



The University of Georgia

Cooperative Extension

College of Agricultural and Environmental Sciences

July 15, 2010

COTTON PEST MANAGEMENT NEWSLETTER #4

COTTON SITUATION: The Georgia Weekly Crop Progress and Condition Report for the week ending July 11th listed the crop as 84 percent squaring and 40 percent setting bolls which are ahead of the 5-year averages of 75 and 29 percent. The crop is rated 34% fair, 46% good, and 11% excellent.

INSECT SITUATION: Aphid populations continue to increase in many areas, fortunately we are seeing aphids crash due to the naturally occurring fungus in some locations (the fungal epizootic is not widespread yet). Corn earworm and tobacco budworm activity is moderate to high depending on location. We have received some reports of corn earworm larvae sizing in Bt cotton and requiring treatment. Stink bugs continued to be reported at threshold levels in early planted fields. Spider mites are present in several areas and should be monitored closely and managed carefully.

Corn Earworm and Bt Cotton: Corn earworm (CEW) moths have been active in South Georgia. Reports of eggs and small larvae have been common. ***The threshold for treating CEW in Bt cotton is when 8 larvae (1/4 inch or greater in length) are found per 100 plants.*** It is extremely important to correctly “size” CEW larvae when scouting fields. Get a ruler and calibrate yourself to a ¼ inch. Once larvae reach ¼ inch in length their likelihood of surviving when feeding on a Bt cotton plant is greatly increased. When CEW larvae are observed in Bt cotton they are generally found in the area of the plant near the uppermost white bloom; be sure to monitor blooms, bloom tagged bolls, and small bolls for larvae. The 2-gene Bt cotton technologies (Bollgard II and WideStrike) provide improved control of CEW compared with the single gene Bollgard technology. However both Bollgard II and WideStrike cottons should be scouted and treated if threshold infestations are observed. The 2 gene Bt cottons are not immune from economic damage (especially if beneficial insects are removed with a broad spectrum insecticide during or just prior to heavy CEW pressure). During 2009, some fields utilizing 2-gene Bt cottons required treatment for caterpillar pests. In general WideStrike fields were most commonly treated for CEW, and Bollgard II fields were most commonly treated for fall armyworm. When comparing the 2 gene Bt cottons, Bollgard II provides better control of CEW and WideStrike provides better control of fall armyworm.

