**ABSTRACT**

The sugarcane aphid (Sugarcaneaphis) is an emerging pest of sorghum. Because this pest can cause significant economic injury to sorghum at various growth stages, it is necessary to evaluate different treatment and timing strategies to determine an economic threshold. Susceptible grain sorghum varieties were evaluated in 2014 and 2015 at five locations in the Southern Plains, two in Texas, and one in Louisiana. The five locations included six planting dates at each location, for a total of 30 plots per location. The five locations included high, medium, and low infestations of the sugarcane aphid in grain sorghum, which were designated as high and low infestations for the purposes of this analysis.

**RESULTS**

The results of the experiments suggest an economic threshold of 50-125 aphids per leaf. This project is a continuation of the work done in 2014, and has been expanded to include partners from Texas, Louisiana, Arkansas, Oklahoma, and Georgia. The results from these trials suggested an economic threshold of 50-125 aphids per leaf. In 2016, the project was expanded to include partners from Texas, Louisiana, Arkansas, Oklahoma, and Georgia. The results from these trials suggested an economic threshold of 50-125 aphids per leaf. The authors wish to express their appreciation to partners in other states: David Kerns, LSU AgCenter, David Buntin at the University of Georgia, Tom Royer and Ali Zarrabi at Oklahoma State University, and Nick Hergert and Pete Eure for help with data collection.

**MATERIALS AND METHODS**

Multiple sequential plantings of grain sorghum were used at five locations with a single planting at the sixth location. Seed was sown at six planting dates at each location, for a total of 30 plots per location. The five locations included high, medium, and low infestations of the sugarcane aphid in grain sorghum, which were designated as high and low infestations for the purposes of this analysis.

**Introduction**

Sugarcane aphid, *Homoptera: Aphididae*, is an important pest in Texas and the Southern U.S. It causes millions in损失 of revenue across the U.S., with losses of $6.50/bushel in Texas. The key to controlling this pest is to maintain healthy populations at designated treatment levels. Griffin, Georgia (GA) Monticello, Arkansas (AR) Winnsboro, Louisiana (LA)

**Economic Injury Level and Economic Threshold for three levels of grain price and four control costs.** From Pedigo’s method EIL = C/(V*I*D*K)

**Table 1: Economic Injury Level and Economic Threshold for three levels of grain price and four control costs.** From Pedigo’s method EIL = C/(V*I*D*K)

**Table 2: Summary of regression components for the analysis of Cumulative Aphid Days on Yield.**

**Figure 3A-C: Crop condition, head size, and maturity of grain sorghum at treatment levels of 50 aphids/leaf (1A), 250 aphids/leaf (1B), and 500 aphids/leaf (1C) at the Rosenberg location 89 days after planting.**

**Table 3: Summary of regression components for the analysis of Cumulative Aphid Days on Yield.**

**Summary**

Economic injury levels are consistently lower than 2016 data but have been expanded along with the addition of other locations in Texas and other sorghum producing areas. The key to controlling this pest is to maintain healthy populations at designated treatment levels. Griffin, Georgia (GA) Monticello, Arkansas (AR) Winnsboro, Louisiana (LA)

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**References**


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