

Lower Rolling Plains **Pest Management News**

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Cotton

Cotton is a fascinating plant. Some fields have 30% to 50% of the bolls open and some will be ready to harvest in October. Cotton that had cutout in the early part of August with very few bolls have put on at least a foot of new growth (7 to 10 fruiting branches). These plants are now loaded with anything from pin head squares to flowers. But, the bolls on these plants are starting to pop open. Some of the later planted fields or fields that had some timely rains are loading up with a fair number of bolls. The boll size also varies considerably with bolls being the size of a pecan or walnut to some as large as a golf ball.

Insect numbers continue to be light in cotton even though cotton bollworm moth numbers have increased in Nolan and Scurry counties (See graph). I have not come across a field with any significant numbers of eggs or larvae. Still fields with small bolls, blooms, and squares should be scouted as small worms could develop in these fields. The question to treat these fields will depend on pest numbers and susceptibility of the fruit to insect damage. The blooms and small squares will be susceptible to damage, but will they develop into a good harvestable boll. In general, cotton bolls in most fields have developed to the point that they are safe from feeding damage.

These cold fronts have been keeping temperatures down and has brought some rain across the region. Since September 1, our daytime temperatures are averaging 87° F and our nighttime lows are around 65° F. This translates into below normal heat units being accumulated. For September 1 to September 8, the number of heat units accumulated has only been 125 which averages to 15.6 HU per day (Table 1). If temperatures continue to stay low, what are the chances of a bloom developing into a good harvestable boll. In our area, the heat units required for a bloom to develop into an open boll is from 750 to 850 heat units. Looking at the past number of heat units accumulated from September through November our probability of getting the necessary heat units is not to favorable (Table 2). We will need exceptionally warm temperatures the rest of this month and through November. I thought it

Table 1. Heat Units Accumulated from Selected Dates to September 8.

From	9/08/08
7/20	1025
8/1	725
8/10	502
8/20	338
9/1	125

Table 2. Accumulated Heat Units by Month.

Month	Avg.	
	2000-2007	Range
September	440	346-551
October	188	110-267
November	43	1-78
Total	671	

would be interesting to project the number of heat units that could be accumulated based on the average heat units per day for September and October. This projection is shown in table 3. This just further illustrates the chance of getting a good boll from any blooms in September is very low. So those fields which have put on a lot of new growth and fruit after previously cutting out does not have much of a chance of making a late crop.

Table 3. Projected Heat Unit Accumulations from Selected Dates to September 15, October 1 and 15, and November 1.

From	9/08/08	9/15/08	10/1/08	10/15/08	11/1/08
9/1	125	230	455	545	635
9/10	-	75	300	390	480
9/20	-	-	150	240	330
9/30	-	-	15	105	195

Heat Units in column 9/08/08 are actual heat units accumulated from September 1. Heat Units for 9/15/08, 10/1/08, and 10/15/08 columns are estimated heat units based on 15 heat units per day during September and 6 heat units per day during October.

Grain Sorghum

Combines were busy harvesting early planted grain sorghum before this cool rainy spell. A lot of the late planted grain sorghum is flowering or in the grain developing stages. Sorghum midge infestations continue to be below economic numbers. Sorghum head worms can be found in all sizes (small < 1/4 inch, medium 1/4 inch to 1/2 inch, and large > 1/2 inch). Most are in the medium size range. In fields I have scouted the cotton bollworms are more abundant than fall armyworms.

Dr. Pat Porter, Extension Entomologist—Lubbock, wrote the following in Focus on South Plains Agriculture last Friday "At this point there is no practical reason to differentiate between the two species when making control decisions. This is because we expect adequate control of either species with pyrethroids. That being said, remember that large larvae are a lot more difficult to kill than are medium sized larvae, and fall armyworm is harder to kill than corn earworm. All of this suggests that high rates of pyrethroids might be a wise choice when one is faced with high numbers of worms, large worms, and more fall armyworms in the mix." Lorsban can be added to the pyrethroids, but there is a 30 day pre-harvest interval for sorghum grown for grain, forage, fodder, hay or silage when Lorsban is used at the 1 pint (or less) per acre rate. There is a 60 day pre-harvest interval when Lorsban is used at a rate higher than one pint per acre. The other option for control is to use Lannate at 24 fl. oz. per acre. This product provided good control last year when there were fall armyworms and large worms.

The following is taken from my previous newsletter on July 10 (volume 11, no. 7) which explains how to calculate the economic threshold for treating headworms. First, there are two formulas to use for determining the treatment level (number of larvae/head). If larvae are medium sized (1/4 to 1/2 inch) use the following formula:

$$\text{Number of medium-sized larvae per head} = \frac{\text{Cost of control as \$ per acre} \times 9754}{\text{Grain value as \$ per cwt} \times \text{No. heads per acre} \times 0.19}$$

For example, if control cost = \$8.00/acre (including chemical plus application costs), grain value = \$9.50/cwt, and the number of heads per acre = 36,000.

