

# WEST PLAINS IPM UPDATE

News about  
Integrated Pest  
Management in  
Hockley,  
Cochran, and  
Lamb Counties  
from  
Kerry Siders

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## Current Crop and Pest Situation

**Cotton** ranges from just beginning to bloom with as many as 7 nodes above white flower (NAWF) to past physiological cutout with 2 NAWF. Looking at the IPM scouting program fields as a representation of the area cotton crop, we see that 60% of the fields have reached physiological cutout (< 5 NAWF) the end of last week. For those fields we need approximately 400 more heat units (HU) to be safe from most insect damage. With the current weather trend of +20 heat units per day, those fields which have reached cutout should be safe around August 20<sup>th</sup> (400 HU divided by 20 HU/day = 20 days, added to August 1st). The remaining 40% of the cotton acreage has such a wide range of maturity levels and is difficult to say when it will be safe. I would approach these later maturing fields from this angle. We historically say that August 15-20<sup>th</sup> is the last effective bloom date, or that date which a boll can be formed, have time to mature, and contribute to yield. Now that is not to say that a boll cannot be formed after the 15-20<sup>th</sup> of August but the odds of it contributing to yield and especially quality are low. Therefore, if we continue with this weather pattern into September, and are accumulating 20 HU/day we can add 20 days to this date of August 15-20. This would give us a target of September 4-9<sup>th</sup> for the latest those late fields would need to be monitored for possible insect infestations. The point being is that NAWF is an important gauge of maturity and can help project time needed to be safe from insects and especially manage irrigation.

Insect activity has been extremely light this season. Yet, do not let this lull you into complacency. The scouts and I are currently **not** finding cotton aphids, but I feel certain that there are small colonies around. I am not overly concerned about this but it does cause me to warn you on these fields where late or excessive nitrogen has gone out to keep close watch for aphids to increase. In most cases though as the plant matures and its physiology change, aphids have a more difficult time in maintaining populations. Continue to monitor non-Bt cotton varieties. To-date however, we are not picking up anything. I do believe the milo and corn have taken the brunt of the worm pressure. One thing which has really not begun yet but will over the next several days is fruit being shed from the cotton plant. This shed will not be insect induced. But rather an adjustment in the fruit load, which has been in excess of 80% and even 90% in some fields since squaring began. So the plant is unable to retain more than approximately 65% of fruit. So hopefully any fruit coming off is either second or third position small squares and from the upper portions of the plant.

**Grain sorghum** continues to be relatively quiet as well. We need to monitor for greenbugs/aphids (sugarcane aphid), mites, midge and headworms. No widespread issue of concern here just that each field can be so different from one turnrow to the next. So check the underside of leaves, particularly next to the midrib for aphids and mites; check for midge in flowering sorghum; and shake sorghum heads in a bucket to dislodge worms from the head. Id those worms and get an average number per head. If you need assistance with decision making on whether to treat or not give me a call 638-5635.

**Peanuts** continue to be a bright spot. Some light worm activity. Current temperatures have slowed development of disease pressure. Weeds continue to be pest #1 as with in other crops.

## **COTTON IRRIGATION MANAGEMENT**

A few producers are thinking ahead to when they can begin backing off and shutting the water down. Again, the NAWF measurement can be helpful. This will let you know where your current top boll position is and how old previously set bolls are. As an example if we have a white bloom three nodes down from the top I would say you have 2 NAWF. Now I am only referring to first position fruit. So just below that white flower should be a small boll which would be approximately 1-3 days old. The boll directly below it was formed 60 heat units before this small boll. Which on average this year is 4 days. So if there are four first position bolls present below this top small boll we can estimate that the oldest boll is somewhere around 16 days old right now. In other words that oldest boll would have been a bloom around July 22th. Okay, now that you know how to judge the age of a boll you should consider which of the uppermost bolls you can realistically take to harvest. Let us be optimistic and say that the white bloom up near the top is the last one we think we have time to mature out. Okay then, this flower will be a boll in a day or so. This boll cannot be water stressed for about twenty days. So this plant needs good water through August 26<sup>th</sup> . Now this moisture may come from irrigation or rain. After August 26<sup>th</sup> this boll can take moderate stress, meaning that it can wilt down on a hot afternoon as long as it completely recovers the next morning. By September 20 or when this last boll is about 45 days old it can take severe water stress and it should not cause quality or yield loss. In fact, you would like for this to be the ideal target of when the soil dries out. In fact, to continue to water any later would delay maturity and could cause harvest problems. So I throw these dates out only as examples. You will have to look at your field, take into consideration your irrigation system, and what is a realistic target for last effective bloom date and yield expectations. I would be glad to help you assess your particular field situation.

## **Bollworm Management**

Cotton fields should be scouted carefully every 3 to 5 days during periods of predicted moth egg-laying activity. In fields with fewer than five squares per row foot (approximately 67,000 per acre), bollworm populations often collapse and cease to be a problem.

