

Sugar on Sorghum

Study ID: 009129201501

County: Nuckolls

Soil Type: Hall silt loam;

Planting Date: 5/18/15

Harvest Date: 10/6/15

Population: 65,000

Row Spacing (in.) 30

Hybrid: Pioneer 85P05

Reps: 8

Previous Crop: Wheat

Tillage: No-Till

Herbicides: **Pre:** 2 qt/ac Lumax and 32 oz/ac Touchdown on 4/28/15;

0.7 qt/ac Lumax, 32 oz/ac Touchdown, and 0.5 lb/ac aatrex on 5/21/15 **Post:** 13 oz/ac Huskie and 1lb/ac aatrex on 6/18/15

Seed Treatment: Cruiser Max

Fertilizer: Injected 120 lb N/ac as liquid 32% on 4/14/15; Broadcast 34 lb P/ac and 1 lb Zn/ac on 4/18/15

Introduction: This was the second year this producer has tried applying sugar to sorghum. The objective was to determine the effect of sugar application on yield, economics, and lodging of sorghum. Rescue herbicide treatments in sorghum often lead to lodging, making harvest more difficult. After seeing the corn stalk strength results, the producer wondered if adding sugar to sorghum would help with lodging after adding a post rescue treatment of Huskie and Atrazine to his field. Three lb per acre of granulated sugar was applied in 10 gallons of water and sprayed in a paired comparison design to sorghum at V7. The sprayer was then filled with Huskie and Atrazine and applied to the entire field which included the plot area.

Results:

	Yield (bu/ac) [†]	Moisture (%)	Test Weight	Stand Count (Sept. 21)	Lodging (%) (Sept. 21)	Marginal Net Return (\$/ac) [‡]
Check	139 A*	18.1 A	61 A	52,333 A	12 A	500.40
Foliar Sugar	139 A	18.6 A	60 A	55,167 A	3 B	499.08
<i>P-Value</i>	<i>0.9075</i>	<i>0.4291</i>	<i>0.2038</i>	<i>0.5883</i>	<i>0.0478</i>	<i>N/A</i>

[†]Bushels per acre corrected to 14% moisture.

*Values with the same letter are not significantly different at a 90% confidence level.

[‡]Net Return based on \$3.60 sorghum and \$1.32/ac. treatment cost. No additional application cost is added as it is expected that this product would be applied with a post herbicide.

Summary: Consistent with research in 2014, there was no statistical yield, moisture, or stand count difference between the sugar and check treatments. This site did see a significant reduction in lodging for the sugar treatment.

Note: Aug. hail storm caused wind/hail damage more to west end of field. Hard and heavy rains at time of emergence thinned stand.

Irrigation: None

Rainfall (in.):

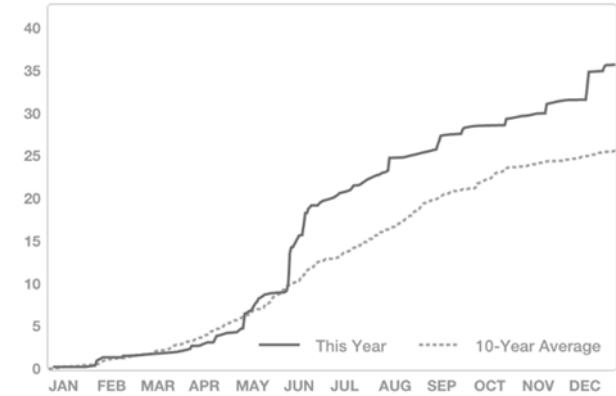


Figure 1: Harvest of research plot testing sugar application to sorghum.