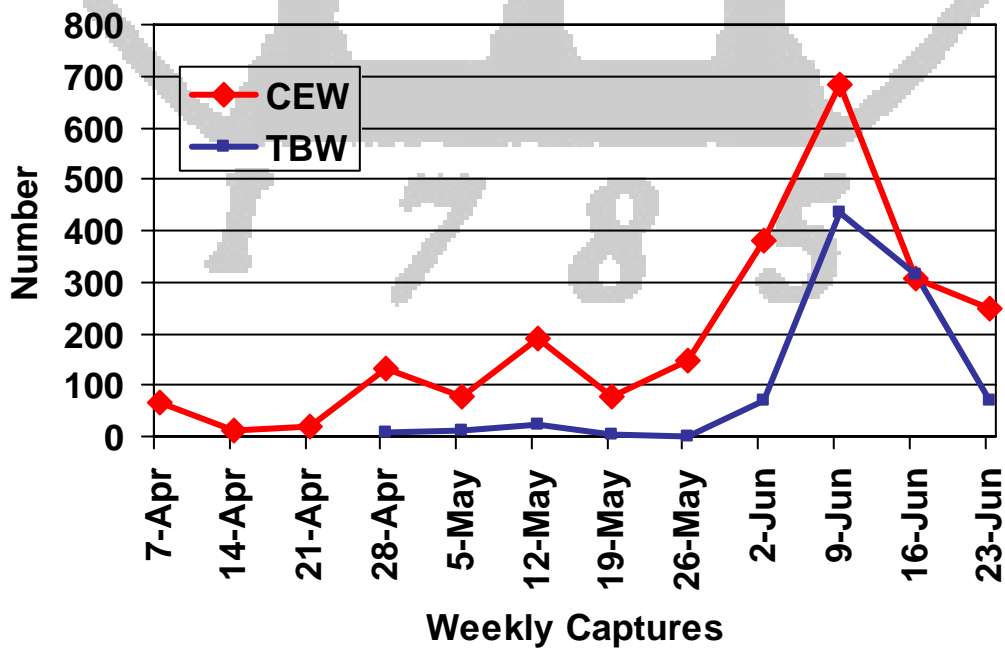


Yields were similar in treatments where stink bug controls were initiated the first week of bloom compared with initiating controls the second week of bloom (1294 vs. 1318 lbs. lint/acre). However, delaying the initial stink bug spray until the third week of bloom when high numbers of stink bugs were present resulted in a significant yield loss (1318-1169=149 lbs. lint/acre).



At some point, stink bugs will begin to migrate out of corn fields in search of more suitable plant hosts. Scouts and growers will need to monitor cotton closely.

**Tobacco Budworm and Corn Earworm:** Tobacco budworm populations have been relatively high to date. Bt cotton should provide excellent control of tobacco budworm. The figure below illustrates pheromone trap captures by week for tobacco budworm and corn earworm in Tift County. Both tobacco budworm and corn earworm complete a generation in about 4 weeks.



**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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