

## Insect Threatens Viability of Grain Sorghum

- Texas is the second-largest producer of grain sorghum in the United States, with an estimated 2.7 million planted acres and 149.4 million bushels produced in the state in 2015.
- In recent years the grain sorghum industry has been threatened by a new invasive pest, the sugarcane aphid, which can cause significant production losses (lower yields) and equipment problems for growers.

## AgriLife Extension's Response

- A task force comprising entomologists, soil and crop scientists, plant breeders, extension agents, and communications specialists with the Texas A&M AgriLife Extension Service and Texas A&M AgriLife Research was formed in 2013 to develop strategies that would effectively control sugarcane aphids.
- The task force conducted sampling, cultivar screening, and natural-enemy studies across designated areas of Texas.
- AgriLife Extension and AgriLife Research personnel developed an intensive scouting program. They also established monitoring recommendations, economic thresholds, and effective insecticide treatments for managing and controlling the sugarcane aphid.
- Control tests conducted by AgriLife Extension and AgriLife Research clearly demonstrated that labeled insecticides did not provide control of this aphid. The tests demonstrated that Transform® WG insecticide\* (a registered trademark of The Dow Chemical Company or an affiliated company of Dow) did control the pest. In response, the task force provided data and observations to the Texas

Department of Agriculture supporting a Section 18 Specific Emergency Exemption request for Transform, and the product was labeled for use on sorghum for sugarcane aphid control for the 2014 season.

- Entomologists and plant breeders began testing sorghum lines for resistance to sugarcane aphids. They quickly determined that resistant lines were available and began working with partners to develop resistant grain sorghum hybrids.
- Publications, web-based educational resources, newsletters, and popular press articles were developed to educate growers on the sugarcane aphid problem and measures to control the pest.

## Economic Impacts

- Sorghum growers in South Texas were surveyed to collect information about sugarcane aphid infestations and the use of the insecticide control method. The economic impact of the control method was measured in terms of economic losses that were prevented.
- The value of prevented losses in grain sorghum was estimated at \$80.61 and \$16.54 per acre in 2014 and 2015, respectively.
- On South Texas acreage that was threatened by sugarcane aphids, prevented losses were valued at \$25.5 million in 2014 and \$5.1 million in 2015.
- Statewide, consultants and grower organizations have estimated the value of prevented losses in 2014 and 2015 at \$265 million.

*\*References to commercial products or trade names are based on label information and on research conducted by the Texas A&M AgriLife Extension Service and are not intended as an endorsement of any specific product or manufacturer.*

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