

# FOCUS on South Plains Agriculture

Texas AgriLife Research and Extension Center at Lubbock  
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## Cotton Insects

Cotton aphids  
Bollworm and fall armyworm

## Sunflower Disease

Sunflower rust

## Sorghum and Corn Insects

Sorghum midge on rampage in some places  
Fall armyworm numbers increase

## Insect Trap Counts

## Cotton Insects

### Cotton aphids

Over the past week aphids have blown up in some area cotton fields. They appear to be primarily relegated to late planted irrigated fields; particularly those that have thinner or skippy stands. However, with the recent rain we've had we need to watch the more mature cotton for re-growth which may support aphids in those fields as well.

To sample for aphids, select 10 leaves from the terminal portion of the plant, pick the leaf from the 3<sup>rd</sup> or 4<sup>th</sup> node down; do not pick the new small leaves. Also sample 10 leaves from the mid to lower canopy. Count the aphids from each leaf and average the number to get an aphid per 1 leaf estimate. Repeat this at 4 or 5 locations across the field. If you average 50 aphids per leaf you are at threshold and should consider spraying. If you have open bolls in the field the threshold is 10 aphids per leaf to prevent sticky lint issues.



*Cotton aphids*

Often we will see lady beetles come in and take care of the aphids before they get bad. However, this year I am not so sure there are enough lady beetles around to do the job. Aphid numbers were generally low in our corn and sorghum crops this year, and these crops usually build up a pretty good lady beetle population that moves over to cotton. However, I wouldn't count them out. If you are picking up 0.3 or more lady beetle adults or 0.2 or more lady beetle larvae per row-ft, and your aphid population is below threshold, there is a good chance that you will not have to spray.

If you see that you need to spray for aphids, based on recently collected data I would suggest considering Intruder at 0.6-0.8 oz, Bidrin at 8 oz or Carbine at 2 oz; although I am not currently comfortable with Carbine by air. In our test that is still ongoing, the aphids were averaging about 125 per leaf before spray and were increasing ([Click here to view the pre-spray data.](#)) There were very few beneficials in the field since it had been recently treated with a pyrethroid. At 3 DAT, the aphids in the check had increased to close to 200 per leaf. All of our treatments reduced the aphid population, but only Bidrin and Intruder (averaging about 25 aphids per leaf) had reduced them to below threshold (all treatments included Crop Oil Concentrate at 1% v/v) ([Click here to view the 3 DAT data.](#)) Under the cooler late August conditions, all of the products evaluated were slow acting so don't panic if things do not look good 3-5 days after treating. By 7 DAT, the Carbine had finally kicked in, and it along with Intruder had the lowest aphid counts, averaging about 25 per leaf. By this time the check had continued to build to almost 275 per leaf. So even after 7 days we were not able to totally clean up the aphids, even with our most active products. Aphids in the Bidrin treated plots, which showed decent initial knock down, had doubled since the 3 DAT rating, and were running close to 50 aphids per leaf (almost back up to threshold) ([Click here to view the 7 DAT data.](#)) Neither Centric nor Trimax Pro faired too well in this test. They both reduced the aphid population by 40-50% at 3 DAT, but experienced an aphid

increase up to about 115 per leaf by 7 DAT. Neither product was able to lower the aphid population below threshold.

Keep in mind that the aphid population in this test was high when we sprayed and was on the increase. This population should have been treated the prior week, before the aphids got out of hand. Regardless of what you use, take care to maximize spray coverage. This means slowing the ground rig down and increasing the spray volume to 15 gallons per acre or more. Also, avoid using flat fan nozzles. Stick to hollow cone or twin fan nozzles. Additionally, include a crop oil concentrate or a non-ionic surfactant. The aphicides we are using are translaminar (move into the leaf tissue) and these surfactants will help spread the product out over the leaf to maximize coverage. If going out by air, try to get your spray volume up to 5 gallons per acre.

### **Bollworms and Fall Armyworms**

We have yet to see the huge egg lay I was expecting, which is a good thing. However, there we are still seeing some light bollworm egg lays primarily in counties north of Lubbock (see last week's edition of FOCUS for more information on bollworms).

