Lower Rolling Plains Pest Management News

August 7, 2008

Volume 11, Issue 11

General Cotton Condition

Temperatures from July 27 through August 5 have been brutally hot. During this time period the weather station at Wastella recorded temperatures above 99°F and as high as 104.6°F on 6 of the 10 days. None of the temperatures were lower than 97°F. Hopefully, by the time you receive this edition of the newsletter, tropical storm “Edouard” will have brought some good rains. Some cotton fields, which have had some rains or had good underground moisture, are generally holding up surprisingly well. Because of the severe conditions more and more fields are already at cutout (less than five nodes above white flower). Many of the fields have only 1 to 2 nodes above white flower. Shedding of small squares and small bolls can be found in all fields, but severely stressed fields are losing a lot of this fruit. The figure illustrates which fruiting stage is most sensitive to shedding from environmental stress.

Insect Pests

Very few cotton bollworm eggs are being found in program fields, but moth numbers have been increasing in our moth traps since July 28 (see figure on next page). More moths can be found resting in fields, mostly those that are irrigated. Also, I have noticed more cotton bollworm moths in whorl stage grain sorghum. We could begin to have an increase in egg lay from this moth activity. Cotton aphids continue to be found in localized areas of cotton fields, but the temperatures and natural enemies are keeping populations contained.

Grain sorghum in the IPM program area is either in the grain filling stage (soft and hard dough) or in early whorl stages. Fields with sorghum heads in the hard dough stage are less likely to have significant damage from “worms”. Fields with heads in the milk to soft dough stages still should be scouted for worms. Fields in the early whorl stages should be scouted, but we have limited options for
worm control in dryland situations. Dr. Pat Porter, Extension Specialist, and Brant Baugh, Extension Agent—IPM, conducted a insecticide trial in the Lubbock area on whorl stage sorghum. In this trial insecticides were applied with a CO₂ backpack sprayer calibrated to deliver 10 gallons per acre using flat flan nozzles. All of the registered insecticides tested (Lorsban, Lannate, and Ammo) were ineffective in controlling larvae in the whorl. Intrepid provided relatively good control, but this product is not registered for use on grain sorghum.

The following is an excerpt from Focus on South Plains Agriculture, (volume 47, no. 12) by Dr. Pat Porter explaining the damage potential of caterpillar larvae to grain sorghum at different growth stages. Small sorghum is not immune from significant damage. Very young plants, those in the five leaf stage (approximately 3 weeks after emergence) to growing point differentiation (about one month after emergence and 7 – 10 leaf stage, depending on maturity class) are at risk. These growth stages correspond to stages 2 and 3 in How A Sorghum Plant Develops. We do not have formal thresholds for caterpillar pests on sorghum at these stages. However, Dr. George Teetes, retired TAMU sorghum entomologist, used a personal “worry level” of two medium sized larvae per plant and something like 50 – 70 percent of plants infested with live larvae. Stage 4 is what we normally think of when we talk about “whorl stage” sorghum, and is when the flag leaf is visible in the bottom of the whorl. Plants can withstand much more foliar damage at this time. Our threshold is when larval feeding reduces leaf area by more than 30 percent OR when larval feeding is damaging the growing point within the whorl. Leaves can withstand a lot of damage, the growing point cannot. Don’t make decisions based solely on leaf damage. It is important to unwrap plants to inspect the growing point. Stage 5, boot stage, is at risk because even one large larva can do a lot of damage to the young head while it is compacted in the whorl. Headworms are what we get at Stage 6 (half-bloom), Stage 7 (soft-dough), and even Stage 8 (hard dough). The thresholds for headworms were recently revised by Greg Cronholm and Allen Knutson, and there are different thresholds depending on whether the larvae are mostly small, mixed in size or large in size. Refer to Managing Insect and Mite Pests of Texas Sorghum for a complete explanation of headworm thresholds and scouting.

Besides the “worms” in grain sorghum, we will need to monitor fields, for this point on, for sorghum midge when heads start flowering. While sampling for head worms this week, I looked at a few heads with flowers and found midge. During flowering, grain sorghum maybe susceptibility for 7 to 9 days, depending on the uniformity of flowering. Scouting for midge is usually best done between 10:00 a.m. to 2:00 p.m. or after temperatures reach 85° F. Only sorghum heads with yellow blooms need to be scouted because this is the only stage that female midge lays eggs. Adult midge do not live longer than 1 day, but a new brood of adults emerge each day. An economic threshold can be determined by using the following equations:

\[
\text{Number of sorghum midges per flowering head} = \frac{(\text{Cost of control as } \$ \text{ per acre}) \times 33256}{(\text{Value of grain as } \$ \text{ per cwt}) \times (\text{Number of flowering heads})}
\]
This equation calculates the number of midge per head that would justify treatment by using the total cost of control, value of grain, and number of flowering heads per acre. To determine the number of flowering heads per acre, record the number of flowering heads along a length of row equal to 1/1000 of an acre. For 30 inch rows, this would be 17.4 feet, and 13.1 feet 40 inch rows. Then multiply the number of flowering heads within that distance by 1000.

**Upcoming Meetings**

**2008, Big Country Wheat Conference, August 19th,** at the Big Country Hall on the grounds of the Taylor County Expo Center, 1982 Lytle Way, Abilene, TX. This conference is conducted by Texas AgriLife Extension Service offices from Callahan, Fisher, Jones, Nolan, Runnels, Shackelford and Taylor counties. Individual registration is free if you pre-register to one of the sponsoring counties by August 15, thereafter registration is $20.00. The conference will begin with registration at the door from 7:00 a.m. to 8:00 a.m. For more information contact the Taylor County Extension office at 325-672-6048, or any of the sponsoring Extension offices.

**2008 Monsanto Technology Field Day, Tuesday, September 23rd.** Located at Steve Chapman Farms (1.5 miles E of Hwy 378 on FM40), Lorenzo, TX. Registration begins at 9:00 a.m. For more information contact your local Monsanto Representative or call 888-851-5177.

**2008 Bayer CropScience Field Day** will be September 16 and September 17. Location has not be set at this time. For more information call 806-765-8844 or 806-765-8845.

---

**Grower Meetings**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Scurry County</td>
<td>Nolan County</td>
<td>Mitchell County</td>
<td>Jones County</td>
</tr>
<tr>
<td>Farmers Coop Gin E Hwy 180 8:30 a.m.</td>
<td>Central Rolling Plains Coop Gin 8:30 a.m.</td>
<td>Producers Coop Gin 8:30 a.m.</td>
<td>Farmers Coop Gin Stamford</td>
</tr>
</tbody>
</table>

Educational programs by the Texas AgriLife Extension Service serve people of all ages regardless of socioeconomic level, race, color, religion, sex, disability or national origin. The information given herein is for educational purposes only. References to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Texas AgriLife Extension Service is implied nor does it imply its approval to the exclusion of other products that also may be suitable.
Cotton Bollworm Moth Traps

No. Moths

Calendar Date

06/23 06/30 07/07 07/14 07/21 07/28 08/04

Jones Co.1
Jones Co.2
Mitchell Co.
Nolan Co.
Scurry Co.