UPPER COAST CROP IMPROVEMENT NEWSLETTER

Matagorda **Wharton** **Jackson**

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Howdy, my name is Simeon Ross, I am the new Integrated Pest Management Specialist (IPM) stationed in Wharton Texas, covering Wharton, Matagorda, and Jackson Counties. My journey started off in 2014 at LSU Ag Center Macon Ridge in Winnsboro Louisiana as a student worker under the supervision of Dr. David Kerns while at the same time working on my bachelor's degree in agriculture economics at Southern University in Baton Rouge Louisiana. I later obtained my master's degree in entomology at Texas A&M University in 2024, under the supervision of Dr. David Kerns. If you have any questions, please do not hesitate to contact me.

General: Last Monday, hurricane Beryl made landfall on the Gulf Coast as a category 1 hurricane with maximum sustained winds of about 86 miles per hour that caused more damage than expected in cotton, sorghum, and corn than the rainfall, estimating about 90 million in crop damage (**Figure 1**). In Wharton County, the wind caused cotton plants to lay at about a 45-degree angle, twisting and wrapping the cotton plants around one another to the point row spacing could no longer be visible. Luckly the bolls at the time had not opened when the storm came in, so we hope the crop will have some time to compensate for the damage and grow out of it.

Figure 1. Damage from Hurricane Beryl. Photo credit: Corrie Bowen

Heat Units: Each county location's temperature data are derived from a field near the county center. At 350-degree days (DD60), or heat units, past cutout, cotton is no longer vulnerable to economic damage from plant bugs and bollworms. It is also no longer susceptible to economic damage from stink bugs at 450 (DD60) post cutout. Bolls that will reach maturity by harvest will be too hard for the respective pests to feed on at this stage. Below, I collected accumulated heat units every 5 days to help farmers with calculating when to stop spraying for stinkbugs.

Table 1. Heat unit accumulation from June 20 through July 17.

Date	Heat Unit Accumulation
Jun 20-24	115.5
Jun 25-29	130
Jun 30-July 4	131
July 5-9	116.5
July 10-14	111
July 15-17	71

Cotton: This week most of our cotton is around 1-2 nodes above white flower (NAWF) in the Wharton, Jackson, and Matagorda counties, meaning we are well past cutout and making our way into open bolls. Cutout occurs when vegetative development stops, which happens when the supply and demand of carbohydrates are equal. No further harvestable fruit is set by the time the plant reaches cutout. This is normally at 4 to 5 NAWF. In fact, in some areas we are seeing about 11% cracked bolls and is averaging about 15 nodes above cracked bolls in the Wharton, Matagorda, and Jackson area.

We are still seeing a few brown stink bugs (**Figure 2**) in fields and running 27% damage bolls in Matagorda County, while in Wharton County I am seeing 19% damaged bolls. At this point I place threshold at 20% damaged bolls so we definitely have fields worthy of treatment. Once the cotton has reached 450 DD60 beyond cutout, sampling and treating for stink bugs may no longer be necessary since bolls produced after this point will not become fully mature or contribute significantly to the crop yield. However, it is possible that this value may shift slightly due to factors such as boll shading, variety, and water stress.

Figure 2. Brown stink bug on cotton boll.

When scouting for stink bugs be sure to check the inside of quarter size bolls for warts, lesions, and stained lint. Figure 3 displays a photograph of a cotton boll that has potential stink bug feeding from the outside, note the slightly raised look of the dark spots, however, to confirm that it is stink bug damage you must open the boll and look in the inside for those warts, lesions, and stained lint (note that the damage can look minute and can be easily looked over) (**Figure 4**). The economic threshold can be found below (**Figure 5**), and it is dependent on the time that the field has been blooming. It is based on the percent damaged bolls with live bugs present. This year, brown stink bugs have been prominent in the field and have been shown to be less sensitive to pyrethroids than green stink bug, however bifenthrin does a pretty good job. Othe options for control can be found in **Table 2**.

Figure 3. Potential feeding from brown stink bug. Photo credit: Kate Crumley

Figure 4. Damaged boll with wart.

