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## COTTON INSECTS

Our cotton crop's final run toward maturity has been helped by the return of normal/above normal temperatures and drier conditions. Almost two weeks of below average temperatures and cloudy, rainy weather slowed crop progress and added days to the insect damage vulnerability period. The cooler, higher humidity days also increased insect survival. Luckily for us, bollworm problems remained mostly south of the High Plains and cotton aphids continued to lay low in most fields. This could change this weekend as weather prognosticators suggest the return of cooler temperatures and increased rain chances. I say, pray for an open, warm September/October but make plans for the possibility of cooler weather through the fall.

### **Area wide, heavy late season bollworm infestations have failed to develop** thus far.

There has been significant bollworm activity to the south of us in areas such as Big Springs, Stanton, Roscoe and Ballinger. This was the result of a



prolonged (10-12 days) egg lay in lush fields under favorable weather conditions. Reports of 25,000 to 50,000 eggs per acre were received. Under hot, dry conditions and in a crop that has been in cutout for one or more weeks, this level of eggs would not have been a problem for us. But fields with 6-8 NAWF, with recent irrigation and with 80's temperatures, we could expect losses here that would cause concern.

It would appear that the general lack of strong winds from the south has delayed the arrival of significant bollworm moth activity in our southern areas. I'm not complaining! With every day and every heat unit accumulated, our crop will move further away from being vulnerable to bollworm infestation establishment and damage. Once cotton "cuts out" and stops producing more squares (and even sheds some of the small worthless fruit), one day old bollworms have a tough time finding food they can sink their teeth into. But if you have a field with young tender bolls and squares, these young bollworms can get a start in these fruit and then move into larger, tougher, valuable bolls. I was told that there were some control problems with bollworms to the south of us. Some folks thought pyrethroid resistant budworms were the cause; others declared that



bollworms were getting harder to kill. But the reality of the situation was more like this: a lush, tall crop with canopy closure and delayed applications resulted in coverage issues. Low rates of pyrethroids failed to address this situation. Higher pyrethroid rates and more spray volume would have corrected this problem.

The egg lay to our south is apparently subsiding while the southern areas of the High Plains are beginning to see increased egg lays and bollworm caterpillar numbers. I still believe that 2004 bollworm infestations are going to be less wide spread and at lower intensity than in some past years. We really haven't experienced the heavy, widespread infestations of the past for several years now.

Corn is also producing fewer corn earworms (aka bollworms) to move into cotton this month. I am told that we can expect 10-20% fewer corn earworms this year compared to last year. We have seen egg lays in corn country over the past two weeks that have produced worm infestations ranging up to 22,000 per acre. But these have been in the later, lush fields. This is all good news but does not mean that all of us will escape bollworm problems. The late, lush fields with later irrigations will be very vulnerable to August/early September bollworm infestations. Watch these fields very closely. I would not treat a field that had threshold numbers around 10,000 per acre unless the caterpillars were 1/4 inch or larger. Let predators and weather do their mortality part. I know the cotton management guide has 5,000 SMALL larvae per acre as the threshold but this is for those of you that can't see 1/16 to 3/16 inch long worms. This isn't always an eyesight problem either. I wear glasses and have no problem finding worms that are just hours old. Finding small worms is a test of one's ability to see small things in a very complex searching arena (cotton plant). Some of us have what it takes and some of us don't. That is one reason to hire a consultant. **See the 9th issue of [FOCUS](#) and our cotton insect management [guide](#) for more bollworm information.**

**Aphid infestations have remained in check** except in those fields that have required treatment(s) for bollworms, pink bollworms or *Lygus*. Pyrethroids often increase aphid problems by both killing predators and keeping them from reestablishing for up to 10 days and

by increasing their reproduction. Other classes of insecticides usually just kill predators, but for shorter periods of time than the pyrethroids.



Once aphids move out on to leaves from squares, flowers, bolls and stems, they often increase rapidly to damaging levels (average around 50 per leaf for two

sample periods) and require treatment to prevent yield loss. Our more advanced fields no longer are vulnerable to a yield loss from aphids but still could support enough aphids to cause a sticky lint problem once bolls open. Luckily for us we have not had a sticky cotton threat for many years and appear to be headed toward another clean year.

