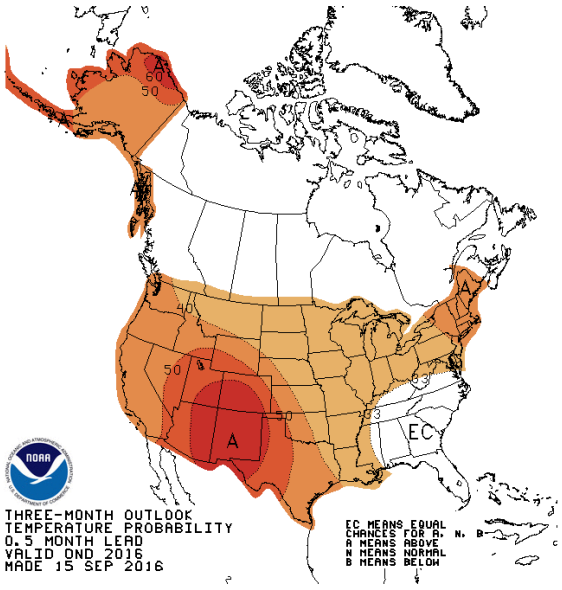
Texas A&M AgriLife Extension

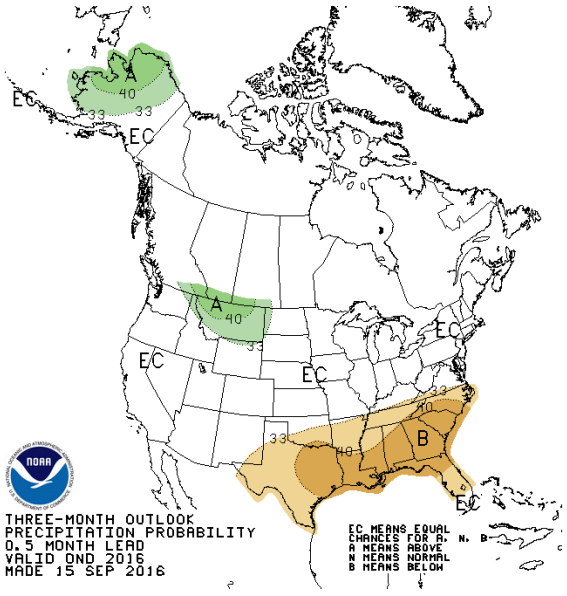
Plains Pest Management

SEPTEMBER 30, 2016

General Status

It has been a few weeks since our last newsletter. During this time, some pests continue to try and make nuances of themselves. Several are just too late via calendar date and / or crop stage to be an economic concern, but there are a few in select fields that we have been forced to deal with. Mostly I am referencing alfalfa and the green cloverworm along with sorghum and sorghum type hay crops for headworms and sugarcane aphids. We have even had some concerns in wheat already from fall armyworms. Meanwhile, most of us have harvest, and harvest aids, and weather conditions for the next few weeks to months on our minds as we look to get our crops in.





Cotton

None of our Plains Pest Management scouting program cotton fields are ready for harvest aids quite yet. Our most mature fields came in this week at 48% open boll, 5 NACB, with a boll maturity rating of 2.18. Our youngest field came in this week at 4% open, 8.2 NACB, with a boll maturity rating of 1.09 and could be considered quite lush and even rank. For several fields in situations similar to our youngest fields, we recommended quite a bit of managed maturity treatments this week. I also like what I see for utilizing this 3/8 rate of PPO in dealing with lighter yielding but regrowthy cotton this week. For a full description of this type of treatment, please see our Plains Pest Management Newsletter releases for September 16, 2016 or September 11, 2015 at http://hale.agrilife.org/newsletters/IPM/.

When making decisions about harvest aid readiness for your fields, I urge producers and consultants to monitor closely the three main standard factors in cotton, percent open boll, nodes above cracked boll, and the sharp knife (boll maturity rating) technique. There are several subtle nuances but for the most part, when any one of these three factors are met, the field is ready for harvest aids. Tommy Doederlein, EA-IPM Dawson & Lynn, had an outstanding explanation of these measure and how to take them in his September 10, 2016 newsletter:

When to Defoliate

Timing defoliation is usually a difficult decision, because we are balancing potential yield and quality loss in the bottom bolls versus additional weight gain in the top bolls. There are several techniques to determine when we can apply harvest aids and still retain maximum yield. These include percent open boll, sharp knife and Nodes-Above-Cracked-Boll (NACB).

