

UPPER COAST CROP IMPROVEMENT NEWSLETTER

Matagorda

Wharton

Jackson

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General Situation

The dry weather pattern that has settled in over this part of southeastern Texas is hopefully beginning to be broken up by a predicted change in the weather pattern and incoming Gulf moisture, with rainfall predicted to be "normal" for the rest of the season. Grain sorghum and corn harvest is in full swing and in lieu of our limited rainfall this year; yields are down to about what we anticipated. The balance of cotton is at physiological cutout, so the next hurdle for our cotton will be thinking about the timing of harvest aids. Now, it appears that our cotton crop is at least 10-14 days or 20% ahead of normal when it comes to average heat units for this year, and you should consider that when thinking about preparing for harvest. Cutout, by the way, is defined as 5 Nodes Above White Flower (NAWF). I am referring to 1st position fruit, count the number of nodes above the uppermost white flower located on a first position. Cutout is an important physiological landmark in that it helps us determine when a cotton crop is "safe" from economic insect damage and in evaluating yield potential as well as when to apply harvest aids.

Regarding insects, research has shown that small bollworms will not feed on bolls that are more than 350 heat units (HU) past bloom, stink bugs will not feed on bolls past 450 HU, *Lygus* 350 HU and for verde plant bugs we are not 100% sure, but our best guess would be it is similar to *Lygus*. With all that said, we are continuing to monitor for bollworms, fall armyworms, stink bugs, spider mites, aphids, *Lygus* and verde plant bugs. Whereas, beneficial numbers in cotton are moderate to high with lady beetle adults, larvae, big eyed bugs, and minute pirate bugs being observed.

What's Happening in the Cotton

Stink Bugs:

Treatable levels of stink bugs are continuing to be found in a number of fields in the area. The fields that seem to be the most infested are in close proximity or right next to grain sorghum and/or corn fields.

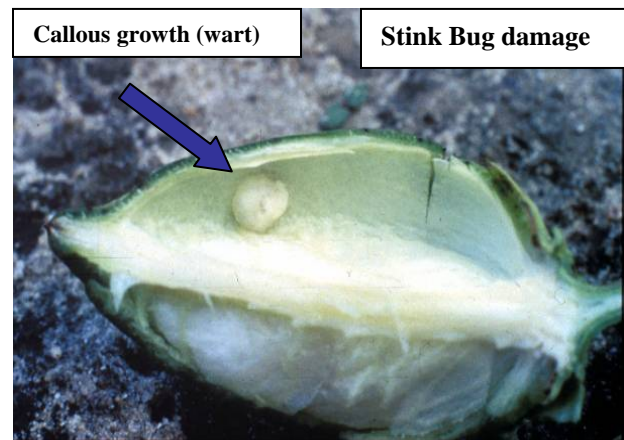
The predominate stink bug species in our area appears to be *Euschistus servus* (**brown stink bug**) although a few **green stink bugs** have been observed. The most precise way to determine treatment needs is to (1) be able to readily find stink bugs at inspection sites and (2) find that 20% of the bolls the diameter of a quarter have evidence of internal stink bug feeding (callous growth in the internal boll wall and/or stained lint). Bolls of this age complement should be inspected each time as it has been found to represent the best index on which to make treatment decisions. There are some states that use a lower “evidence of internal feeding” on which to initiate treatment, but these locations also have heavier populations of Lygus bugs. However, I think it would be appropriate to prepare for stink bug treatment and not wait another week when 15% evidence of internal feeding is found. Stink bugs are often clumped near field margins. Spot treatment provides effective control when this situation exists. Second through fifth instar stink bug nymphs and adults can damage bolls. Fourth and fifth instar stink bug nymphs can cause the same level of damage as adults. Feeding on bolls may cause boll shed and/or seed damage, lint staining, lint rot, and yield reduction.