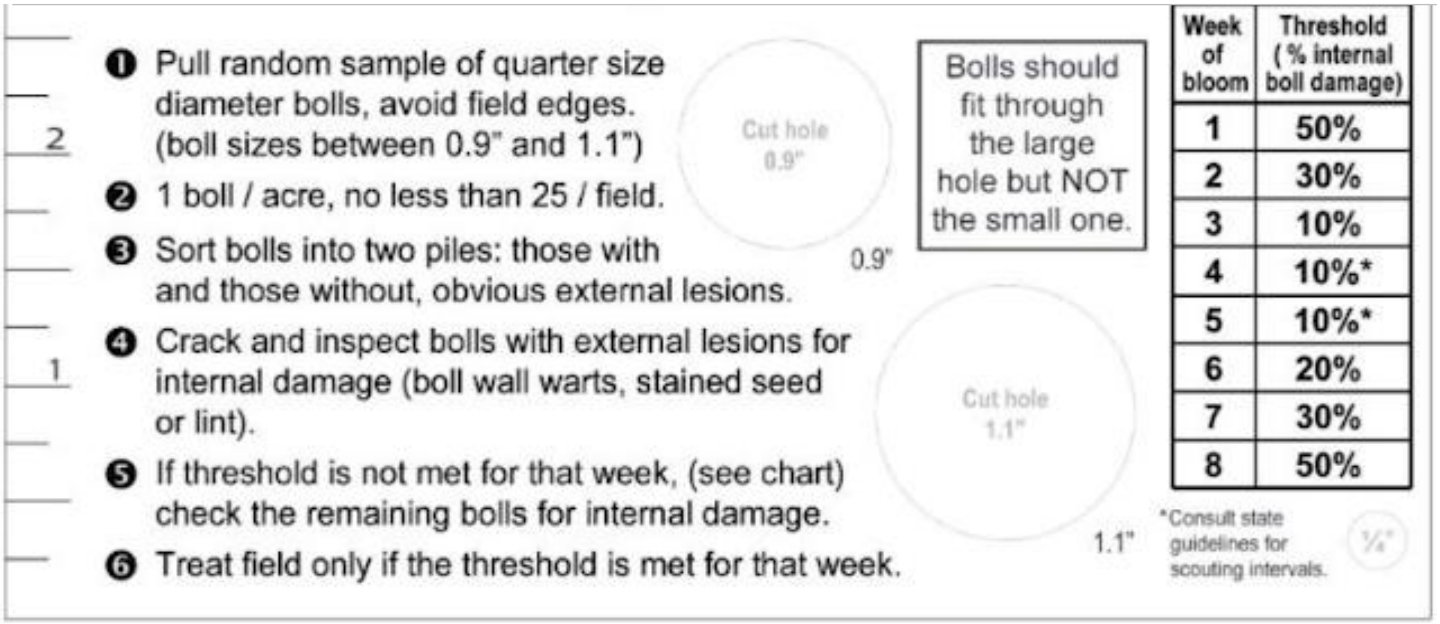

Figure 5. Decision aid for stink bug threshold in cotton.

Table 2. Insecticide treatment for brown stink bugs				
Insect	Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acre Treated per Gallon or Pound SP
Brown stink bugs	acephate Orthene (90)	0.8 pound	0.72	1.25
	dicrotophos Bidrin	6.0 - 8.0 ounce	0.33-0.5	24.0 – 16.0
	bifenthrin Brigade	2.6 – 6.4 ounce	0.04 – 0.1	50.0 – 20.0

Soybeans: Our soybean crop has a decent yield potential and is starting to move from R6 to R7 stage and at this stage it is still susceptible to economic damage from soybean loopers and redbanded stink bug (**Figure 5**). Soybean loopers are most common in the eastern half of the state. Generally, loopers begin infesting soybeans earlier than the other foliage-feeding caterpillars do. Soybean looper larvae are distributed throughout the soybean canopy but, unlike velvetbean caterpillars and green cloverworms, more are found in the lower canopy. When scouting, I am finding about 21 loopers per 100 sweeps, even though it is not at threshold you should most definitely keep an eye out on increased numbers. Scouting every week is important on staying on top of insect pressure and spray decision. Threshold for loopers are 8 worms ½ per inch or 150 worms in 100 sweeps. The soybean looper has developed resistance to many insecticides, particularly pyrethroids. Pyrethroids will make looper infestations worse than not spraying. There are some good option, most notably those that contain the active ingredient chlrorantraniliprole such as Vanatacor, Besiege, Elevest and Shenzi. Intrepid Edge is effective, and higher rates of Intrepid are usually effective although some resistance issues do exist with this product. Insecticides for soybean loopers I like are listed in **Table 3**.

Figure 6. Soybean looper larvae

Table 3. Insecticide treatment for soybean loopers.

Insect	Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acre Treated per Gallon or Pound SP
Soybean looper	chlorantraniliprole Vantacor (5)	1.7 – 2.5 oz	0.066 – 0.098	75.3 – 51.2
	methoxyfenozide Intrepid (2)	6.0 – 10.0 oz	0.09 - 0.16	21.0 - 12.5
	bifenthrin, chlorantraniliprole Elevest	5.6 – 9.6 oz.	premix	22.8 – 13.3
	lambdacyhalothrin, chlorantraniliprole Besieg	5-8 oz.	premix	25.6 - 16
	methoxyfenozide, spinetoram Intrepid Edge	4.0-6.4 oz.	premix	32-20
	chlorantraniliprole Shenzi	1.7 – 3.8	0.044 – 0.098	75.29 – 33.68

Table 3. Insecticide treatment for soybean loopers.

Soybeans are susceptible to redbanded stink bugs (**Figure 7)** until R7, especially under wet humid conditions. In beans nearing harvest that are infested with redbanded stink bugs, consider including 0.75 lbs of Acephate with your gramoxone harvest aid shot. The threshold for redbanded stink bug is 16 per 100 sweeps.

Figure 7. Red bandit stink bug. Photo credit: Kate Crumley