

WEST
PLAINS
IPM
UPDATE

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

August 25, 2022

Vol. 27 – No. 15



Economic Damage from Cotton Insect Pests Comes to an End

By Dr. Subas Vyavhare, Extension Entomology Specialist, Lubbock

As we approach the end of August, one question that has been received lately more often than any other is at **what stage do I stop worrying about insects in cotton?** The major insect activity that I am noticing at this stage is around lygus bug and stink bugs.

Stop sampling and treating for lygus bug when cotton accumulates 350 DD60 (degree days 60) beyond five nodes above white flower (NAWF). The window of vulnerability for developing cotton bolls to lygus bug damage is significantly less after ~8 days post-anthesis when the carpel wall has become sufficiently thick and mature that probing activity is less damaging. Lygus bugs will continue to feed on squares and small bolls in the plant terminals even beyond 5NAWF+350 DD60 but those fruiting structures will not contribute significantly towards the yield (not to the extent to offset the cost of an insecticide application). Same applies to bollworms. Fields that have reached 5NAWF+350 DD60 are no longer susceptible to small ($\leq 1/4$ inch) larvae. This time frame may widen for larger worms but if you are not picking up on any bollworm activity at this stage, it is very unlikely they will appear from somewhere and reach damaging levels anymore.

Stink bugs, on the other hand, will have to be scouted for a bit longer. They prefer larger bolls (about quarter size diameter) and may need treatment up to 450 DD60 after 5NAWF. Once the cotton reaches 450 DD60 beyond 5NAWF, sampling and treating for stink bugs may no longer be necessary since bolls produced after this point will not become fully mature or contribute significantly to the crop yield. Now, it is possible that this value may shift slightly due to factors such as boll shading, variety, irrigation, presence of pathogen (e.g., boll rot) but it shouldn't change to the extent that we need to keep scouting and spraying going into mid-late September or October. As per the recommended threshold, we will have to hit 50% boll damage going into 8th week of bloom to trigger a spray and the 8th week of bloom wouldn't go beyond August.

We have had instances in the past where stink bug damage (hard locks) was found in harvestable bolls in October—this scenario would be most likely from the earlier infestations that went undetected.

Discussion on the above article on next page

CROP & PEST SITUATION

Cotton Insects As I refer to previous issues of this newsletter, we will see that on July 28th (Vol. 27 – No. 11) our average cotton plant, based on the IPM Scouting Program fields, indicated that there were 5.5 nodes above white flower (NAWF). Then the following week, on August 4th the newsletter (Vol. 27 – No. 12) indicated that that week 60% of all fields were <5 NAWF. Therefore, a majority of our cotton reached physiological cut-out (5 NAWF) on or around July 31- August 1. Based on my data as the Levelland National Weather Service Observer for August 1-25 we have accumulated 449 heat units. So, by August 26th a majority of the cotton acres in our scouting program area from Ropesville to Morton and north near Littlefield will have sufficient heat units to meet the criteria of 5 NAWF + 450 DD60 Heat Units to be safe from economic insect damage. The exception to this is cotton aphids. I have not seen cotton aphids in 18 days. So, this is not the “all clear, everyone walk away from the cotton” signal. However, the signal to be very careful in spending money to control an insect situation that will not return in final yield has been given.

Cotton Nematodes Now is an excellent time to soil sample for cotton root-knot nematodes. Soil sampling is important in determining populations of plant parasitic nematodes capable of reducing yield. Nematode samples collected prior to harvest may give the best estimation of nematode populations. In collecting soil samples, several factors, such as sampling method(s), sample preparation and handling and field conditions must be taken into consideration.

Several methods can be used in obtaining soil samples. Samples should be collected following a random, crossing, or zig-zag pattern (Fig. 1). A total of three composite samples (from 1/3 of the field each) should be collected per field. Additional samples may be required if dealing with different soil types in a field. A composite sample consists of 15 to 20 soil cores taken from a depth of 12-inches using a soil probe, or a narrow-bladed shovel. Samples should be taken within a 4-inch radius of the taproot, as it is important to have root fragments present in the sample. The soil cores should be placed in a bucket and thoroughly mixed being sure that any dirt clods are broken-up. A sub-sample of 1-quart should be placed in a sealed plastic storage bag. Nematode samples need to be kept cool (*not frozen*), and out of direct sunlight. In addition to the collection and handling of samples, field conditions at the time of sampling may impact test results. Close attention should be paid to the amount of soil moisture at sampling. Samples should not be taken if soil moisture is too wet or too dry. Samples should be sent to a qualified laboratory capable of making microscopic evaluations to determine populations.

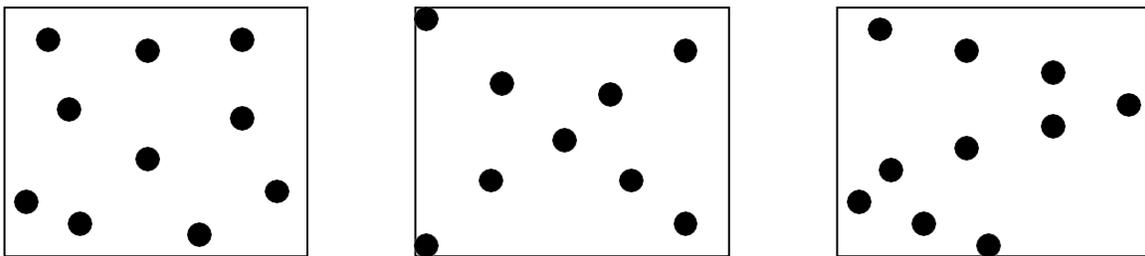


Figure 1. Sampling patterns used to determine nematode populations in soil. Left) random, Middle) crossing or X and Right) zig-zag patterns.

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

Editor: Kerry Siders, Extension Agent-IPM

Contact information:

1212 Houston St., Suite 2 Levelland, TX 79336

(806) 894-3150 (office),

638-5635 (mobile), or 897-3104 (Fax)

ksiders@tamu.edu (E-mail)



Partners with Nature

Educational programs of the Texas A&M AgriLife Extension Service are open to all people without regard to race, color, religion, sex, national origin, age, disability, genetic information, or veteran status. 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 Texas A&M AgriLife Extension is implied.

The Texas A&M System, U.S. Department of Agriculture, and the Commissioners
Courts of Texas Cooperating

