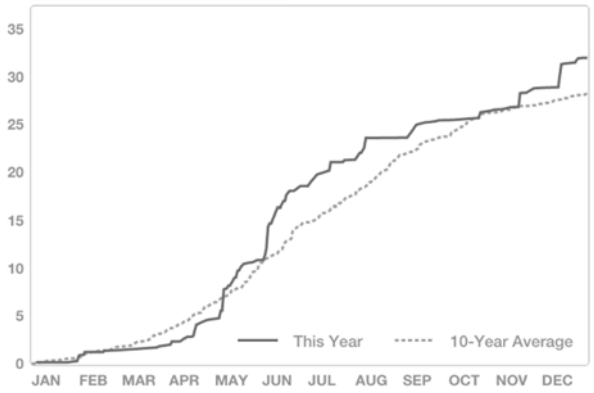
Nebraska On-Farm Research Network

Cane Molasses on Corn

Study ID: 038035201503
County: Clay
Soil Type: Crete silt loam;
Planting Date: 4/23/15
Harvest Date: 10/20/15
Population: 34,000
Row Spacing (in.) 30
Hybrid: Dekalb 62-68
Reps: 5
Previous Crop: Corn
Tillage: Ridge-Till
Herbicides: ***Pre:*** Sprayed once with Roundup PowerMax ***Post:*** unknown
Seed Treatment: Acceleron 250
Foliar Insecticides: none
Foliar Fungicides: none

Fertilizer: 100 lb/ac 11-52-0; 205 lb/ac N, 2 lb/ac Zn, 15 lb/ac S; 6 gal/ac 10-34-0
Irrigation: Gravity, Total: 5.0"
Rainfall (in.):



Introduction: This is the fifth year these producers have applied sugar to their corn fields. The objective was to determine the impact of sugar application on corn yield, economics, and standability. Products tested and yield and stalk rot results from 2010-2014 are shown at right. While yield was not statistically increased in these studies, there was a reduction in stalk rot for using the sugar products. This year 1 qt/ac molasses were applied at V8. There was a hard, fast rain immediately after the application, so the molasses were re-applied right after the rain event.

Field note: this field had severe grey leaf spot and no fungicide was used.

2010-2011, 2013-2014 Sugar Applied to Corn Trials-Clay Co. Producer

Producer	Avg Yield Check	Avg Yield Sugar
2010 Clay Co. (6 reps) 3 lb gran. Sugar/ac	208.9 (22% stalk rot)	210.6 ns (3% stalk rot)
2011 Clay Co. (6 reps) 3 lb gran. Sugar/ac	209.6 (19% stalk rot)	213.2 ns (12% stalk rot)
2013 Clay Co. (6 reps) 3 qts Plen-T-Sweet**/ac	222.6 (19% stalk rot)	214.2* (16% stalk rot)
2014 Clay Co. (6 reps) 13 oz liquid brown sugar/ac	226.2 (24% stalk rot)	228.6 ns (16% stalk rot) ns

*Indicates statistically significant at 95% confidence level. (2014 stats at 90% level).
**Recommended rate is 1 qt of Plen-T-Sweet so the high rate coupled with irrigation problems may have affected study in 2013.
3 lbs sugar (2010-2011), 3 qts Plen-T-Sweet (2013), 13 oz liquid brown sugar (2014) added to 10 gallons of water applied at V7-V8 leaf stage. Stalk rot ratings taken 2 weeks prior to harvest using the pinch test. Cost of sugar was $1.25/acre in 2010-2011, $6/ac in 2013 (should be $2 with correct rate), and $3.04/ac in 2014.

Results:

	Yield (bu/ac)†	Moisture (%)	Test Weight	Harvest Stand Count	Stalk Rot (%)	Marginal Net Return ($/ac)‡
Check	194 A*	12.1 A	63 A	30,800 A	61 A	708.10
Molasses	194 A	12.0 A	63 A	32,000 A	62 A	707.30
P-Value	0.9793	0.6135	0.5589	0.3239	0.941	N/A

†Bushels per acre corrected to 15.5% moisture.
*Values with the same letter are not significantly different at a 90% confidence level.
‡Net Return based on $3.65 corn and $0.80/qt molasses treatment cost.

Summary: In 2015, there was no yield, stalk rot, stand count, test weight, or moisture difference between the check and the molasses treatment.

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