

## UPPER COAST CROP IMPROVEMENT NEWSLETTER

**Matagorda**

**Wharton**

**Jackson**

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### General Situation

The hot, dry weather pattern that has settled in over this part of southeastern Texas is continuing. Widely scattered showers are also continuing here, and they have not come close to breaking this ongoing area wide drought. The balance of cotton is at physiological cutout, so the next hurdle for the cotton will be protecting the bolls from insect damage. 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 *Creontiades* we are not 100% sure, but our best guess would be it is similar to *Lygus*. With all that said, we are continuing to monitoring for bollworms, stink bugs, spider mites, aphids, *Lygus* and *Creontiades*. Whereas, beneficial numbers in cotton are moderate to high with lady beetle adults, larvae, big eyed bugs, and minute pirate bugs being observed.

Listed below is a comparison of the 2004 through 2009 total rainfall accumulated for the first six months of the year. Sadly, this graphic describes the real story for the 2009 cropping season here. Source and location of the rainfall totals were obtained from the crop weather station located at Rancho Grande Farms near Crescent in Wharton County.

Month	2009	2008	2007	2006	2005	2004	Averages
January	0.08	3.73	0	1.12	1.68	3.17	1.63
February	0.56	2.26	0	0.86	4.37	3.53	1.93
March	2.23	3.50	6.56	2.60	3.99	2.56	3.57
April	6.81	1.94	2.88	1.85	1.26	4.62	3.23
May	0.88	0.24	5.96	4.49	4.37	6.64	3.76
June	1.01	1.25	2.74	2.63	0.87	12.66	3.53
Total	11.57	12.92	18.14	13.55	16.54	33.18	17.65

## What's Happening in the Cotton

### Cotton Aphids:

Populations in the area have either been treated or have crashed in the past several weeks to around 0- 20 per leaf in most fields, levels well below economic threshold. Aphids at this time of year can affect yield by reducing boll size. Therefore, it is critical to protect the crop from high aphid populations during the boll-filling period. **So remember, that treatments should be initiated when the field averages 50 aphids per leaf and if the population is continuing to climb.**

### Lygus:

*Lygus* numbers are low in most program fields with numbers falling well below 1 per 10 row feet in fields with the highest levels. However, *Lygus* can still be a pest as they can move from alternate hosts and damage squares of all stages and young bolls that have accumulated less than 350 heat units. **During the first 6 weeks of squaring, control measures should be considered when *Lygus* bug numbers average 10(count nymphs as two) per 50 sweeps on more than two successive sampling dates (spaced 5 days apart.)** While this activity is currently low and not widespread, it is my opinion that this is not a pest to trifle with. In other areas of the state, I have personally witnessed large populations of *Lygus* adults that moved into cotton fields and significantly reduced fruit loads within a very short period of time. So please remain vigilant for this boll robber.

### Stink Bugs:

**Treatable levels of stink bugs are continuing to be found in the area however they have been "hit or miss" in relation to where we are finding them. However, the fields that seems to be the most infested are in close proximity or right next to grain sorghum and/or corn fields.**

As a reminder, feeding on bolls by this pest may cause boll shed and/or seed damage, lint staining and yield reductions. When making management decisions on whether to treat for stink bugs the following should be adhered to; Examine 6 row feet of cotton in several locations in the field. **When there is an average of one or**

**more stink bugs per 6 feet of row, feeding can cause excessive loss of squares and small bolls and may stain lint. Additionally, at least 50 small bolls (the diameter of a quarter) should be examined. If 20 percent of the small bolls have evidence of internal feeding (callous growth on internal boll wall and/or stained lint) and stink bugs are present, then treatment should be considered.**