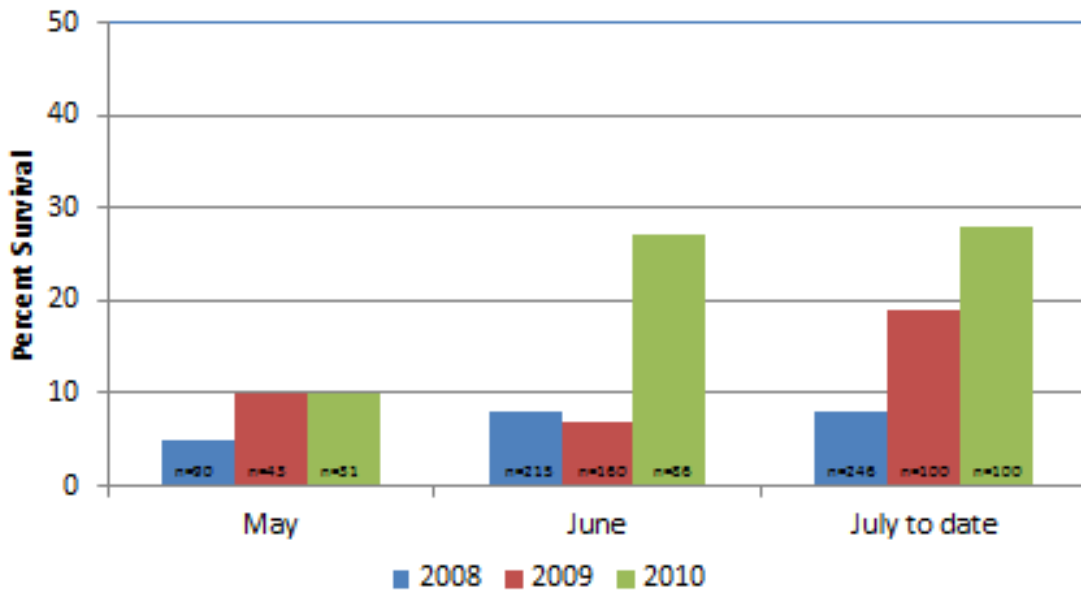


Photo by Ron Smith, ipmimages.org

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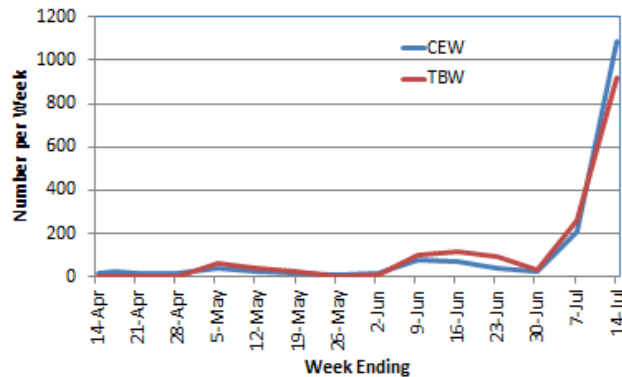
Corn Earworm Pyrethroid Susceptibility Monitoring: Below observe a chart illustrating results of Adult Vial Tests to monitor the susceptibility of CEW to pyrethroid insecticides. Survival of CEW moths in glass vials treated with 5 µg cypermethrin is elevated in 2010 compared with 2008 and 2009 which suggest that populations may be more difficult to control. However, pyrethroids are good options for CEW control due to expected efficacy and cost compared to alternatives. High rates should be used when targeting large larvae or high populations.

CEW Adult Vial Test 5 µg cypermethrin Tift County GA 2008-2010



Tobacco Budworm: The majority of cotton acres in Georgia are planted in Bt cotton which should provide excellent control of tobacco budworm (TBW). On non-Bt cotton TBW may be a significant pest. TBW is resistant to pyrethroid insecticides and non-pyrethroid insecticides should be used for control of TBW. Pheromone trap capture data from traps on the Tifton Campus indicate that both CEW and TBW are active in the area.

2010 CEW and TBW Pheromone Trap Captures RDC Pivot (Tift Co. GA)



Stink Bug: To date the primary stink bug species observed in cotton continues to be the brown stink bug. However we are beginning to observe an increase in southern green stink bugs. Threshold levels of internal boll damage have been reported from several areas. Note that we are recommending the use of a Dynamic Threshold for stink bug management in 2010. *The boll injury threshold should be adjusted up or down based on the number of susceptible bolls present. Use a 10-15% boll injury threshold during weeks 3-5 of bloom (numerous susceptible bolls present), 20% during weeks 2 and 6, and 30%+ during weeks 7(+ of bloom (fewer susceptible bolls present). Detection of 1 stink bug per 6 row feet would also justify treatment.* Bolls approximately the diameter of a quarter should be sampled and examined for internal damage. Internal damage is defined as warts or callous growths on the inner surface of the boll and/or stained lint (see images below). During the first week to ten days of bloom, bolls the diameter of a quarter are not present and the largest bolls available should be evaluated. Stink bugs prefer to feed on medium sized bolls but may feed on small bolls when that is all that is available. Small bolls (less than 10 days of age) which are damaged may be aborted. When deciding to treat stink bugs with insecticide it is important that we have a general idea of stink bug species makeup. Pyrethroids provide good control of southern green stink bugs, but only fair control of brown stink bugs. OP insecticides such as Bidrin and methyl parathion provide good control of both brown and southern green stink bugs.

Decision aid for stink bug thresholds in Southeast cotton

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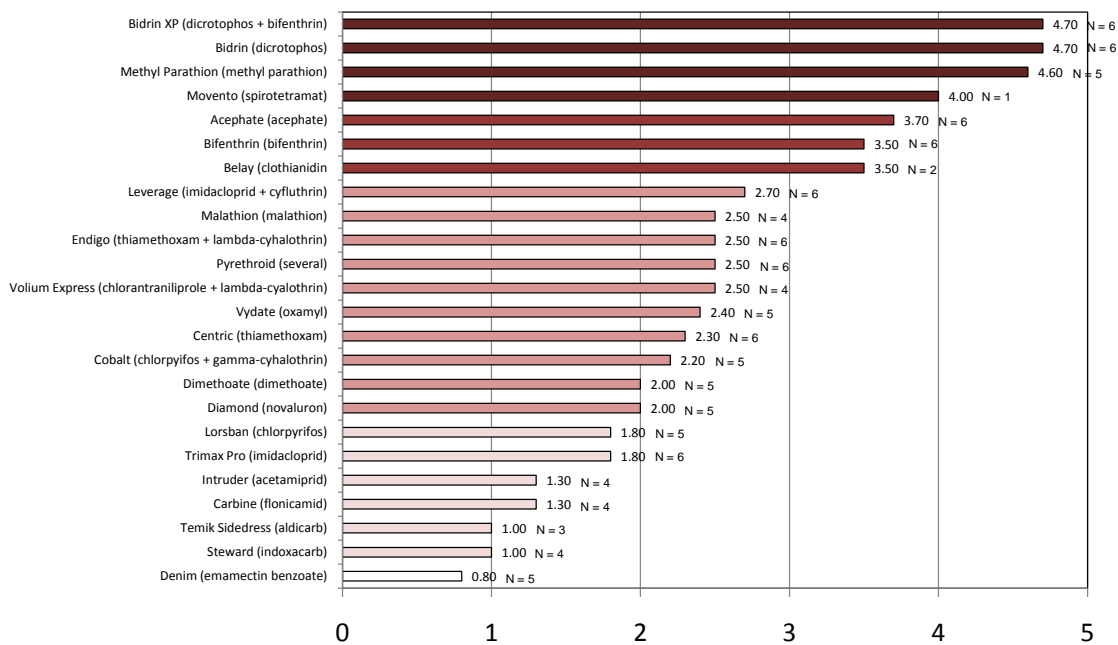
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Recently 22 cotton entomologist representing 14 states across the cotton belt responded to a survey on insecticide performance in cotton. Below find responses from 6 southeastern entomologists on brown stink bug and green/southern green stink bugs.