Treatment threshold will be 1.2 or more medium size worms per head.

If majority of the worms are larger than 1/2 inch in size the following formula should be used to calculate the treatment threshold:

$$\text{Number of medium-sized larvae per head} = \frac{\text{Cost of control as \$ per acre} \times 9754}{\text{Grain value as \$ per cwt} \times \text{No. heads per acre}}$$

Then if all factors are the same, as previously stated, calculations will be:

The treatment threshold for large larvae will be a minimum of 0.2 larvae per head (or at least 1 larvae per five heads).

This shows the damage potential of large larvae and the importance of making applications when larvae are from 1/4 to 1/2 inch in size.

As previously reported, small larvae (up to 1/4 inch) consume very little grain (about 10 percent of the total) and about 80 percent of them die in this stage. **Therefore, small larvae should not be considered in determining the economic injury level.** If most headworms are this size, sample the field again in 3 to 4 days.

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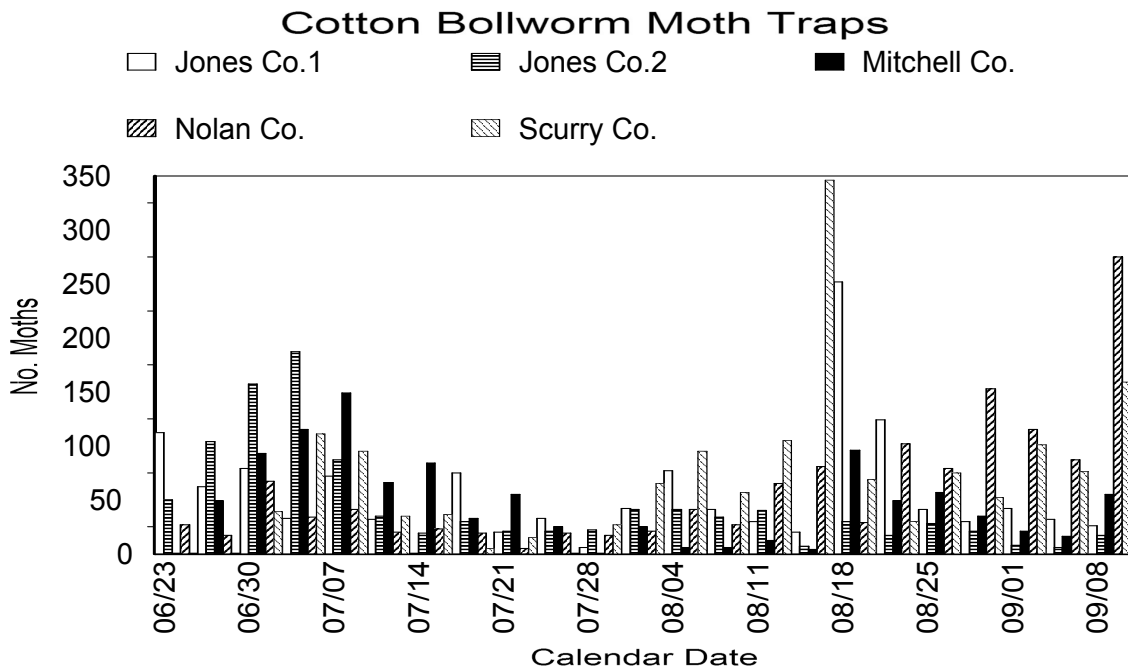
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Upcoming Meetings

2008 Monsanto Technology Field Day, Wednesday, September 24th. 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 has been **changed to September 30th and October 2nd.** Meet at the Ranching and Heritage Center in Lubbock. Buses will then take you to their test plots at the Texas Tech University farm and back for lunch. Please RSVP by calling 806-765-8844 or 806-765-8845.

Ag Waste / Pesticide Collection Program sponsored by The Texas AgriLife Extension Service, Texas Department of Agriculture, and Texas Commission on Environmental Quality will be September 24 from 8:00 a.m. to 1:00 p.m. at the Taylor County Expo Center. Individuals can bring their unwanted or unused (waste) pesticides for disposal. There is no charge and this allows individuals a place to dispose of their old chemicals that have accumulated over time. The program is strictly voluntary and no one is required to participate. The participants do not have to identify themselves. Individuals are asked to fill out a short survey to help determine how the materials should be handled. For more information about the upcoming Agricultural Waste Pesticide Collection program, please call the Taylor County Extension Office at (325) 672-6048 or TCEQ at (512) 239-3100 or send an e-mail (recycle@tceq.state.tx.us).



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