

# Williamson County Result Demonstration Report



## EVALUATION OF SEED TREATMENTS AND SOIL APPLIED INSECTICIDES FOR EARLY SEASON INSECT CONTROL IN GRAIN SORGHUM

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### **SUMMARY:**

Each of the insecticide treatments, Gaucho, Poncho, Cruiser and Counter performed better than the check treatments (Untreated and no-insecticide + Concur fungicide treatment) at limiting the number and damage from yellow sugar cane aphids (YSA).

### **OBJECTIVE:**

Grain sorghum producers are confronted with early season insect pests each year, including greenbugs, yellow sugarcane aphids (YSAs) and chinch bugs. As of now, only a few different systemic seed treatments are available for grain sorghum. In this study, a new product for sorghum, Poncho (active ingredient: clothiadin) will be evaluated for its effectiveness for early season insect management.

### **MATERIALS & METHODS:**

NC+ 371 hybrid grain sorghum was planted on the field farmed by Archie Abrameit at the Stiles Farm in Thrall in Williamson County, Texas on March 25, 2005 with a 4-row planter equipped with granular insecticide boxes. Treatments were arranged in a randomized complete block design with 4 replications in 4-row wide by 50-ft long plots with rows on 38-inch centers. Corn had been grown at the site for more than 8 years. The soil type is a Houston Blackland Clay. Granular insecticide was banded over the open seed furrow. Fertilizer consisted one application of lbs of in and 130 lbs of anhydrous in December of 2003.

Treatments were assessed by taking stand counts on 2- 1/1000th ac units in the middle 2 rows of each plot on April 8, and 20. Number of yellow sugarcane aphids per 10 plants and YSA damage rating scale were collected on April 20 and 27. Due to the plots being destroyed by a storm in early July, no yield data was able to be obtained from this study.

## **RESULTS AND DISCUSSION:**

Mean plant stand counts, mean YSA/10 plants and mean YSA plant damage ratings are provided in Table 1. There were no differences in plant populations among the two sampling dates of April 8 and 20. The Concur ST (fungicide treated, no insecticide treatment) had the highest mean YSA count of April 20, however, no differences were observed among treatments on the April 27 evaluation. The untreated check, had the highest mean YSA damage rating on each of April 20, with a mean damage rating of 3 compared to 2.1 for the next lowest treatment. The untreated check had a higher YSA mean damage rating on April 27 than did the Poncho 600, and both of the Cruiser treatments. No differences in mean # of YSA were observed between treatments on April 27.

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Trade names of commercial products used in this report are included only for better understanding and clarity. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Texas A&M University System is implied. Readers should realize that results from one experiment do not represent conclusive evidence that the same

**Table 1. Mean plant stand counts, mean yellow sugarcane aphids/10 plants and mean yellow sugarcane aphid damage rating, Stiles Farm, Williamson Co., TX. 2005.**

Treatment	Rate	Plant Population (1/1000 ac) 4/8/05	Plant Population (1/1000 ac) 4/20/05	# YSA/ 10 plants 4/20/05 <sup>1</sup>	YSA Damage Rating 4/20/05	# YSA/ 10 plants 4/27/05	YSA Dam Rating 4/27/05
Untreated		59	5	18.8ab	3.0 a	15.6	3.00 a
Gaucho 480	250 gm AI/100 kg	54	4	22.4 ab	1.5 c	13.0	2.50 ab
Poncho 600	200 gm AI/100 kg	54	5	8.9 b	1.1 c	11.4	2.13 b
Cruiser + Allegiance FL	200 gm AI/100 kg 4 gm AI/100 kg	55	4	9.4 b	1.4 c	8.5	2.13 b
Counter 20 CR	6 oz/1000 rw ft	46	3	22.6 ab	1.6 c	7.8	2.50 ab
Cruiser + Apron XL	200 gm AI/100 kg 4 gm AI/100 kg	48	4	12.4 b	1.5 c	13.4	2.00 b
Concur ST	312.5 gm/100 kg	55	4	35.0 a	2.1 b	12.9	2.63 ab
LSD (P=.10)		9.0	13.5	13.56	0.44	12.87	0.542
Treatment Prob (F)		0.1037	0.2504	0.0087	0.0001	0.8565	0.0140

<sup>1</sup> Means within a column followed by the same letter are not significantly different.

<sup>2</sup> Allegiance FL, Apron XL, and Concur ST are fungicide seed treatment products.