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Lygus Bug Awareness and Considerations – by Phillip Kidd

I began my career in cotton scouting in 1991. It was an aphid year for those who remember. From aphids to bollworms to boll weevils to pyrethroid resistant bollworms and other pests, in my opinion, regarding treatment decisions, Lygus bugs are the most difficult pest we have to deal with in the High Plains.

First of all, they are often difficult to detect, as the adults may move in and out of fields within hours. Sampling methods also cause some confusion, since different cotton growing regions use different methods. Each method has its own economic threshold.

My personal preference is very sneaky visual inspection for adults and use of a black drop cloth for immatures. The threshold, by "the book" ranges from one to six per six row feet, depending on crop stage. In early season I count immatures as two, because they are residents and will definitely not leave for a couple weeks. Adults may come and go.

Then, you need to evaluate the damage being done by these critters. That damage can be highly variable according to the developmental stage of the plant. This is where our current issue comes into play.

When you read all the literature, which we reference here, you will likely come to the conclusion that the current crop is "safe" from significant Lygus damage. I agree with "the book" for many of our area fields. But there are always exceptions and I believe we have many fields in our area this year which are exceptions to the general rules.

Here's why: The economic thresholds (ETs) and the guides were developed in average cotton, in average years and average lint prices. Since we had a wet spell during our normal May planting window, we have many fields planted a little late. We also received unusually high rainfall amounts and have fields with well above average yield potentials. On top of those factors, we have an unusually high price right now.

By the way… contact your respective gin manager if you would like to take advantage of this high price and contract some acres.

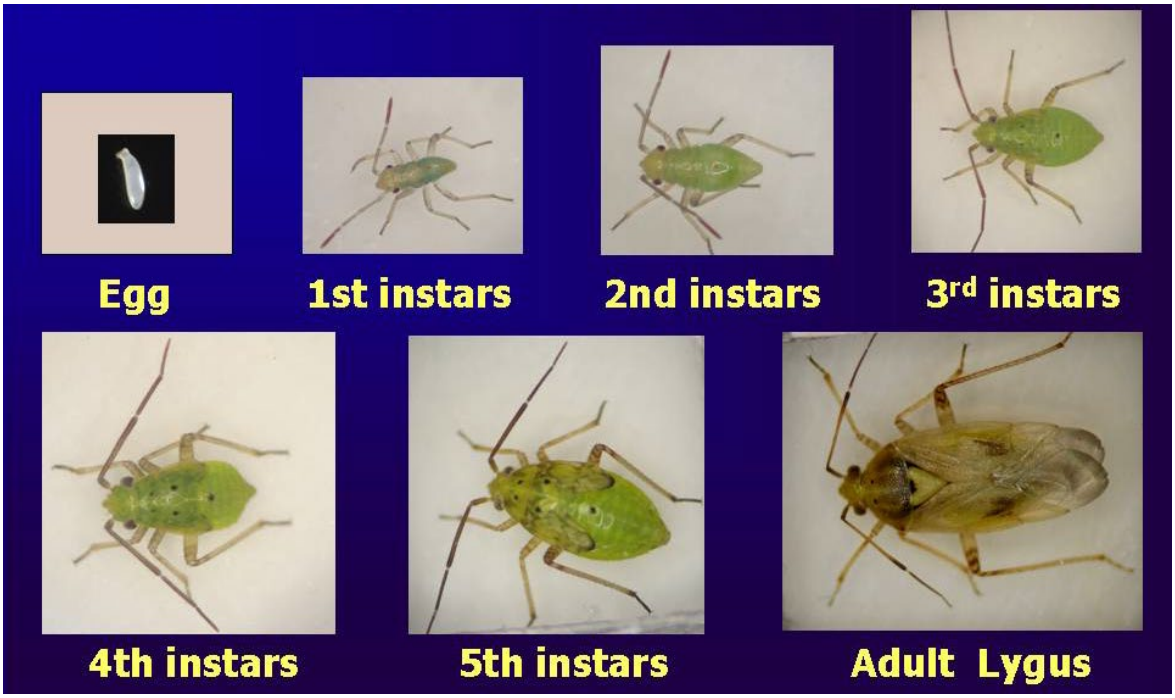
The fields at highest risk are the late planted, high yield potential fields. I have been in some of these fields this week and have seen the highest Lygus populations I've ever seen in my career. These fields have a significant portion of their bolls, which are nickel size and smaller. We estimate these bolls could account for up to 10-15% of the total yield.

