

# Northwest Plains Pest Management News

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The first notable hot dry “blow” of the summer occurred this week. Most crops continue to progress very well. A few dryland and or limited irrigation fields are beginning to show moisture stress. Overall, crops look very good but cotton is behind normal development.

Corn continues to be at peak moisture demand, requiring .36 or more inches per day under hot windy conditions. Without rainfall 2 inches of irrigation per week will be necessary to sustain the crop and maintain soil moisture levels.

Pests are relatively quiet in corn with the exception of a few fields with hot spots of spider mites. Corn should be regularly monitored for mite infestation. Established economic thresholds were developed using a fast acting and effective miticide. Oberon is a viable remedial and effective miticide but is not fast acting. If it is going to be used a prompt treatment should be made. The delayed application of a slow acting pesticide may allow the targeted pest to do an unacceptable amount of damage before the pest is suppressed below economic levels. With that said, the established economic threshold for

<b>Cotton Heat Unit Accumulation<sup>1</sup></b>			
Location	Current	2006	Long Term <sup>2</sup>
Farwell	721	1060	
Friona	688	1142	
Muleshoe	711	1143	909
Muleshoe WR	750	1158	

<sup>1</sup> DD 60 based on May 1

<sup>2</sup> Based on Muleshoe long term weather data 1971-2000

spider mites in corn is as follows:

Control cost per acre	Market Value (\$) per acre				
	500	550	600	650	700
15	18/9	16/9	15/8	14/7	13/7
20	24/13	21/11	20/10	18/10	17/9
25	29/16	27/14	25/13	23/12	21/11

*% infested leaves per plant / % total leaf damage*

I expect the second generation southwestern corn borer moth flight to occur sometime in the next two weeks. Eggs are creamy white, flattened, approximately 1/8 inch in diameter and can be laid singly or in groups of 2 to 3 or more. When in groups eggs are laid in an overlapping pattern resembling fish scales. Eggs will develop 3 parallel red bands about 1 day after they were laid. Eggs hatch in about 5 days.

Second generation larval feeding is most damaging. Small larvae will feed on leaves, ear shoots, husks, and silk for about 5 to 10 days before tunneling into the stalk or ear

<b>Daily Water Use</b>	
Crop	Inches per day
Corn	.32-.36
Cotton	.26
Grain Sorghum	.25
Bermuda grass	.20
Fescue/ Bluegrass	.26

shank and continuing to feed. Full grown larvae will move down the plant, bore into the stalk and tunnel down into the crown below ground level



*Single SWCB egg.*

where an overwintering chamber is constructed. Then before sealing the chamber larvae move up 2 to 6 inches above soil level and girdle the stalk by chewing away nearly all tissue in a groove around the inside of the stalk leaving only a thin layer of tissue. Girdled plants are particularly susceptible to lodging. Ear shank feeding may result in dropped ears as corn begins to dry down. Stalks in which corn borers have feed are also more susceptible to secondary stalk rot infestation.

Yield losses may occur as a direct result of stalk and or ear shank feeding, as well as lodging.

First generation Southwestern corn borer eggs and small larvae are difficult to detect. Plants should be checked for eggs, larvae and larval feeding damage. Plants with feeding damage should be dissected to locate and identify the pest responsible for the damage. Second generation Southwestern corn borer will lay 75% of their eggs on the upper surface of the middle 7 leaves; the ear leaf, two above and four below. Inspection should be concentrated in this zone. A sufficient number of plants across the field should be inspected to get an accurate representation of the percentage of plants infested with eggs or larvae.

The established economic threshold for Southwestern corn borer is when 20-25% of plants are infested with eggs or newly hatched larvae.

When Southwestern corn borer infestations meet or exceed economic thresholds an

insecticide application may be justified. There are a variety of insecticides available to manage Southwestern corn borer in corn. Timing is critical when making an insecticide application; insecticides must be applied prior to larvae boring into the stalk to be effective. Insecticides should be selected carefully; some are harsh on beneficial arthropods and may cause a secondary outbreak of an existing sub-threshold spider mite population. More than one insecticide application may be necessary to protect corn from an extended Southwestern corn borer egg laying period. Bt corn is very effective in controlling Southwestern corn borer.

An occasional bloom was observed in some area cotton fields, hopefully most fields will be in full bloom shortly. Plant bugs continue to infest much of the area cotton. Low levels of aphids are also present making management decisions for plant bugs even more difficult. A harsh insecticide application may "flair" the aphids causing a secondary pest outbreak.



*Adult Lygus bug.*

*Monti Vandiver*

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