

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

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Mark Your Calenders

June 5th

Dryland Grain Sorghum Field Day

Look for details in future editions of the *Pest Cast* Newsletters!

General Situation

On average, we have accumulated 21 heat units per day during the first two weeks of May. Therefore the cotton plants are experiencing rapid growth. Adequate soil moisture is needed to allow for this rapid growth. Several irrigated farms have been irrigating their fields during the past couple of weeks. However, significant rainfall is needed in order to finish up the dryland grain sorghum crop and provide enough soil moisture for the dryland cotton plants to continue growing and producing squares. Some cotton fields have started to bloom, while other cotton fields have barely started to produce squares. We have a similar scenario in the variation between growth stages of various grain sorghum fields. Therefore, there is a high potential for insect pests building up in the older fields and migrating to the later maturing fields.

Fleahoppers, aphids, and spidermite populations continue to exist in several of our cotton fields.

Beneficial insect populations have decreased during the last week.

Cotton “worms”

Please see the attached **Cotton “Worms” ID Key**. This key was developed by individuals from the IPM Extension Group as an aide in the identification of “worms”.

Bollworm/tobacco budworm larvae

populations ranging from 0 to 15 per 100 plants have been observed in the IPM Scouting fields in works units 1707 (East Raymondville), 1710 (East Lyford) and 1711 (Combes), and 1713 (Progreso). I have also received reports from crop consultants that have found an occasional small bollworm larvae in a couple of the fields that they are scouting. No populations have warranted treatment.

Do not base treatment decisions on worm egg presence only. Naturally, occurring parasites, predators, and to a certain extent, weather conditions often suppress bollworm and tobacco budworm populations.

Scouting

Divide fields into four sections. **Examine 25 random green squares (½ grown or larger) or bolls per section for worms and worm damage. Examine 25 plant terminals per section for eggs and small worms.**

Threshold (before bloom)

The economic threshold is reached when **larvae are present and 10 - 15% of the squares are damaged by the larvae.**

Threshold (after bloom)

The economic threshold is reached when **10 small larvae (less than 5 days old) are found per 100 plants and 10% of the squares and small bolls have worm damage.**

Threshold (after insecticides applications)

If a broad spectrum insecticide has been applied during the previous two weeks and beneficial populations have been disrupted. Then the economic threshold is reached when **4 - 5 small larvae per 100 plants, eggs are present and 5% of the squares have worm damage.**

Threshold (Bt transgenic cotton)

Treatment with foliar insecticides for bollworm should be considered when **10 larvae larger than 1/4 inch per 100 plants are present and 5% of the squares have worm damage.**

The threshold information was obtained from the Texas Cooperative Extension "Managing Cotton Insects in the Lower Rio Grande Valley 2007."

Sorghum Insects

A small **midge** population was reportedly found near Brownsville. Below are the new sorghum tables that include the new sorghum prices and insect control cost. These tables will be included in the soon to be published Texas Cooperative Extension "Managing Insect and Mite Pests of Texas Sorghum".

Table. Estimated economic thresholds for sorghum midge for a range of flowering sorghum heads per acre, treatment costs and grain value. Numbers in table are mean number of midge per blooming head. Table presented only as a guide. Use equation in text for estimating thresholds for your actual control costs, crop value and number of flowering heads.

Control Cost, \$/acre	Crop value, \$100 lbs	Blooming heads = 18,000/acre	Blooming heads = 45,000/acre	Blooming heads = 67,500/acre
5	6	1.6	0.6	0.4
5	7	1.3	0.9	0.34
5	8	1.2	0.5	0.3
6	6	1.9	0.8	0.5
6	7	1.6	0.7	0.4
6	8	1.4	0.6	0.35
7	6	2.2	0.85	0.6
7	7	1.9	0.75	0.5
7	8	1.6	0.65	0.45

Table 17. Economic injury level for corn earworm larvae larger than 1/2 inch long (5-6th instar) shown as number of larvae per acre. When the number of CEW larvae per acre exceeds the number in the table at a given cost of control and value of grain per cwt, the value of the protected grain exceeds the cost of control.

Control Cost \$/acre	Grain Value: \$/100 lbs			
	6.00	7.00	8.00	10.00
6	9,750	8,500	7,250	5,750
8	13,000	11,000	9,750	7,750
10	16,250	14,000	12,250	9,750
12	19,500	16,750	14,750	11,750

1 This threshold table assumes all larvae will complete development (no mortality).

Table 18. Economic injury level for corn earworm larvae 1/4-1/2 inch long (3-4th instar) shown as the number of larvae per acre. When the number of CEW larvae per acre exceeds the number in the table at a given cost of control and value of grain per cwt, the value of the protected grain exceeds the cost of control.

Control Cost \$/acre	Grain Value: \$/100 lbs			
	6	7	8	10
6	51,500	44,750	38,250	31,250
8	68,500	58,000	51,500	41,750
10	87,750	73,750	64,500	51,500
12	102,750	88,250	77,750	62,000

1. Table assumes 81 % of the 3-4th instar larvae will die in that stage and therefore not contribute to additional yield loss

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2007 Cotton Heat Unit (H.U.) Accumulation Graph

