

News Column
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Sugarcane aphid: potential new pest of sorghum

Grain sorghum growers in Kansas need to be aware of a potential new pest this summer. The Sugarcane Aphid is a new aphid pest of sorghum that in 2013 was detected in 38 counties and parishes of Texas, Louisiana, Oklahoma, and Mississippi, further expansion into other states occurred in 2014 and in two counties in Southern Kansas late last summer. This aphid can spread rapidly across a wide geographic range and reproduce even more rapidly than greenbugs; all aphids are females and born pregnant.

It is likely to arrive this summer again in Kansas and very possibly much earlier this year with the potential of moving further into Kansas. Latest reports have the aphid overwintering on Johnsongrass as far north as Dallas. However, spring infestations are currently very light in Mexico and south Texas, says K-State Research & Extension Entomologist J.P. Michaud at the Agricultural Research Center, Hays.

Note that this aphid feeds all the way up to seed fill in the panicles and can reduce yield significantly, even if it doesn't kill younger plants. "So we do want sorghum growers to be on the watch and report any suspect infestation says J.P".

In 2013, large populations of sugarcane aphids developed on sorghum in southern states. They produced large amounts of honeydew, in some cases choking combines and caused lost grain in northeast Texas and Louisiana, growers lost up to 50 percent of grain sorghum yield in infested fields during 2013.

This insect appears to have arrived on infested sugar cane planting material from Hawaii and changed its host from sugarcane to plants in the genus Sorghum—grain sorghum, forage sorghums, sorghum x sudan crosses and johnsongrass. This has happened before in South America and South Africa. Small colonies have also infested corn plants, but they do not appear to feed well on corn.

The aphid is a key pest of sorghum and sugarcane in tropical and subtropical regions around the world, including Africa, Asia, Australia, Central and South America; although it was reported in Hawaii in 1896, it was first found in the continental United States on sugarcane in Florida in 1977. It was also observed on sugarcane in Louisiana in 1999, these infestations broke out in the summer and declined by winter. Neither introduction resulted in permanent infestation by the pest, an indication that it was not, at that time, able to adapt to a more temperate environment. It is unable to produce sexual forms and eggs, so it will not overwinter in freezing temperatures.

Sugarcane aphids colonize the lower surfaces of lower leaves first and then advance to the upper leaves, the most damage occurs when the aphids colonize the grain sorghum head causing reductions in grain weight and harvesting problems due to heavy honeydew production. Thus the sugarcane aphid can be more harmful to sorghum than greenbug.

When conditions are favorable, small colonies can quickly grow to large colonies and produce large amounts of sticky honeydew.

Aphid feeding causes yellow to red or brown leaf discolorations on both sides. The honeydew may also support the growth of black, sooty mold fungus. Infestations of seedlings can kill young grain sorghum plants; later infestations can prevent grain from forming properly or filling completely.

Natural enemies of sugarcane aphids include lady beetles, syrphid fly larvae, green lacewings, and parasitic wasps. There is variation among sorghum lines in tolerance of sugarcane aphid feeding and research is ongoing to find resistant cultivars.

However, when populations of sugarcane aphids are increasing rapidly, insecticides may be needed

to prevent yield losses and honeydew buildup before harvest according to Entomologists at Texas A & M. Sugarcane aphids are soft body insects that suck sap plant juices, can hinder plants growth and produce large amounts of honey dew. The sugarcane aphids seen in 2013 were pale in color, white to light yellow; they are hairless as seen under a hand lens. The distinguishing feature of sugarcane aphids is their short, dark, paired, tailpipe-like structures, called cornicles, Otherwise, only their tarsi (feet) are dark at high magnification.

One management practice that K-State Research & Extension Entomologists are suggesting is to consider planting grain sorghum earlier this year. If the sugarcane aphids were to build-up to damaging levels, the earlier planted sorghum might avoid needing an insecticide spray or one spray might control them versus normal to later planted sorghum might need to be sprayed twice.

They can reproduce rapidly with many generations during a growing season. As mentioned earlier it was detected late last summer in Kansas. Sorghum growers in Kansas need to be aware of this potential new pest to sorghum and be scouting their fields this summer.