

The Integrated Pest Management (IPM) Newsletter for Row Crops in the Lower Rio Grande Valley

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## General Situation

After last week's rain storms and the forecast calling for more rain this week, several growers may be wondering when they will be able to get back into their fields to finish sorghum harvesting and start defoliating their cotton. Some of the Cameron County growers have harvest about half of their grain sorghum crop, while the rest of the valley is finished or within a couple of days of finishing their sorghum harvest. Cameron County was planted later than the rest of the Valley due to rainy conditions at the time of planting.

Boll rot, hard-lock, and strung-out cotton is becoming an increasing concern as the rain storms keep rolling into the Valley. Several fields have open cotton that has been soaked during the last couple of rain storms. The percentage cracked boll in the IPM Scouting fields ranges from 3 to 62%. A majority of the fields have **no** squares or small bolls left on the plants (as indicated by a "." in the % squares damaged by worms and % squares damaged by weevils columns on the attached IPM Scouting Report for the week of July 16<sup>th</sup>).

Once growers are able to get back into their cotton fields, the next question they have is "Which harvest aides to use and the timing of the applications?"

Dr. Robert Lemon, Texas Cooperative

Extension Agronomist - Cotton, wrote the following on this year's harvest aide use and timing of applications.

Because of the "tropical" weather this season, the crop canopy is very large and robust, lending itself to a much different harvest aid approach than we see in more "normal" years. Be careful to adjust harvest aid rates to crop conditions. We've gotten by with lower rates of thidiazuron in the past, but this crop will likely require higher rates. For example, thidiazuron at the rate of one pound of product per 5 to 8 acres might be a good starting point, especially in very rank fields. Also, it may be very difficult for a "one-shot" scenario to provide the desired defoliation. The new PPO mode of action defoliant work very well as the sequential material in a two-shot approach. These products will desiccate juvenile tissue on the plant and knock-off the remaining leaves (canopy skirt) remaining from the initial defoliant application. In addition, this may be a crop worthy of considering a boll opener to hasten the harvest. Don't cut the rates of the boll openers. Use at a minimum a full pound of ethephon. For optimum performance, both defoliant and boll openers need to be applied at the proper time. Timing is always critical, and there are several methods that can be used (percent open bolls and heat units past cutout). However, the tried-and-true approach is to cut open the last bolls you expect to

harvest. If the boll is mature, it will be difficult to slice with a sharp knife, the seed coats will be tan to brown in color, the lint will string-out, and the cotyledons (seed leaves) will be clearly defined in the seed. Also, there should be no gelatinous material inside the seed. When that last boll population is mature, the defoliant and boll opener can be applied resulting in no loss of yield or fiber quality. And watch your volume. I realize we like to cover lots of acres with ground rigs, but 10 gallons per acre is better than five for harvest aids.

### **Leaf Grade**

At the recent Bayer CropScience Field Day, guest speaker Dr. Dan Fromme, Texas Cooperative Extension - Extension Agronomist, said that one of the main objectives of cotton defoliation is to decrease leaf trash and stain. He gave the example of cotton with a grade of 21-2-36 having a value of base over 2 bales equaling \$69.95 per acre, while cotton with a grade of 21-4-36 brought a value of base over 2 bales equaling \$38.50 per acre. Therefore, the difference between a leaf grade of 2 and a leaf grade of 4 is \$31.45 per acre. Expanding this out to 100 acres that averaged 2 bales per acre we are looking at \$3,145.

### **Attachments**

I have attached the 2006 and 2005 Lower Rio Grande Valley Harvest Aide Trial results.

### **Cotton Insects**

Whiteflies, worms, and weevils, the three "Ws".

Whitefly populations have continued to increase with the highest populations being found in the western and southern parts of the valley. The percentage of leaves infested with whitefly adults (3 or more adults on the fifth leaf from the top) ranges from 0 to 93 percent, with a the average being around 24%. The percentage of leaves infested with whitefly nymphs (3<sup>rd</sup> or 4<sup>th</sup> instar nymph in a quarter size section on the 5<sup>th</sup> leaf from the top) ranges from 0 to 76%, with the average being around 33%.

Bollworms/tobacco budworm larvae are still being found in work units 1703 (East Edinburg), 1705 (West Raymondville), 1706 (Port Mansfield), 1707 (East Raymondville), 1708 (Sebastian), 1709 (Los Coyotes), 1710 (East Lyford), 1714 (Santa Monica), and 1715 (Rio Hondo). The number of larvae per 100 plants ranged from 0 to 30 in these work units, with the average being around 5 larvae per 100 plants. Bollworm moth trap counts remain low, while the Tobacco budworm moth trap counts north of Combes and north of the sugar mill increased to 54 and 69 moths per day, respectively (please see attached Cotton Moth Trapping table).

We have received reports of weevil punctures and live weevils increasing in fields.

