

Arkansas Corn and Grain Sorghum News

Jason Kelley, Glenn Studebaker, and Scott Akin

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Crop Status: Jason Kelley - Wheat and Feed Grains Extension Agronomist

Corn and grain sorghum crops are both progressing rapidly but are still behind in development compared to previous years. Delayed planting due to wet conditions and relatively cool weather early in the season has slowed overall crop development. According to the Arkansas Agriculture Statistics Service, as of July 6, 83% of corn had silked, compared to 94% in 2007 and 94% for the 5-year average. Overall, the corn crop was rated 71% good to excellent, 25% fair and 4% poor. The grain sorghum crop is also considerably later than in previous years with only 22% rated as headed. This compares to 62% for 2007 and 55% for the 5-year average. Grain sorghum condition was rated as 53% good to excellent, 42% fair and 5% poor.

Rain over the past few weeks has been spotty across much of the state. Good chances of rain are forecasted for today and tomorrow, so hopefully everyone will get some much-needed rainfall.

Sorghum Midge

Glenn Studebaker

Extension Entomologist, University of Arkansas Division of Agriculture Cooperative Extension Service

Growers need to be scouting their sorghum fields for midge. Although the sorghum midge is a very tiny insect (a tiny, orange-colored fly about the size of a gnat), it can be very destructive to grain sorghum. It is considered to be the most destructive pest of grain sorghum in Arkansas. Sorghum midge has the potential to drastically reduce yields, if not managed properly. We've seen an increase in the number of fields requiring treatment as well as damage from this pest over the last couple of years. The sorghum midge has a very short lifespan as an adult. Adults live only about 24 – 48 hours, during which time they mate, lay eggs and then die. This gives them a short window in which to attack grain sorghum. It is important to note that they **lay eggs only in flowering grain sorghum**. This translates into a very short window at which the grower can initiate control measures, since it is the adult stage that must be controlled.

Early in the season, midge will reproduce on Johnsongrass. Fields in the vicinity of Johnson grass should be scouted closely for this pest when the field begins to flower. Adults will lay eggs on flowering heads. The egg hatches into a legless larva or maggot and begins to feed on the developing seed. Because the larvae are inside the seed, they are difficult, if not impossible, to control with foliar insecticides. The adults, on the other hand, are easily controlled with foliar insecticides. Therefore, targeting applications towards adults is critical to manage this insect pest.

Because midge lay eggs only in flowering sorghum, flowering is the time at which fields should be scouted. Scouting for midge after flowering is too late. They have already done their damage, and the

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next generation has moved on. It is prudent to get out there and check fields at flowering. Also keep in mind that it can be difficult to find the tiny adult flies. They are not strong fliers and are nearly impossible to find on windy days. I would try to scout for them in the morning, before the wind gets up too high. Treat when an average of **one midge adult per head** is found in flowering sorghum. The field should be checked again in 4 or 5 days, if it is still flowering, and treated again if midges are above the threshold of one per head. We've had several fields that have required more than one application in the last few years. Below is a list of recommended insecticides and rates for sorghum midge in Arkansas:

Lorsban 4E	0.5 pts/acre
Dimethoate 4E	0.25 – 0.5 pts/acre
Lannate 2.4LV	0.75 – 1.5 pts/acre
Asana XL 0.66EC	2.9 – 5.9 oz/acre
Baythroid XL	1.0 – 1.3 oz/acre
Karate Z	0.96 – 1.29 oz/acre
Silencer 1Ec	1.92-2.56 oz/acre
Prolex	0.77 – 1.29 oz/acre
Mustang Max	1.28 – 4.0 oz/acre
Respect 0.8 EC	1.28 – 4.0 oz/acre

**If stink bugs are also present in the field, you may want to consider raising the rate on the above-listed insecticides to control them as well.

Stink Bugs in Grain Sorghum

We're also beginning to see a few stink bugs in grain sorghum. Sorghum can tolerate fairly high numbers of stink bugs, particularly later in the season. Treatment level for stink bugs in sorghum changes as the sorghum matures. During flowering through soft dough stage, treat for 5 stink bugs per head. When sorghum reaches the hard dough stage we raise the treatment level to 16 or more stink bugs per head. Although stink bugs in sorghum are rarely a problem, they can be a concern for more sensitive crops, such as rice, that may be growing nearby. Any heading rice adjacent to sorghum should be closely monitored for stink bugs.

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Adult midge on flowering sorghum.

Southwestern Corn Borers

Glenn Studebaker, Associate Professor/Extension Entomologist
Scott Akin, Assistant Professor/Extension Entomologist

Southwestern corn borer trap catches have jumped statewide over the last week. Some areas have caught over 200 moths in a 2- to 3-day catch. I have had several questions about what our threshold is based on trap catches. We have no threshold based solely on pheromone traps for southwestern corn borer. We use the traps to give us an idea as to when moths are emerging, indicating that the next generation of borers may be moving into non-Bt corn fields. Obviously, in those areas where catches have jumped up with several hundred moths in a trap, there is a good indication the next generation has emerged. In other areas the increase in numbers may be less dramatic, such as jumping to 20 or 30 moths. In either case, any non-Bt corn fields in that area should be monitored for southwestern corn borer eggs and/or small larvae and treated if 25% or more of the plants are infested.