Brown Stink Bug – Southeast

Standards: Bidrin (6)

0 = No Control, 1 = Poor Control, 2 = Marginal Control, 3 = Fair Control, 4 = Good Control, 5 = Excellent Control



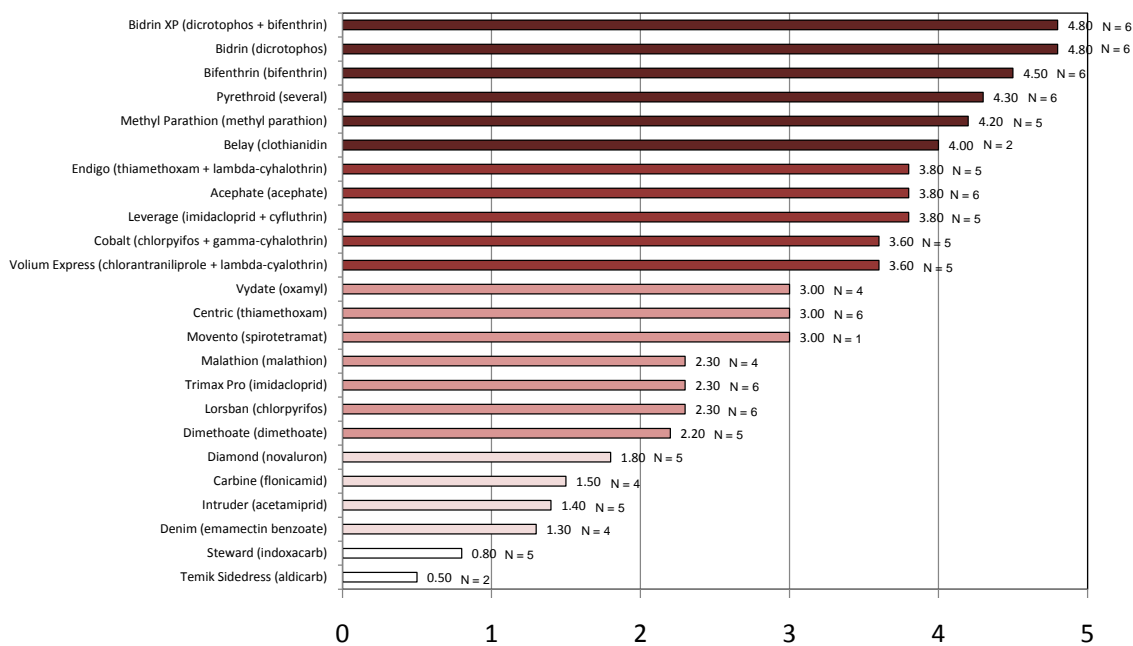
6 Responses

Mean Rating

Green/Southern Green Stink Bug – Southeast

Standards: Pyrethroid (4), Bidrin (3)

0 = No Control, 1 = Poor Control, 2 = Marginal Control, 3 = Fair Control, 4 = Good Control, 5 = Excellent Control



6 Responses

Mean Rating

Aphid: Aphids have been slow to build but are coming on strong in some, but not all, fields. We have received a few reports of the fungus which causes populations to crash, but nothing widespread yet. Scouts should be observant for gray fuzzy aphid cadavers which is indicative of the naturally occurring fungus. Once the fungus is observed we would expect aphid populations to crash in about a week.



Spider Mites: Mites are still present in some fields, especially in drier areas. Watch infested field closely and manage insect pests carefully. We have consistently created significant mite infestations by disrupting beneficial insects with repeated insecticide applications. See the July 1, 2010 Cotton Pest Management Newsletter for more information on spider mite management.

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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