Fall armyworms have been low in most areas. However, Eric Best with Monsanto reported a field of Bollgard II cotton near Paducah that had a lot of fall armyworms feeding in the blooms. He reported that there did not appear to be any boll feeding, but they were moving from bloom to bloom to avoid the Bt toxins, and were able to complete development and pupate without causing economic damage. I hope to get a look at this field next week. DLK



*Fall armyworm feeding in a bloom*



*Fall armyworms can be distinguished from bollworms and beet armyworms by the inverted Y on their head*

## Sunflower Disease

### Sunflower rust

I have had several phone calls regarding sunflower rust (caused by *Puccinia helianthi*) this season. This disease can cause significant reductions in yield and quality under conducive environmental conditions. Initial symptoms consist of cinnamon-brown colored pustules. As the disease progresses several pustules on a leaf may coalesce and have an irregular shape. In some cases the pustules may be surrounded by a yellow (chlorotic) halo. Rust symptoms generally appear after at or after bloom on the leaves in the lower canopy.



*Sunflower rust pustules*



*Sunflower rust on a leaf*

Development of the disease can be observed on the upper leaves, petioles, stems, and the back of the flower head. Differences in

the reaction of sunflower hybrids to rust can be observed. In general, confection hybrids are more susceptible to rust than oil seed hybrids; however, the overall reaction of commercially available lines is unknown. Fungicides are another management option for sunflower rust. The number of fungicides currently available for use in sunflower is limited; however, emergency exemptions for use have been issued in the past. The fungicides pyraclostrobin (Headline, BASF Corporation) and tebuconazole (Folicur, Bayer CropScience) are currently being evaluated in research trials on the High Plains by Dr. Calvin Trostle. According to producers and consultants I have spoken with, fungicide applications are often made in conjunction with insecticide applications aimed at control of the sunflower head moth (*Homoeosoma electellum*). One thing to consider when taking this approach is the difference in coverage (i.e. carrier volume, spray tips, etc.) you are trying to obtain. Applications targeting the head moth focus on coverage of the sunflower head, whereas, uniform coverage of the plant canopy is required for management of rust. Other considerations when using fungicides usage rates, the total number of applications, and pre-harvest intervals. All of the aforementioned information is contained within the fungicide label.

Fungicide efficacy also depends on application timing. For best results, preventative applications (those made prior to infections occurring) will provide the best level of disease control. This could also play a role in choosing a product, as some fungicides may have a higher level of systemic activity. According to Extension personnel at North Dakota State University fungicides may be considered as a last alternative in controlling rust. As a general rule, fungicide applications are recommended when rust pustules cover 5% of the lower leaves at or before flowering and weather conditions are favorable for disease development. Much of the information provided in this article was taken from an [Extension Bulletin written by Thomas Gulya, Robert Venette, James Venette, and Arthur Lamey](#). Keep in mind it is the responsibility of the applicator to read and fully understand pesticide

labels. If you have any questions regarding sunflower rust, please contact your local Texas AgriLife Extension office. JW

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## Sorghum and Corn Insects

### Sorghum midge on a roll

Sorghum midge has reached alarming levels on some fields that are still flowering. Greg Cronholm, retired but still working IPM Agent in Hale and Swisher counties, called this morning and reported 4 - 6 midges per head in some fields. That is the good news. He also said that one field had 12 - 18 midges per head, and this is enough to entirely eliminate any yield for the day's flowering. If you have sorghum that has not finished flowering it is time to check for midge. Please refer to [Managing Insect and Mite Pests of Texas Sorghum](#) for thresholds and a list of suggested insecticides.

Fall armyworm and corn earworm numbers have rebounded in area traps. Together these two species comprise the sorghum headworm complex.

### Late corn: fall armyworm and mites

Most area corn is out of the woods and not at risk from insects or spider mites. However, there is some very late corn in the area that should be watched for fall armyworm and spider mites. I have discontinued fall armyworm traps in Lubbock County, but Greg is reporting high numbers in Swisher County in traps near late corn. Bt corn is relatively less affected by fall armyworm than is non-Bt corn. Spider mites do fine on both types of corn but will struggle with cooler temperatures. Mite season has mostly passed but very late planted fields should be checked. RPP

## Insect Trap Captures

- [Cotton bollworm Lubbock Co.](#)
- [Beet armyworm Lubbock Co.](#)
- [Fall armyworm Hale Co.](#)
- [Southwestern corn borer Hale Co.](#)

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