

Panhandle Pest Update



TEXAS A&M
AGRI LIFE
EXTENSION

Dr. Ed Bynum, Extension Entomologist
Texas A&M AgriLife Extension Service,
6500 Amarillo Blvd., West, Amarillo, TX 79106
Ebynum@ag.tamu.edu,
806.677.5600 ext. 612



August 30, 2017 Volume IX, issue 11

Predominate Pest Threats in the Texas Panhandle

The corn earworm (CEW), aka cotton bollworm, one of the sorghum headworms, and soybean podworm, is probably the primary pest of concern in cotton and a close second behind sugarcane aphids in grain sorghum. The earworm moths prefer corn, then sorghum, and cotton and soybean. There has been an increase in CEW egg lay in grain and forage sorghums all across the Panhandle. In sorghum, both the CEW and the fall armyworm feed on the developing grain kernels. However, fall armyworm numbers have been relatively low this season in our moth trapping sites across the Panhandle. The increased CEW activity in our sorghum crops could spill over to our cotton and soybean fields. A female moth is capable of laying 500 to 2000 eggs singly on cotton leaves, terminals, squares, blooms and bloom tags and bolls and

sorghum leaves and heads. Eggs will hatch in 3 to 4 days at an average temperature of 77° F. Larvae will feed on the cotton and soybean fruiting forms (cotton squares and bolls, soybean pods) and sorghum kernels for 14 to 18 days. The infestations can cause significant yield losses if not controlled.

Infestations could even reach damaging levels in Bt cotton, including Bollgard II, Widestrike, and TwinLink varieties. The latest Bt cotton traits, Bollard 3, Widestrike 3, and Twinlink Plus, should provide better protection from any Bt resistant caterpillars and from heavier infestation pressure. Historically, the Texas Panhandle rarely has had damaging infestations in cotton, but with the increased cotton acreage and the delayed fruit development this could be a year when we have damaging infestations.

Sugarcane aphids (SCA) have been increasing and spreading throughout the



Large bollworm boll damage

Photo: TAMU Entomology



Bollworm moth on cotton leaf - 8/30/17, Sherman County.
Photo by John Quillin



<https://twitter.com/TXPIPM>



<http://txppipm.blogspot.com>

Educational programs by the Texas A&M AgriLife Extension Service serve people of all ages regardless of socioeconomic level, race, color, religion, sex, disability or national origin. 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 the Texas A&M AgriLife Extension Service is implied nor does it imply its approval to the exclusion of other products that also may be suitable.



Panhandle Pest Update

2

Panhandle for last few weeks. In my forage sorghum trials at Bushland, there have been a lot of winged aphids moving into the field the past two weeks and populations are reaching treatable infestations. I am expecting populations to explode this week in my test plots. Currently, there are very few beneficial predators in the field. The predators present are mostly lady beetle adults and larva and minute pirate bug adults and nymphs. There have been an abundant of syrphid flies



Sugarcane aphids, winged and non-winged aphids, Photo: Pat Porter



Syrphid fly maggot

hovering in the field and more syrphid fly maggots are being found on the leaves this week. Unfortunately, beneficials are not abundant enough to prevent damaging SCA infestations.

Treatment Thresholds

For **cotton**, the treatment threshold has been modified and is based on boll damage instead of worm numbers per acre (see new Action Threshold Table). Our old bollworm threshold was 5,000 worms per acre that were larger than 1/4 inch long or 10,000 worms smaller than 1/4 inch long for non-Bt cotton. For Bt cotton, no treatment was not based on worms 1/4 inch or less in size. The threshold for larger than 1/4 inch worms was 5,000 worms per acre with 5-15% damaged fruit. For **soybeans**, a method of determining infestation is to use a drop cloth laid between the rows and vigorously shaking plants over the cloth. If 1 or more CEW larvae are found per linear foot of sampled row then the infestation is at the economic threshold. Another method is to look for feeding damage to the soybean pods. Treatment levels are recommended if 5% -10% or more pods are damaged from CEW larvae. In **grain sorghum**, our treatment threshold uses a formula to calculate the number of large ($\geq 1/2$ inch long) or medium ($> 1/4$ to $1/2$ inch long) sized worm per head to justify treating. This treatment threshold formula factors in the cost of control and the expected market value of the grain. The threshold formula is explained on page 22 of "[Managing Insect and Mite Pests of Texas Sorghum](#)".

Bollworm and Tobacco Budworm Action Threshold Based on Boll Damage

Cotton Stage	Action threshold (both Bt and non-Bt cotton)
Before bloom	≥ 8 worms ($\geq 1/4$ inch) per 100 plants wet populations threaten to reduce square retention below 80 percent
After boll formation	$\geq 6\%$ damaged squares and/or bolls and worms are present
Field that have accumulated 350 DD60s beyond 5 NAWF are no longer susceptible to first or second instar bollworm/tobacco budworm larvae. Action threshold should be adjusted according to yield potential and production system (dryland vs irrigated).	

Bollworm and Tobacco Budworm Action Threshold Based on Boll Damage

Tobacco budworms are rarely recorded in substantial numbers in the South Plains and Panhandle areas

Control Options

The majority of insecticides labeled for use to control worms in cotton, grain sorghum, and soybeans are pyrethroid insecticide products. There are a few other products with different modes of action, such as Prevathon, Lannate, Steward, and Blackhawk. Our home-grown worms that overwinter on the Panhandle are most likely susceptible to the pyrethroid products, but the corn earworm/cotton bollworms moths finding their way up here from south Texas could be more resistant to the pyrethroid insecticides. There have been reports of control failures of bollworms down state to the pyrethroid insecticides. Even though we do not know what the frequency of moths we have from south Texas, pyrethroid insecticides should still be effective when using higher label rates of name brand products, not generic pyrethroid products.

One negative impact from using pyrethroid insecticides is that they will be detrimental to the natural beneficial predator and parasitoid populations. This could be an issue where cotton fields have cotton aphids and grain sorghum fields are infested with sugarcane aphids. In these situations, you may want to use some other insecticide that is "soft" on beneficials. Insecticide options for situations with sugarcane aphids are available in "[Insecticide Selection for Sorghum at Risk to Sugarcane Aphid Infestations](#)".