



Pest e-alerts



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False Chinch Bugs and Headworms in Sorghum, 2018

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We have received reports of false chinch bug, chinch bug and sorghum headworms infesting sorghum. We have already discussed chinch bug management <http://entopl.okstate.edu/pddl/2018/PA%2017-20.pdf>. As sorghum begins to head, make sure your crop is not being damaged by false chinch bug or sorghum headworm. False chinch bugs injure plants by sucking the liquid in developing seeds when they are in the milk stage. Headworms eat developing seeds. Once the grain reaches hard-dough, neither should be a problem.

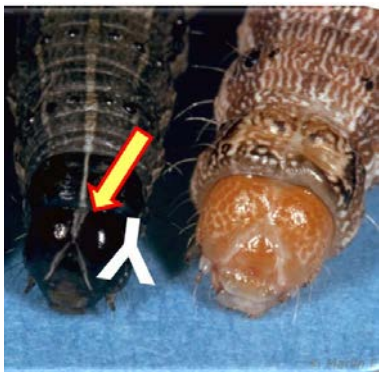


Description: False chinch bug adults measure about 1/8-inch-long, are dirty gray, with brown or black markings. Nymphs are ash-gray with brown-white mottling on the back and red mottling on the abdomen.

Description: Sorghum headworms are a complex of two species, the fall armyworm and the corn earworm. For the most part, corn earworms are the predominant caterpillar in grain heads, and fall armyworms are the predominate one in sorghum "whorls". The fall armyworm has a prominent white or yellow inverted "Y" on its head, which allows it to be distinguished from the corn earworm. Corn earworms don't have the inverted "Y" and vary greatly in color, ranging from light green or pink to nearly black. Both eat developing seed.



Fall armyworm (left), corn earworm (right)
Photo: DuPont Pioneer



Fall armyworm (top) Corn earworm (bottom)
Photo: Texas A&M Agrilife



Sampling: Examine sorghum heads to determine the need for control of panicle-feeding bugs and headworms. The good news is that one technique works for both pests! The shake bucket/baggie method of scouting works well for sampling fields. Using a 2.5 to 5 gallon bucket or white garbage can, carefully move to a plant without disturbing it, quickly place the head into the bucket, and shake it vigorously. Count 5 heads at six locations. Count all false chinch bugs and headworms that fall into the bucket or garbage bag. Adult bugs will fly out of the bucket, so be prepared to count “flying” bugs. Inspect at least 1 head per acre of field (minimum 30 samples) and continue scouting sorghum until the grain has reached hard dough.



Control Decisions:

The “rule of thumb” for headworm thresholds is based on a typical plant population of 25,000 plants per acre, a grain price of \$4.00 per bushel, and a treatment cost of \$12 per acre.

The threshold makes a difference as to whether they are large (greater than 1/2 inches or mostly medium sized (1/4 to 1/2 inches). If they are large, the rule of thumb is **0.5 worms per panicle**. If they are medium size, the rule of thumb changes to **3 worms per panicle**, and if they are a 50:50 mix of medium and large, the threshold is **1.5 worms per panicle**.

If insecticide costs are different simply calculate the (new price/12) and multiply the answer by the threshold: (Example $16/12 = 1.33$. New thresholds would be Large = $1.33 * 0.5 = 0.66$ worms per panicle, medium would be $1.33 * 3 = 5$ worms per panicle, and mixed would be $1.33 * 1.5 = 2.65$ worms per panicle.

False chinch bugs are not likely to cause economic injury when sorghum matures past the milk stage, so treatment for false chinch bugs after milk stage is not likely to provide economic benefit. Before milk stage, treat when scouting indicates more than 140 false chinch bugs per head. If maturity is variable, look to see where most of the false chinch bugs are located. If they are feeding on heads with seed past the soft dough stage, you may not need to treat a field.

Choosing an Insecticide: Now, prepare for the tricky part! If we only had to consider one pest, we would advise selecting the insecticide that works best on that pest. However, we now have to consider sugarcane aphid in all of our sorghum pest management decisions. In our opinion, if sugarcane aphid is already present and building, a producer must consider using either Transform® or Sivanto®. That narrows the choice options for combining another product to control false chinch bugs and headworms because pyrethroids, while effective, could flare the aphids.

After reviewing data from multiple years of insecticide trials throughout the SE US, we know:

The data suggests that products containing chlorpyrifos provide spotty control of headworms and false chinch bug is not listed on the label.

Prevathon® and Blackhawk® provide excellent control of headworms, but false chinch bug is not on their labels.

Diamond® while effective on headworms and false chinch bug, is a growth regulator and will take some time to work. We have not seen any data to suggest it will flair sugarcane aphid.

If you planted a sugarcane aphid resistant variety, and your scouting has not revealed any sugarcane aphid presence, a product such as Besiege®, Cobalt®, Concero® or Stallion® might be an option. They all contain a pyrethroid, but if sugarcane aphid is not an issue, they should be effective.

Consult CR-7170, *Management of Insect and Mite Pests in Sorghum*
<http://pods.dasnr.okstate.edu/docushare/dsweb/HomePage> for more information.

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