

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

Manda Cattaneo ♦ Extension Agent - IPM ♦ mgcattaneo@ag.tamu.edu

<http://lrgvipm.tamu.edu>

Newsletter Printing Sponsored By: Ag. Credit of South Texas

2401 East Highway 83
Weslaco, Texas 78596
Telephone (956) 968-5581
Fax (956) 969-5639



LRGV IPM Website:
<http://lrgvipm.tamu.edu>
IPM Website: <http://ipm.tamu.edu>
TPMA Website: <http://tpma.org>

Volume XXXI, No. 7

May 26, 2006

General Situation

The Lower Rio Grande Valley has received no additional rain since the last rain storm on May 14 & 15. The dry dusty conditions have returned. Several cotton fields have reached peak bloom. Grain sorghum is maturing and harvesting will probably begin within the next two weeks.

During peak bloom to first open boll, cotton water usage will peak. Proper timing of irrigations will increase the efficiency of water use by the cotton plants. Once the cotton plants start to bloom, growers should monitor the number of nodes above white flower (NAWF). Find the highest 1st position white bloom and count the number of nodes above this flower. The NAWF will indicate what stage the cotton plant is and whether you need to continue adding water and fertilizer to extend the boll setting period. Once the plant has reached cut-out (5 NAWF), the plant water usage will decrease and additional irrigations will not improve the yield potential.

Boll Weevil

During this May moratorium for the Boll Weevil Eradication Program, the individual grower is responsible for their boll weevil insecticide applications. Boll weevil punctured squares have been observed and reported in scattered fields throughout the valley. Fields should be scouted twice a week to determine if boll

weevils have moved into the field. “Randomly inspect 100 1/3 grown squares from four or more representative locations in the field and from various portions of the plant. If boll weevil damaged square levels reach 15 to 25 percent from the time of squaring to peak bloom, the economic threshold level has been reached and an insecticide application is necessary” (excerpt from Managing Cotton Insects in the Lower Rio Grande Valley 2005).

Bollworm/budworm

Bollworm activity has increased in several fields. Scattered fields have a high percentage of bollworm and beet armyworm egg lays. However, insecticide treatments should not be based on egg lays. Several eggs will not hatch due to the dry conditions and increased beneficial activity. Again, scouting is your best option to determine if an insecticide is justified. “After bolls are present, the economic threshold has been reached when 10 small larvae (less than 5 days old) are present and 10 percent of the green squares have been damaged by larvae.”

“After initiation of insecticide applications. The fields should be checked closely 2 to 3 days following the first application. The economic level has been reached when bollworm eggs and 10 small larvae are found per 100 plants and 5 percent of the squares and small bolls have been injured by small bollworms or

tobacco budworms” (From Managing Cotton Insects in the Lower Rio Grande Valley 2006).

Whitefly

Silverleaf whitefly continue to be found in fields. Minute pirate bug adults and immatures have been observed feeding on whitefly adults and immatures. Minute pirate bug adults are about 1/8 inch in size and have a black X pattern on the back. The immatures are yellow-orange in color, with red eyes.

Aphids and spider mites

Cotton aphid and spider mite populations seem to have decrease in some fields. However, these populations need to be monitored.

Beneficial Insects

Beneficial insect activity has been noted in most fields. Beneficial insects will begin migrating out of the maturing grain sorghum and corn fields into the cotton. This will provide added protection against pests in the blooming cotton.

Sorghum Midge

It is that time of year again. Sorghum midge has been reported in some fields. Sorghum midge can build up on the earlier planted sorghum and move into the later planted sorghum in damaging numbers. The estimated latest sorghum flowering date is May 10 to most likely escape significant damage by sorghum midge.

“To determine whether insecticides are needed, **evaluate crop development, yield potential and sorghum midge abundance daily during sorghum flowering.** Because sorghum midges lay eggs in flowering sorghum grain heads (yellow anthers exposed on individual spikelets), they can cause damage until the entire grain head or field of sorghum has flowered. The period of susceptibility to sorghum midge may last from 7 to 9 days (individual grain head) to 2 to 3 weeks (individual field), depending on uniformity of flowering.”

“To determine if adult sorghum midges are in a sorghum field, check at mid-morning when the temperature warms to approximately 85° F. Sorghum midge adults are most abundant then on flowering sorghum grain heads. Because adult sorghum midges live less than 1 day, each day a new brood of adults emerges. This fact requires sampling almost daily during the time sorghum grain heads are flowering. Sorghum midge adults can be seen crawling on or flying about flowering sorghum grain heads.”

“The simplest and most efficient way to detect and count sorghum midges is to inspect carefully and at close range all sides of randomly selected flowering grain heads. Handle grain heads carefully during inspection to avoid disturbing adult sorghum midges. Because they are relatively weak fliers and rely on wind currents to aid their dispersal, adult sorghum midges usually are most abundant along edges of sorghum fields. For this reason, inspect plants along field borders first, particularly those downwind of earlier flowering sorghum or johnsongrass. If no or few sorghum midges are found on sorghum grain heads along field edges, there should be little need to sample the entire field. However, if you find more than one sorghum midge per flowering grain head in border areas of a sorghum field, inspect at least 40 more grain heads from the entire fields (avoiding plants within 150 feet of field borders). Calculate the average number of sorghum midge per flowering grain head. Sample at least 20 flowering grain heads for each 20 acres in a field.”