Distinguishing which green bolls will be harvestable is an important skill needed to use these techniques. Not all unopened bolls on a plant will be harvestable at defoliation. Characteristics of mature harvestable bolls include: 1) they are too hard to depress between thumb and forefinger, 2) they are too hard to slice easily with a sharp knife, 3) they have lint that strings out when bolls are sliced with a sharp knife, 4) they have seed coats that are dark yellow to tan in color and 5) they have seed cavity filling with no jelly material present.

Crop maturity determination is critical for a successful harvest-aid program. Premature crop termination has been shown to reduce lint yield, seed quality, micronaire, and fiber strength. Harvest-aid chemicals cannot increase the rate of fiber development. Only additional good growing weather including open skies and adequate heat units combined with functional leaves can mature cotton bolls.

Percent Open Boll

Long term approaches have been to apply a defoliant when 60% to 75% of bolls are open, and a dessicant application when 80% or more of bolls are open and remaining green bolls can be cracked when squeezed. Although this is a useful gauge, more accurate techniques are available. When the crop has a "fruiting gap" the percent open boll technique can give erroneous recommendations.

To calculate, count the number of open bollsand total harvestable bolls per plant on 3 row feet from four randomly selected areas of a field. Divide the number of open bolls by the number of total harvestable bolls, then multiply by 100.

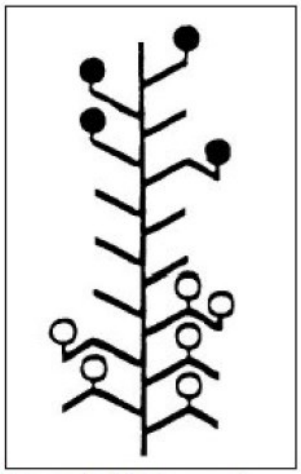


Figure 1. At 60 percent open boll, this crop would not be fully mature and safe to defoliate.

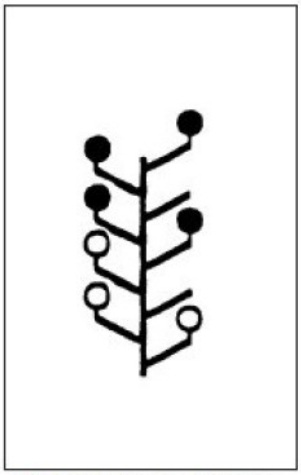


Figure 2. Even at 45 percent open boll, this crop would be mature enough for safe defoliation.

Sharp Knife Technique

Cutting into green bolls is a highly accurate method. Inspect the cross section of the seeds looking for signs of immaturity: jelly surrounding the seed, glistening water in the boll, cotyledons white and not yellow-green, and white seed coat instead of tan or black.

Immature

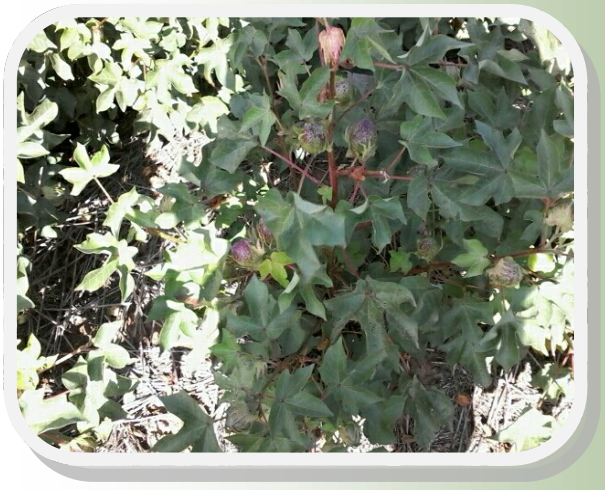
Requires more heat units - boll opener will probably open but will not fluff.

Towards maturity

Ready for boll opener.

Mature

Fully mature - should open with a dessicant (paraquat)



Close up of a Swisher Field that should have plenty of time to finish, but is not ready harvest aids yet.

Uppermost harvestable boll maturity rating of 2.3 from a Hale field this week. The field averaged 2.18 .

Photo from a Hale field at 6 NACB.