Stink Bug Action Threshold

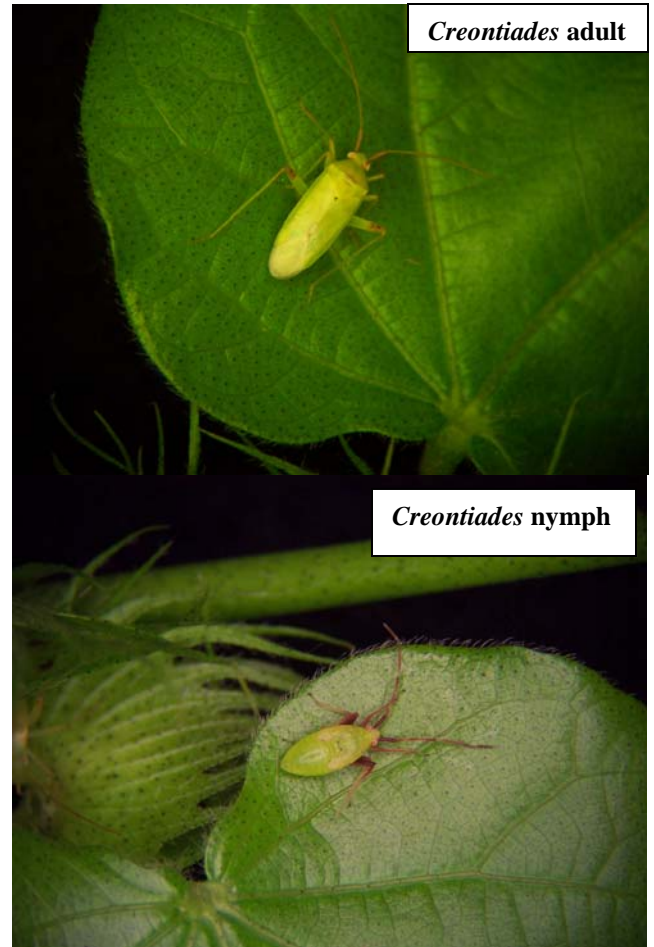
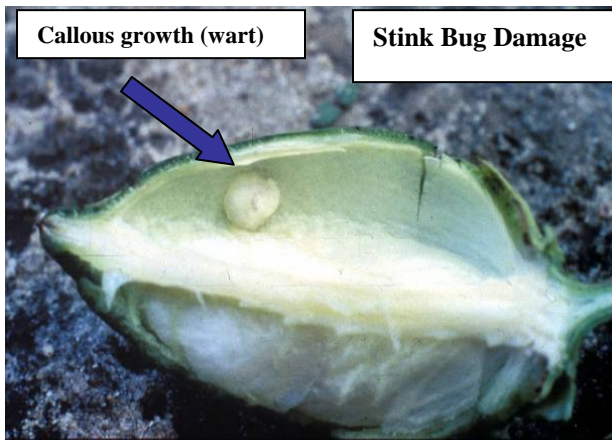
Drop cloth	Small bolls*
1 per 6 row ft	20% with internal injury

\*Sample at least 50 quarter-sized bolls.

\*Callous growth on internal boll wall and/or stained lint.

Stink bugs often are 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 instars can cause the same level of damage as adults. Shown are two of the more commonly found stink bugs that infest cotton in our area as well as the damage that they can do to the fruit. Additionally, my counterpart to the west of us, Stephen Biles, EA-IPM, Calhoun, Refugio & Victoria Counties, has put together an excellent stink bug publication which can be viewed at: <http://calhoun-tx.tamu.edu/Publications.cfm> and then click on Integrated Pest Management.





**Creontiades:**

**We are continuing to find treatable numbers of *Creontiades* in Matagorda County.**

The adults of this plant bug are ½ inch long, narrow-bodied and light green. This insect goes through five molts or instars (nymphs). The antennae of nymph and adult *Creontiades* are longer than the length of their body, while the antennae of nymph and adult fleahoppers are approximately half the length of the insect body. Nymph and adult *Creontiades* are light to dark green and have red eyes. Young nymphs of *Creontiades* have a red stippling on the antennae, but this usually is not observed after the third instar. In addition, adults of *Creontiades* have a reddish band on the pronotum (segment behind the head). Damage from *Creontiades* species in cotton can be square and small boll loss. A characteristic clear yellow liquid (frass) is often left on the fruiting structure where *Creontiades* have fed. Squares and small bolls may suffer damage ranging from just surface feeding and boll malformation to complete fruit loss.

The need to control this bug is determined by the insect abundance. Inspect fields at 4- to 5-day intervals during the fruiting period. Take 50 sweeps at each of the four locations in the field by sweeping a 15- to 16-inch net across the top of one row in such a way that the top 10 inches of the plants are struck. The action threshold for *Creontiades* has not been fully evaluated. 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 *Creontiades* 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 *Creontiades*.

*Creontiades* Action Threshold

Cotton stage	Action threshold
During the 1st 4 or 5 weeks of fruiting	15-25 bugs per 100 sweeps with unacceptable fruit set

When harvestable bolls exceed 10 days old, treatment should not be necessary.

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.** What I am unsure of is what would be an economic threshold for *Creontiades* using this method. Again my best guess would be using a similar method as we do for *Lygus* which is **after peak bloom if 4 *Lygus* per 6 ft-row is found then treatment may be necessary.** Now obviously, we need to get more information about this pest regarding best sampling methodologies, economic thresholds, and efficacy of insecticides, not to mention exactly what are they doing to other crops such as grain sorghum and soybeans. **With that said Stephen Biles and I are currently conducting an insecticide efficacy trial in cotton for *Creontiades* in Matagorda County and by the next newsletter we should have the results.**

#### Cotton 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 30%. Damaged squares were between 0-14% and small worms (8%) 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 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.

#### Spider Mites:

**Spider mites are continuing to be found at economic levels in a handful of cotton fields in the area.** Spider mites infest the undersides of leaves, where they remove the sap from the plant and cause the leaves to discolor. They may also infest bracts of squares and bolls, causing the bracts to desiccate and squares or small bolls to shed. Severe infestations can defoliate the cotton plant. Mite infestations most often occur in spots and in field margins. Increased spider mite populations usually follow multiple applications of insecticides for other pests, since insecticides destroy natural spider mite predators.

**Management and decision making. Treat when mites begin to cause noticeable leaf damage. Spot treatment of fields is encouraged when infestations are restricted to small areas.** Two applications at 5-day intervals may be required for acceptable control. In certain locations, some mite species are highly resistant to miticides and are difficult to control with available materials.



## 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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## TPMA Website

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