

News Column

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Don't forget about Chinch bugs after wheat harvest

I don't have a crystal ball, but I would like to remind farmers that have grain sorghum and sorghum/sudan fields planted adjacent or close to wheat fields to keep an eye on them after wheat harvest. In the last 3 to 4 years now there have been problems with chinch bugs coming out of the harvested wheat fields and feeding on the small sorghum plants.

The overwintered adults emerge in early spring and fly into small grains where they mate and produce the first generation. Most problems in milo or feed occur when large groups of the immature, wingless nymphs migrate from maturing wheat fields and invade adjacent sorghum or sorghum/sudan hay fields where they attempt to complete development. They typically do not infest the entire field but can take out several rows of milo next to the wheat.

Problems with this insect were historically confined to eastern and central Kansas, with damage beginning in May or June, but in recent years, chinch bugs have become more of a problem further west in the state.

Chinch bugs puncture vascular tissues to extract plant juices and secrete digestive enzymes that cause the breakdown of surrounding plant tissues. Feeding punctures also can allow pathogens to enter the plant. Consequently, damaged plants present a variety of symptoms including stunting, yellowing, wilting, and necrotic lesions. The effect nymphal feeding has on plants depends to a large degree on the size, health and nutritional status of the plants. Growth stage and water balance are critical because small or drought-stressed plants have less ability to tolerate or recover from chinch bug feeding damage.

Using seed treatments: clothianidin (Poncho), imidacloprid (numerous products) and thiamethoxam (Cruiser) at planting can potentially decrease chinch bug damage and may protect plants for up to 3 weeks, unless the migration is heavy. Growers can use follow-up sprays on border rows if protection wears off before the end of chinch bug migration.

Most often the damage is noticed only after several rows of sorghum or feed have been severely stunted or killed. Ideally treating promptly as migrations begin and before significant numbers of bugs enter the field and small plants are affected is best.

An insecticide spray can be used over the affected rows and approximately an additional 100 feet beyond. Also, spraying about 100 feet into the wheat stubble is advisable if chinch bugs are still coming out of the wheat field.

Most currently approved insecticides have good efficacy against chinch bugs, if three factors are considered. First, it is important to use the full recommended rate of the selected insecticide, preferably applied in 20 to 40 gallons of water per acre. High gallonage ensures good plant coverage and enhances the movement of material into protected plant parts such as leaf sheaths, which increases the probability of contact with bugs. Second, the material should be applied with properly adjusted and calibrated equipment. Cone nozzles designed for high-pressure use will create smaller droplets and improve coverage. Third, the timing of the insecticide application is critical. Early morning applications are preferred because winds are calm (reducing drift), temperatures are cool (reducing volatilization of chemicals), and a large proportion of the chinch bug population will be on the plants and exposed to the application. None of the materials currently registered for use against chinch bugs has long residual efficacy and plants can outgrow the protection. Because peak migrations may continue for 10 days or more, monitoring is required to determine if additional applications to border rows are necessary.

There are several insecticides labeled for the control of chinch bugs listed in the K-State Research & Extension publication "Sorghum Insect Management 2020 which can be found on our web site at www.cottonwood.ksu.edu

If you have any questions or need further information, contact me at the Cottonwood District Extension Office in Hays.

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