Sugarcane Aphid Plant Injury, Residual, and Yield Response following Insecticide Applications in Three Texas Studies

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ABSTRACT

The trial in Sinton was initiated May 29. Plots measured 20 feet by four rows with 30" row spacing arranged in a randomized complete block design with three replications. Treatments were made at heading/early bloom with a hand-held CO2 powered spray boom (800067 nozzles, 50 mesh screens) with a final spray volume of 13.7 gallons per acre. Aphid counts were taken at 7 and 14 DAT. At the Rosenberg location, Transform WG (1 oz./acre), Sivanto, and Transform WG reduced aphid populations at 3, 8, and 15 DAT compared to the non-treated check. At the Sinton location, aphid counts were taken at 7 and 14 DAT. At all locations, Transform WG resulted in lower plant damage ratings across all sampling dates, compared to Baythroid XL and non-treated plots. Sivanto (4 oz./acre) treatments had better yield than Nufos and Baythroid XL, but were not different from Transform WG, Centric 40WDG or the 7 oz./acre Sivanto treatment. Residual activity of Sivanto, Transform WG, Endigo ZC, and Centric 40WDG, of approximately 10-14 days is consistent with what was observed in 2014.

INTRODUCTION

As of Texas Sorghum. Texas Cooperative Extension. Publication B-1220. The Texas A&M Aggie Insect Report is issued weekly during the growing season. Methods for chemical and cultural control of these pests are well known (Cowie, et al. 2017) The first report of the sugarcane aphid, Acyrthosiphon sugarcane (Homoptera: Aphididae), was made in the State of Texas in 2007 (Hoffman, 2007). In 2010, the sugarcane aphid was reported in 36 counties and parishes in Texas. Louisiana, Arkansas, and Mississippi (Vance et al. 2014). Confirmed sugarcane aphid populations exceeded 10,000 aphids per leaf in East Texas in more than 200 locations in 2014, and 17 states and the District of Columbia were reported to have the sugarcane aphid in 2015 (Bowling, et al. In Press). The sugarcane aphid was reported for the first time in Texas in 2014, and it has been recorded in at least 90 counties in Texas by the end of 2015. The sugarcane aphid is a significant pest to sorghum throughout the United States. The sugarcane aphid is a significant pest to sorghum throughout the United States. The sugarcane aphid is a significant pest to sorghum throughout the United States.

MATERIALS and METHODS

Plots measured 20 feet by four rows with 30" row spacing arranged in a randomized complete block design with three replications. Treatments were made at heading/early bloom with a hand-held CO2 powered spray boom (800067 nozzles, 50 mesh screens) with a final spray volume of 13.7 gallons per acre. Aphid counts were taken at 7 and 14 DAT. At the Rosenberg location, Transform WG (1 oz./acre), Sivanto, and Transform WG reduced aphid populations at 3, 8, and 15 DAT compared to the non-treated check. At the Sinton location, aphid counts were taken at 7 and 14 DAT. At all locations, Transform WG resulted in lower plant damage ratings across all sampling dates, compared to Baythroid XL and non-treated plots. Sivanto (4 oz./acre) treatments had better yield than Nufos and Baythroid XL, but were not different from Transform WG, Centric 40WDG or the 7 oz./acre Sivanto treatment. Residual activity of Sivanto, Transform WG, Endigo ZC, and Centric 40WDG, of approximately 10-14 days is consistent with what was observed in 2014.

REFERENCES


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http://ccag.tamu.edu/sorghum-insect-pests