Sorghum & Corn

We had little activity in our late corn this week. These fields are finally reaching late dent stage and developing past most serious disease issues and is now unattractive to bollworms / corn earworms. The rust diseases, both common and Southern are common in most fields but have run their course with limited impact and little fresh disease spread. We will remain watchful for spidermites until the fields develop past this pest too, but our populations have been low for the past few weeks.

We still have plenty going on in sorghum. There remain many are sorghum fields still at risk and attractive to headworms (bollworms and fall armyworms) and a population of worms looking for a good host. Predators continue to build and have aided us in the headworm fight greatly in sorghum and cotton this year. In our later sorghum fields we are finding around 0.8 to 4 headworms per head, but very few, if any worms reaching a size larger than ½ inch in length, the size headworms need to be to be a true economic problem. Predation and parasitism look to me to be the leading cause for the 'disappearance' of worms in our sorghum before they become an economic issue.

The problem for our more mature sorghum, currently past economic concern for headworms, and our later sorghum remains the sugarcane aphid. Through our differing research projects and field experience we are getting a better understanding of this aphid, but not soon enough. Over the past month, the aphid has gone from a difficult but manageable pest up to a pest in overdrive. What exactly kicks this pest in to overdrive is not known. We have had to treat 100% of our sorghum fields for this pest to date. Even the area's earliest planted sorghum, with harvest delayed due to weather, now has concerns over the aphid and harvest issues. Several fields are now being treated late or are under consideration harvest aids to speed harvest before the aphid causes combine clogging or lodging issues. Many of these harvest aids treatments are being mixed with Malathion. Malathion will not offer much SCA control, but has shown to reduce the chances of aphid harvest issues by 50% by chasing the aphid from the head while offering a 7 day PHI. The PHI for a full treatment of Sivanto or Transform is 14 days but should offer better insect control, if a second full application is needed.

Photo from Dr. Jourdan Bell's silage trial in Bushland. The same silage variety, with the one on the right over ET for SCA and treated late.

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For quicker pest alerts-

Plains Pest Bugoshere:
http://
halecountyipm.blogspot.com/

Pest Patrol Hotline, registration at:
www.syngentapestpatrol.com

We're on the air…

"Tuesday's with Blayne" from 6:30—7:00 AM on the HPRN network on 1090 AM KVOP-Plainview.

"IPM Wednesdays" from 1:00-2:30 PM on The FoxTalk 950 Ag Show. FoxTalk 950 AM - Lubbock.

"IPM Report with the Bruiser" from 7:06-7:15 PM on 1470 AM KDHN - Dimmit.

Alfalfa & Wheat

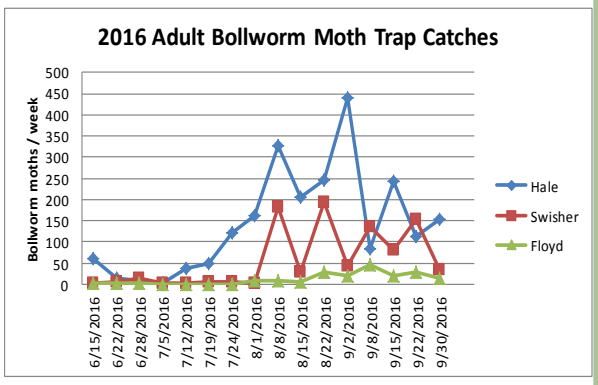
A few weeks ago, we gave an alert for green clover worms in soybeans and alfalfa in eastern areas of Floyd and Crosby. This week, we have found this pest in our PPM alfalfa fields doing serious damage. We are unsure what the exact ET is, but our average counts were 120 worms per 20 sweep net sweeps with 15% defoliation. Last week these fields were at 0.67 green cloverworms per 20 sweeps with <1% defoliation. We have reports from Floyd county alfalfa fields of complete defoliation from similar populations in 5 to 7 days.

Photo of just a few alfalfa stems shaken onto a drop cloth with several green cloverworms

Cloverworm defoliation spots starting to show in a Swisher alfalfa field.

I am getting reports of FAW in establishing wheat in areas north of Tulia and south of Canyon. These populations are reported to be high enough to threaten stand establishment.

Blayne Reed



Average number of fall armyworm moths per trap, Lubbock, Texas 2016.
Current year averages are based on two traps.