***Lygus* remain a minor pest problem for some fields**, especially the later developing fields and those with late irrigations. [Surveys](#) of weed hosts and cotton from Hale County to Dawson County indicate that in general, *Lygus* numbers remain low. The charts do indicate we could expect increases as we move through September. Be extremely vigilant with cotton near alfalfa when it is cut and weedy areas if these are mowed or sprayed with herbicides. Fields that have



significant *Lygus* activity usually have a lot of "dirty blooms" caused by *Lygus* feeding. Remember that bolls are "safe" from *Lygus* damage once they have accumulated 350 heat units past white flower. Bollworm safe bolls need 450 heat units and pinkie safe bolls need 650 heat units.

**Pink bollworm infestations are spreading out** from their original early season epicenters. This was not unexpected as pinkie moths (like boll weevils) fly out increasingly longer distances as their hostable fields shrink in number with each day closer to maturity. We expanded our trapping efforts recently so that we will now be providing pink bollworm [trapping data](#) from not only Gaines, Yoakum



and Terry counties; but also Dawson, Lynn, Lubbock, Cochran, Hockley, Bailey and Parmer counties (8 traps each). We are

picking up moths in all but Parmer County at this time. We are also seeing an increase in catch in the Gaines County area. Trap numbers will go much higher as we move into September. Hopefully, the Texas Boll Weevil Eradication Foundation will get their traps out soon so that we can get a more complete distribution picture. This would allow us to determine the high-risk areas for next year's planting decisions (Bollgard varieties or not).

I have been having trouble in explaining why we have been catching so many moths in areas that have sprayed refuge acreage many times with a pyrethroid. This should have dropped moth numbers significantly. But here is a possible explanation. Some of the acreage planted to Bollgard varieties this year was in non-Bollgard cotton last year. Even though Bollgard cotton was planted on top of this acreage in 2004, overwintering moths (actually larvae that then became moths) still continued to emerge in what is now Bollgard acreage. Since only the moths in the non-Bollgard areas were sprayed, moths emerging in Bollgard (formally non-Bollgard) areas were unaffected and continued to pour out across the area. I also believe that we have had an extended emergence this year. All of this coupled with very good survival conditions (environment)

has made this year's pinkie problem that much worse.

A soon to be named task force will look at best management strategies for harvest, post harvest and next year's in-season management. This task force will also establish research priorities and seek funding support. I expect we will have overwintering studies in place this year to look at survival and emergence profiles next year. We will also evaluate different cultural practices that would limit survival this winter. If you have any suggestions of what the taskforce needs to do, please contact me (I am the chair).

Fields with bolls less than 650 heat units old need to be checked for rosetted blooms and bolls cracked for infestation determination.

Look for warts on the inside of the boll wall and then look for very small worms using a hand lens. Once larvae gain some size and turn pink you won't need a hand



lens to find them. A level of 10-15% infested bolls is enough to trigger a treatment if there are enough bolls left that are vulnerable to damage to cover the cost of the application.

**JFL**

## BOLL WEEVIL WATCH

**Trap catches are increasing in the Permian**

**Basin zone** but remain virtually nonexistent in the other High Plains zones. Hopefully, once the St. Lawrence zone starts their diapause program around September 13<sup>th</sup>, we can start to see numbers wind down in the PB



zone. Only the Western High Plains zone has caught any weevils the past two weeks (1). With this kind of progress, I foresee the potential of further reductions of trapping and resources to support eradication in our area (this means lower cost). The other good news is that the Rio Grande Valley will be having a referendum the first part of November and the Northern Blacklands in December or January. These are the last two areas left outside of eradication. Texas will soon be on its way to being weevil free. **JFL**

### WEST TEXAS AGRICULTURAL CHEMICALS CONFERENCE

The 52nd Annual West Texas Agricultural Chemicals Conference is scheduled for Tuesday, September 7, 2004 at the Lubbock Memorial Civic Center, 1501 6<sup>th</sup> Street. Registration begins at 7:00 a.m. and the program starts at 8:00 a.m. There are 5 CEU credits for private, commercial and noncommercial applicators and 5.5 CEU credits for Certified Crop Advisors.

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