I'm somewhat simple minded on these things and just like to do the math. So… in a 3-bale potential field, and assuming 15% of the total yield arises from bolls of susceptible size, this could be 225 lint lbs. At 85 cents per pound (December futures today is 94+) that's $191.25 per acre at risk. "The book" is probably based on something more like 1000 lbs X 5% susceptible X 60 cents = $30 per acre (about the same as treatment cost).

I believe most of the 2-bale and under cotton has much less susceptible fruit and will rarely justify treatment at this stage of the game. But producers should still be scouting these fields. Even a lower yielding field can need treatment if it was planted late enough.

Please call me (806-292-2148) or any Windstar Gin manager if you would like to talk more about Lygus scouting and treatment.

***Lygus hesperus* (western tarnished plant bug) – life stages**



Slide courtesy of Texas A&M AgriLife Extension Service

General Lygus Information

- Blayne Reed, the Hale/Swisher Extension IPM agent has discussed the Lygus situation in recent newsletters. To access his newsletters, click on the following link.
- https://hale.agrilife.org/files/2021/08/August-27-2021.pdf
- For a direct link to his most recent (September 3) newsletter where he describes significant Lygus challenges, click here: https://hale.agrilife.org/files/2021/09/September-3-2021.pdf
- Excellent information and photographs concerning this pest has been provided by Texas A&M AgriLife Extension's Dr. Suhas Vyavhare (Lubbock) and Dr. David Kerns (College Station). For more information on this insect, click on the following link and proceed to page 20 of the PDF of Managing Cotton Insects in Texas:
- https://lubbock.tamu.edu/files/2019/04/ENTO-075-2019.pdf
- Discussion of Lygus bugs was copied from this publication and is provided below.
- There are three predominant species of lygus in Texas cotton: the western tarnished plant bug, the tarnished plant bug, and the pale legume bug. The western tarnished plant bug is the most common species in the western half of Texas, and the tarnished plant bug dominates in the eastern half of the state. These species are similar in appearance, biology, and the damage they cause. In this publication, we will call them lygus and discuss them as a single pest.
- Lygus bugs feed on cotton terminals, squares, flowers, and small bolls.
- Adults are ¼ inch long, have a conspicuous dark-colored triangle in the center of the back, have wings, and vary from pale green to yellowish brown with reddish brown to black markings.
- Nymphs (immatures) are uniformly pale green with red-tipped antennae; late instars have four conspicuous black spots on the thorax and one large black spot near the base of the abdomen. The nymph's wings are not developed, but they can move rapidly and are difficult to detect in cotton foliage. It is easy to mistake small nymphs with aphids, cotton fleahoppers, and leafhopper nymphs, but their broader shape, quick movements, larger size, and the specific characteristics discussed above help differentiate them.
- Lygus bugs prefer legumes to cotton and usually occur in large numbers in alfalfa, potato fields, or on wild hosts such clovers, dock, mustard, pigweed, Russian thistle, vetches, and wild sunflower. Lygus bugs are attracted to succulent growth.
- In cotton, their feeding causes:
- Deformed bolls
- Dirty bloom (damaged anthers in blooms) and puckered areas in petals
- Shedding of squares and small bolls
- Stunted growth
- Small black spots or small, dark, sunken lesions on the outer surface of the developing bolls that can penetrate the boll carpel wall and damage developing seeds or lint.

Lygus Adults and Damage