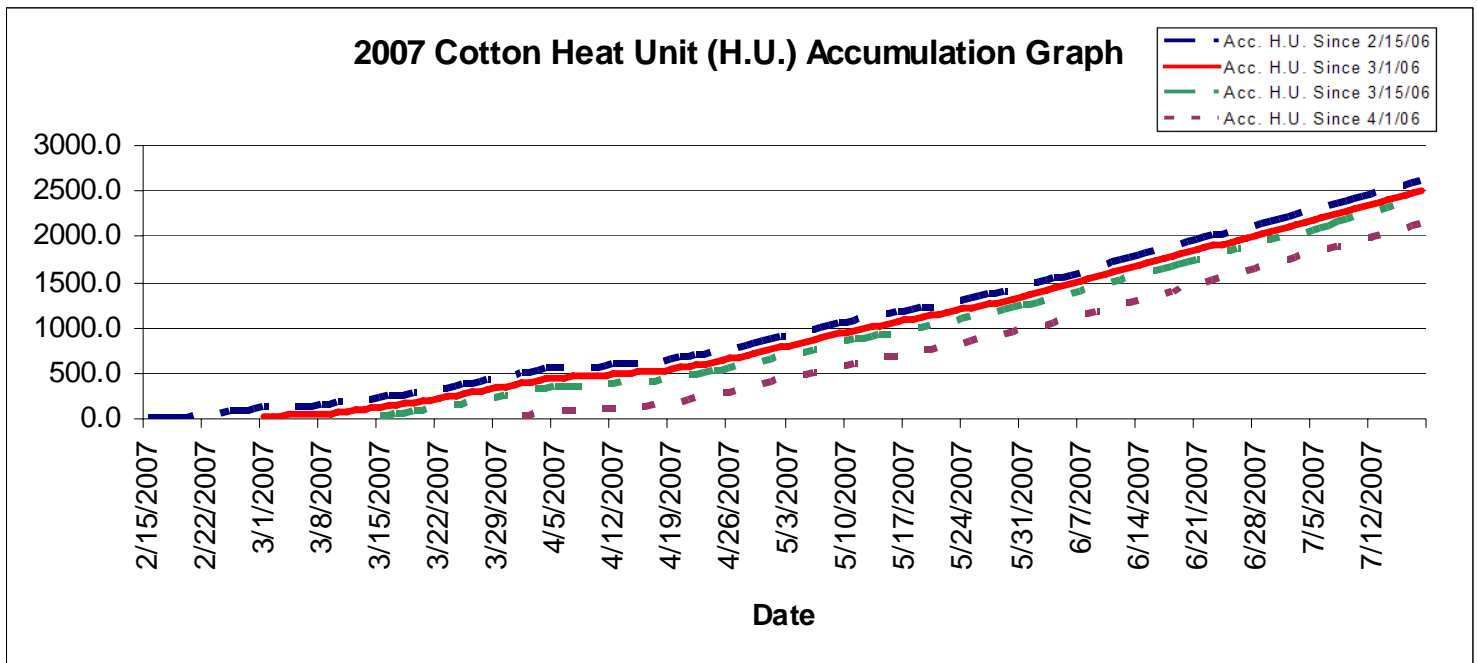
### **New IPM Program Sponsor**

I would like to thank Depot Crop Insurance who recently became a sponsor of the IPM Program.

### Special Thanks to the 2007 IPM Program Sponsors

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## SUMMARY

### Cotton Moth Trapping in the LRGV, 2007

Location	Species	Average number per trap per day														
		4/30	5/7	5/14	5/21	6/4	6/11	6/14	6/20	6/27	7/3	7/7	7/10	7/13	7/17	7/20
North of Weslaco	<b>Bollworm</b>	1	0.6	3.1	1.7	2.9	fallen	0.5	0.8	4.1	1.0	2.3	2.5	0.0	0.5	0.6
	<b>Tobacco Bud worm</b>	0.4	0.1	0.1	0.3	0.4	0.7	2.5	5	4.6	2.7	21.3	3.8	0.3	0.0	2.3
	<b>Beet armyworm</b>	2.1	2.1	0.7	0.1	0.2	0.1	0	0.2	2.1	2.2	4.3	1.8	2.3	1.5	1.6
North of Combes	<b>Bollworm</b>	-	-	-	-	2	8	1	0.9	0.8	0.7	3.4	0.7	2.2	0.8	0.8
	<b>Tobacco Bud worm</b>	-	-	-	-	-	-	12	1	7.7	3.0	76.0	11.3	2.7	1.8	54.3
North of SugarMill	<b>Bollworm</b>	-	-	-	-	7.5	7.1	5.5	1.7	6.1	1.0	6.7	0.9	0.7	1.5	2.6
	<b>Tobacco Bud worm</b>	-	-	-	-	-	-	57.6	0.2	10.3	1.2	79.0	13.5	2	0.5	69.3