Brown Stink Bug
Euschistus servus (Say)



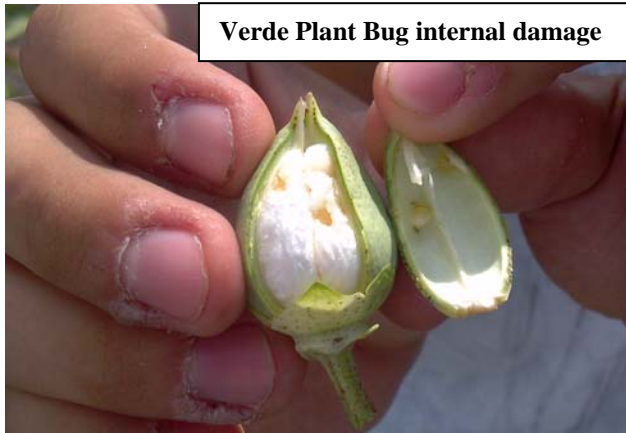
Green Stink Bug



Verde Plant Bugs:

We are continuing to find treatable numbers of verde plant bugs (*Creontiades signatus*) in the Tin Top and Palacios area of Matagorda County. Current recommendations are to scout fields with a beat sheet or sweep net. While the sweep net method is a good way of sampling for this pest, it does have some flaws. For example you are only able to sample the upper 10 inches of the plant and you are unable to determine if the rest of plant has any populations. **In my opinion, a more effective way is to sample with a drop cloth (beat sheet) because you can literally knock the insects onto the sheet and count them.** Economic thresholds (ET) for this pest are not worked out so using an ET similar to that of stink bugs may be appropriate; treat when plant bug counts exceed 15 to 25 bugs per 100 sweeps. Additionally, sample 100 thumb-sized bolls collected from 4-5 spots per field. Cut these bolls open and examine the inner boll wall for evidence of feeding which appears like wart-like formations caused by stink bug feeding. The

verde plant bugs feeding will result in a similar wart. The economic threshold for stink bugs is when more than 20% of the bolls examined have evidence of feeding. This threshold should be sufficient for verde plant bugs.



Verde Plant Bug internal damage

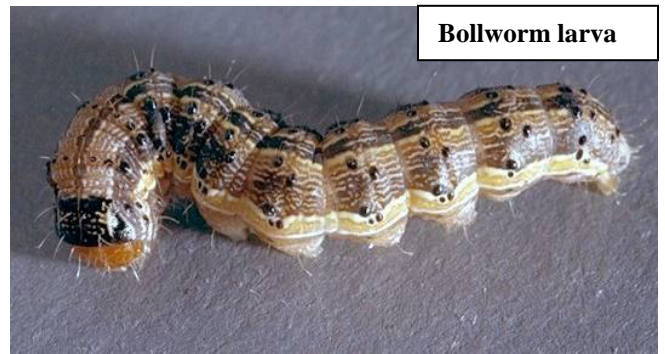


Verde Plant Bug external damage

8,000 larvae per acre larger than 1/4 inch are present (based on a population of 40,000 to 60,000 plants/acre) or when 8 to 12 larvae larger than 1/4 inch per 100 plants are present and 5 to 15 percent of the squares or bolls are worm damaged.



Minute Pirate Bug



Bollworm larva

Bollworms:

Continue to be on the lookout at this time, for bollworms. **Egg lays are variable across the area with some program fields in the La Ward, Crescent and El Campo areas having up to 12%. Damaged squares were between 0-8% and small worms (5%) are being detected in the lush program fields.**

When scouting this transgenic cotton, the entire plant should be searched for tobacco budworm and bollworm larvae and injury. A proper sample includes squares, white blooms, pink blooms, bloom tags and bolls. Scouting intervals should be reduced to 3 to 4 days during periods of increasing bollworm egg laying, especially during peak bloom. Treatment should not be triggered by the presence of eggs alone. Hatching larvae must first feed on the cotton plant to receive a toxic dose. Treatment with foliar insecticides for tobacco budworm or bollworm should be considered when 4,000 to