Eggs and newly hatched worms are usually found in the plant terminals and indicate possible outbreaks. Natural mortality agents such as weather and predators frequently control these pests before any damage occurs. Once worms have grown to larger than ½ inch long, natural and insecticidal control are less effective. Insecticides applied to control 1/2-inch long worms are only moderately effective.

Frequently, examination of the upper third of the plant (leaves, stems, squares, blooms and bolls) is all that is needed to make a sound management decision. However, when eggs are being laid all over the plants or when



60 percent or more of the bolls are mature, whole plant counts should be used. Mature, unopened bolls are firm, cannot be dented when pressed between the thumb and forefinger, and cannot be cut easily with a sharp knife. **After bolls are present.** Divide the cotton field into four or more manageable sections depending upon field size. Make whole plant inspections of five randomly chosen sets of three adjacent cotton plants in each section. Count the number of eggs, worms and key predators encountered and estimate the number of eggs, worms or key predators per acre using the following formula:

*Number worms, eggs, or key predators counted multiplied by (the plant population divided by the number of whole plants checked) = the number of worms, eggs, or key predators per acre.*

*The plant population can be calculated on 40" rows by: counting the number of plants in approximately 13' 1" row feet. Do this in at least 4 locations and average. Multiply that average by 1000. This gives you plants per acre.*

*As an example let us say I counted 45 plants on average in 13' 1" from 4 spots a field. I multiply by 1000 and get 45,000 plants per acre. I scouted the field by checking 40 whole plants and found 10 bollworm eggs, 3 small worms, and 12 key predators like ladybugs and lacewing. I take 45,000 plants/acre and divide by 40 plants checked to get a multiplier of 1125. I simply multiply the number of eggs, worms or predators by the 1125. Therefore, I have approximately 11,250 bollworm eggs/acre; 3,375 small bollworms/acre; and 13,500 key predators.*

Treatment may be justified when counts average 5,000 or more small worms per acre. However, if two or more key predators are found for each small worm, control measures may not be needed or a microbial insecticide may be used. The actual treatment level will vary according to the ability of the individual scout to locate small larvae, the age structure of the infestation, maturity of the crop and crop value.

### **Suggested insecticides for control of bollworms**

<u>Insecticide</u>	<u>Formulated amount</u> <u>Per acre</u>
Capture® 2 E *	2.6 - 6.4 oz
Baythroid ® 2 E *	1.6 - 3.2 oz
Leverage ® 2.7 SE *	3.75 oz
Karate ® 2.08 CS *	1.6 - 2.56 oz
Ammo ® 2.5 E *	2 - 5 oz
Decis ® 1.5 E *	1.62 - 2.56 oz
Asana XL ® 0.66 E *	5.8 - 9.6 oz
Steward ® 1.25 SC	9.2 - 11.3
Lannate ® 2.4 LV	1.5 pts
Methyl Parathion (4E)	2.5 - 4 pts
Curacron ® 8 E	8 - 16 oz
Tracer ® 4 SC	2.14 - 2.9 oz
Larvin® 3.2 F	1.5 - 2.25 pts
Scout® X-tra 0.9 E *	2.56 - 3.37 oz
Fury ® 1.5 E *	2.82 - 3.83 oz

**\* The use of synthetic pyrethroid insecticides may increase cotton aphid numbers.**

## Private Pesticide Applicators Training

The Texas A&M AgriLife Extension Service will offer the required private Pesticide Applicators Training (PAT) each month. This training is required by Texas Department of Agriculture before taking the exam for obtaining the license. A private pesticide applicator is a person who uses or supervises the use of a restricted-use or state limited-use pesticide or a regulated herbicide for the purpose of producing an agricultural commodity. This license is not for those receiving monetary compensation for a pesticide application.

To participate in training individuals must call 806-894-3159 by 3pm the day prior to the training in Levelland or 806-385-4222 ext 235 by 3pm the day prior to the training in Littlefield, and 806-266-5215 for training in Morton. The trainings will begin promptly at 1pm at the Extension Offices (see addresses below). There is a \$60 fee for training materials. This is only the required training. Testing will be conducted at a separate time and location.

Future PAT Trainings:

- August 24 Littlefield Extension Office, Courthouse, Room B-5
- September 22 Morton Extension Office 200 W. Taylor Avenue
- October 27 Levelland Extension Office 1212 Houston Street
- November 17 Littlefield Extension Office, Courthouse, Room B-5
- and December 19 Morton Extension Office 200 W. Taylor Avenue

*Texas A&M AgriLife Extension seeks to provide reasonable accommodations for all persons with disabilities for any educational meetings. Please contact us to advise us of the auxiliary aid or service that you will require a week in advance of training.*

## See You On The Radio

IPM Radio Program Aglife on Fox Talk KJTV, radio 950 AM, on Wednesdays from 1:00 to 2:15 pm.

Texas A&M AgriLife Extension in Hockley County Report on KLVT Levelland, High Plains Radio Network, radio 1230 AM, Wednesdays from 7:30 am to 7:45 am.

**West Plains IPM Update** is a publication of the Texas A&M AgriLife Extension Service IPM Program in Hockley, Cochran, and Lamb Counties.

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