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Southwestern Corn Borer Eggs



Newly Hatched Corn Borer Larva

Treatment Options

If a field is at treatment level, there are several options for control listed below:

Insecticide	Rate/Acre	Class	Residual
Asana XL	5.8–9.6 oz	Synthetic Pyrethroid	Several days
Baythroid XL	1.6–2.8 oz	Synthetic Pyrethroid	Several days
Brigade	2.1–6.4 oz	Synthetic Pyrethroid	Several days
Discipline	2.1–6.4 oz	Synthetic Pyrethroid	Several days
Fanfare		Synthetic Pyrethroid	Several days
Karate Z	1.28–1.92 oz	Synthetic Pyrethroid	Several days
Silencer	2.56–3.84	Synthetic Pyrethroid	Several days
Mustang Max	2.7–4.0 oz	Synthetic Pyrethroid	Several days
Respect	2.7–4.0 oz	Synthetic Pyrethroid	Several days
Sevin XLR	3 qt	Carbamate	Several days
Furadan	1 qt	Carbamate	Several days
Hero	4–10.3 oz	Synthetic Pyrethroid	Several days
Cobalt	19–38 oz	Syn. Pyr + Organophosphate	Several days
Intrepid	4–8 oz	Other	Several weeks

Most of the insecticides available will give several days' residual in the field and therefore must be applied at or near the time eggs begin to hatch in order to get satisfactory control. Intrepid is the exception in that it will give several weeks of control. Therefore, it can be applied prior to egg hatch

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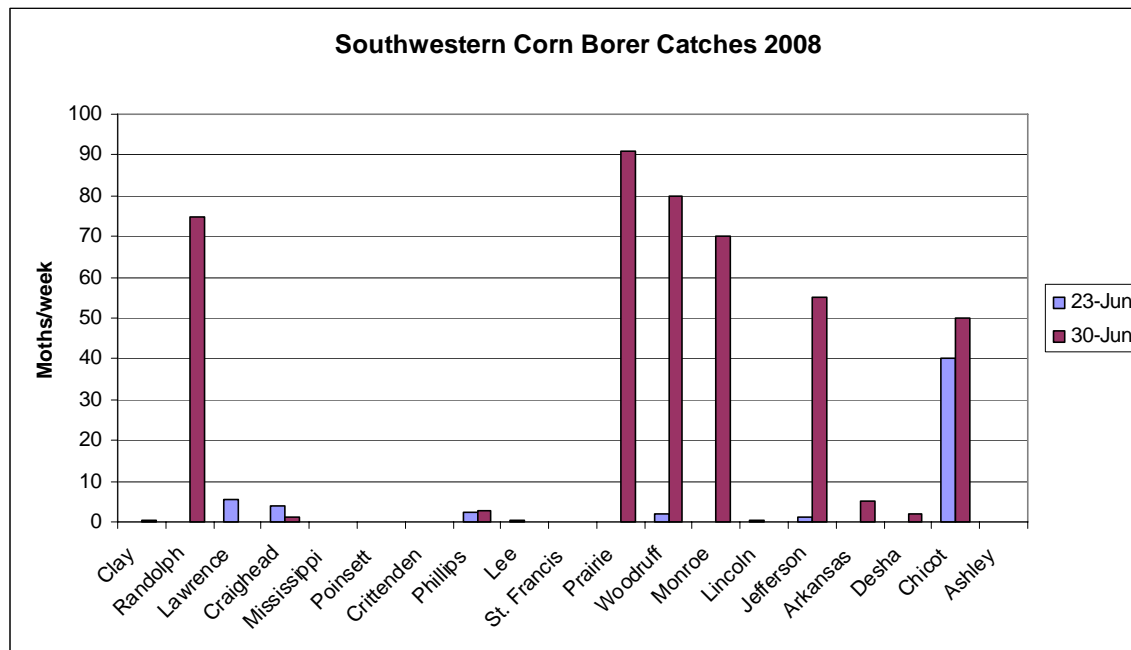
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and still work well. None of the insecticides listed above will give any control once the larvae have bored into the stalk. Therefore, it is VERY important that any insecticide application be applied before this happens. It is also important to remember: **Corn containing the Bt gene for corn borers DOES NOT need to be sprayed for southwestern corn borers.** This is not to be confused with the Bt gene for corn rootworm. The corn rootworm gene will not control corn borers.

Trap catches by county are listed in the graph below. Trap catches can also be seen on the Cooperative Extension Service website under the Insect Control in Arkansas Corn page (http://www.aragriculture.org/insects/corn/southwest_borers.htm). This page will be updated weekly with trap catches.



Contact Information:

Please contact your local county Extension agent in Arkansas or the authors by email at jkelly@uaex.edu, gstudebaker@uaex.edu and akin@uamont.edu, if you have questions or comments regarding this newsletter.

Acknowledgments:

We sincerely appreciate the **Arkansas Corn and Grain Sorghum Promotion Board** and Arkansas corn and grain sorghum producers for their support.

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