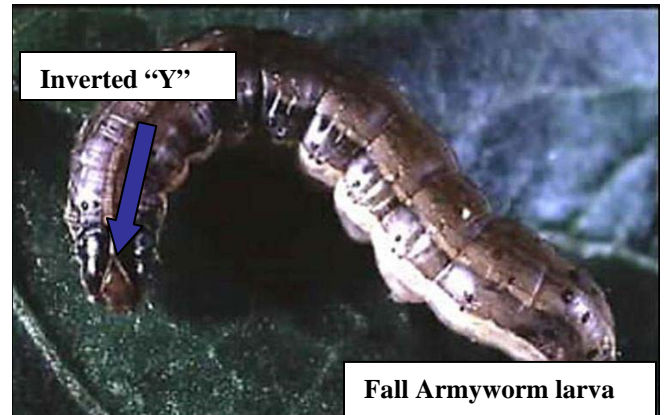
Fall Armyworms

Fall armyworm larvae are beginning to be reported in the Lane City area of Wharton County in Bt cotton. Fall armyworms are similar to other armyworm species in that females lay an egg mass (usually 50-200 eggs). The egg mass of fall armyworms is loosely covered by tan scales from the female body. The egg masses, which are normally deposited on the undersides of leaves in the lower half of the cotton canopy or on boll bracts, hatch in two to four days. Moths have a wingspan of about 1 1/2 inches. Hind wings are grayish white, and the front wings are dark brown to gray and mottled with patches of white, yellow or gold. Larvae have various color phases, ranging from light to dark brown or green, and reach a maximum length of 1 1/2 inches. The body is slightly tapered toward the head. The most distinguishing characteristic of this species is the presence of a prominent, light-colored inverted

“Y” on a relatively dark head capsule; although, this may not be visible on small larvae. Unlike the bollworm and budworm larvae, fall armyworms do not have the presence of numerous tiny spines on most parts of the skin when viewed with a 10x to 20x hand lens.

Fall armyworms are likely to feed on both blooms and bolls. Small larvae are difficult to detect because they often feed on boll bracts and on the surface of bolls, hidden behind the bracts. Fall armyworms feed on a relatively small number of bolls. Thus, it takes more larvae to do as much damage as a smaller number of bollworm or tobacco budworm larvae.

Treatment is justified when four or more small larvae (<1/4 inch) are found in 100 blooms and bolls or when 10-20 larvae are found per 100 plants. Timing applications to control small larvae is more effective than trying to control larger larvae. Small larvae are often found in white blooms, pink bloom tags or behind the bracts of medium or large-sized bolls. Large fall armyworms are capable of penetrating bolls that are quite mature; even bolls that are over 500 DD60s of age. Because fall armyworms are normally found feeding under the bracts of large bolls in the lower half of the cotton canopy, this makes them extremely difficult to detect and difficult to obtain adequate spray coverage when treating as well. Increasing spray volume above what would normally be used to control other pests will usually improve fall armyworm control, but any control over 60 to 80% should be considered good.



Upcoming Events & Announcements

> The Fort Bend Row Crops Task Force & the Texas AgriLife Extension Service is conducting a Crops Tour of several grain, corn and cotton crop demonstrations on Thursday, June 23rd beginning at 8:30 a.m. at the Fort Bend Extension Office Education Center which is located at 1402 Band Road Rosenberg, Texas. 3 CEU's will be available. For more information contact Allen Malone, Fort Bend County CEA-AG/NR at (281) 342-3034 or email Allen at amalone@ag.tamu.edu

> On Thursday, July 21st the Texas AgriLife Extension Service and Phytogen cottonseed will be hosting a meeting and field day at the Texas AgriLife Research and Extension Center located at Corpus Christi. The program will begin at 8:30 a.m. and conclude at 1:15p.m. Activities will include viewing current and future Phytogen cottonseed varieties, update on the EnlistTM Weed Control System which is a new herbicide tolerant trait technology from Dow AgroSciences, and a Liriomyza leafminer adult Leafminer larvae & mining presentation on TransformTM WG which is a new insecticide for controlling aphids, whiteflies, and cotton fleahoppers. To register go to: <http://events.signup4.com/Tailgate11>

Acknowledgements

Funding for the IPM program is provided by donations from local agribusinesses. Money goes towards postage, travel, and wages for scouts. We are still in need of funding so if you know someone you think would be interested in donating please contact them or call our office. The IPM staff would like to thank these businesses that donated to the program and encourage producers to support their business as they have supported the producers.

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Bayer CropScience
Crop Production Services
Danevang Farmers COOP
Delta and Pine Land/Monsanto
Dow AgroSciences/Phytogen

DuPont Crop Protection
Farmers COOP El Campo
Hornbeck Seed Company
Helena Chemical Company
Moses Gin
South Texas Cotton & Grain Association
Syngenta
Traditions Insurances Services Inc
Wharton County Farm Bureau
Wiese Crop Insurance
Wilbur-Ellis

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TPMA Website

The Upper Coast Crop Improvement newsletter and other Texas Agrilife Extension IPM Program newsletters from across the state can be viewed at the Texas Pest Management Association website at <http://www.tpma.org>



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