Pest e-alerts

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Vol. 13, No. 26 http://entoplp.okstate.edu/Pddl/ **Aug 12, 2014**

Watch for Sorghum Midge in Late-blooming Sorghum

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I noted high populations of sorghum midge adults actively swarming on some late blooming heads in my sorghum plots at the Cimarron Research and Extension Center in Perkins. Favorable climate and abundant Johnson grass may allow them to become a problem in late-planted sorghum this year.

Sorghum midge is a tiny fly, measuring less than 1/32 inches long. It has a reddish abdomen with one pair of grayish transparent wings. The female fly lays eggs in open florets and the maggots feed inside the developing seed. The contents of the seed are usually completely consumed. The lifecycle from egg to adult is completed in 14-16 days. Heads that have sorghum midge injury are referred as "blasted". The adults live for one day, but one female can lay 30-100 eggs.

Insecticide control: Scouting is essential to achieve effective control with an insecticide. Use a 10X magnifying hand lens to aid in in identification. There are two ways to scout. One is to

carefully move to a plant without disturbing it, quickly put a plastic bag over the head, and shake it vigorously. Remove the bag and contents and look for midges inside the plastic baggie. The other way is through direct observation; without disturbing the plant, look for small gnat-sized flies that are moving about the head or are laying eggs on flowers with extended anthers.

The sorghum midge is most active from 9:00 -11:00 am, so that is the best time to scout. Begin scouting when the heads first emerge and begin pollinating. Continue every 3 days until the field is finished blooming. The economic threshold is 1 midge per head for susceptible or 5 midge per head for resistant varieties. There are numerous insecticides labeled for control. Apply the first when the threshold is reached, and 25-30% of the heads are blooming. A second application may be necessary in 3-5 days. All label restrictions should be followed. For a list of registered insecticides, consult CR-7170, Management of Insect and Mite Pests in Sorghum. (http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2625/CR-7170web.pdf)

If a producer asks what can be done to avoid the problem next year, I suggest the following management strategies which are listed from most to least desirable:

- Planting Date: This should be strongly encouraged! Plantings of sorghum should occur early and uniformly in an area. By planting early, the crop will avoid an infestation. If all plantings flower at the same time, existing midge populations become diluted. As the season progresses, midge numbers build on Johnson grass and sorghum, and will concentrate on later plantings. In general, the risk of a sorghum midge infestation increases for each day past August 15 that the sorghum blooms.
- Control Johnsongrass in and around sorghum fields. Controlling Johnsongrass before the sorghum blooms can reduce resident midge populations.
- Resistant varieties: There are a limited number of resistant varieties of sorghum available from seed companies. Resistant lines generally suffer only 1/5 the injury that susceptible lines receive from the same number of adults. Consider a resistant variety for double crop sorghum that will bloom after the 15 of August.

Dr. Richard Grantham - Director, Plant Disease and Insect Diagnostic Laboratory

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert E. Whitson, Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President, Dean, and Director of the Division of Agricultural Sciences and Natural.