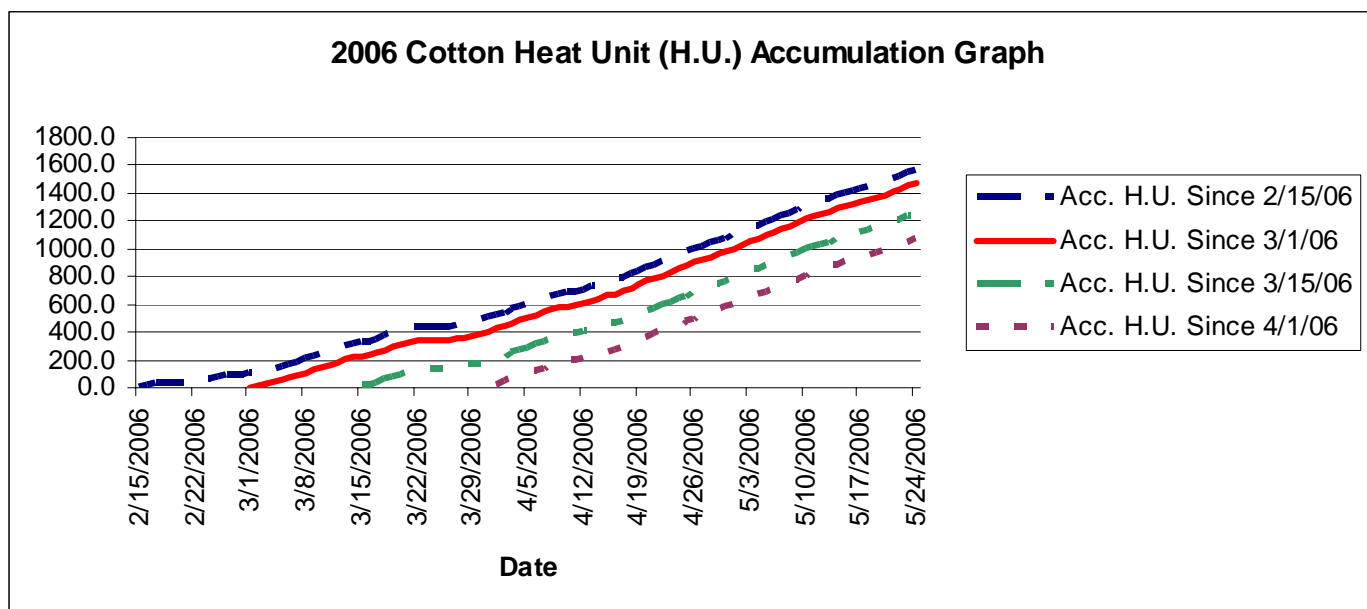
“Base the need for insecticide treatment on the number of adult sorghum midges per flowering grain head after at least 20 percent of the grain heads in a field are flowering. Tables 14 and 15 present economic injury levels for susceptible or resistant sorghum hybrids” (From Managing Insect and Mite Pests of Texas Sorghum).

Table 14. Economic injury levels based on number of adult sorghum midges per flowering grain head of susceptible sorghum hybrid.

Control cost (\$) per acre	Crop market value (\$) per acre								
	100	125	150	175	200	225	250	275	300
	Number of sorghum midges								
6	2.4	2.0	1.6	1.3	1.2	1.1	0.9	0.8	0.8
8	3.0	2.5	2.2	1.8	1.6	1.4	1.2	1.1	1.1
10	3.5	3.0	2.6	2.2	1.9	1.7	1.5	1.4	1.3
12	3.9	3.5	3.1	2.7	2.3	2.0	1.8	1.6	1.4

Table 15. Economic injury levels based on number of adult sorghum midges per flowering grain head of resistant sorghum hybrid.

Control cost (\$) per acre	Crop market value (\$) per acre								
	100	125	150	175	200	225	250	275	300
	Number of sorghum midges								
6	12	10	8	7	6	6	5	4	4
8	15	13	11	9	8	7	6	5	5
10	17	15	13	11	10	9	8	7	6
12	19	17	15	13	11	10	9	8	7



Special Thanks to the IPM Program Sponsors

Frisby-Bell Gin Co.
Hargill Growers Gin
Harlingen Gin Co.
La Feria Co-op Gin & Supply
Lyford Gin Association
Progreso Co-op Gin
Rangerville Co-op Gin
RGV Gin Company
Ross Gin Co.
Tri-County Cotton & Grain Co.
Willamar Gin Co., Inc.
Willacy Co-op

Adams Farms
San Miguel Partnership
SRS Farms
Russell Plantation
Bayer Crop Science
Beltwide Cotton Genetics
Delta & Pine Land Company
Dow Agrosiences
Dupont Crop Protection
Monsanto Company
Syngenta
Agriliance

Helena Chemical co.
UAP
Valley Co-op Oil Mill
Wilbur-Ellis Co.
Ag. Credit of South Texas
Hidalgo County Farm Bureau
LRGV Cotton and Grain Producers, Inc.
Sparks Family Limited
Texas State Bank
Texas Boll Weevil Eradication Foundation
Willacy County Farm Bureau