

Soybean Benchmarking-Baseline vs Improved Soybean Practices

Study ID: 0926039201901

County: Cuming

Soil Type: Kennebec silt loam, overwash, occasionally flooded

Harvest Date: 10/16/19

Seeding Rate: 150,000

Row Spacing (in): 30

Variety: Midland Genetics® 2819E3

Reps: 5

Previous Crop: Corn, baled residue

Tillage: Conventional-Till

Herbicides: *Pre:* 2 pt/ac Treflan® *Post:* Enlist Duo®

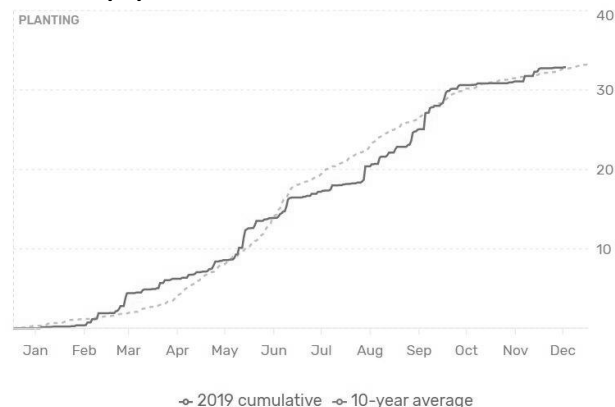
Seed Treatment: CruiserMaxx®

Fertilizer: Manure on 10/15/18

Soil Tests (June 2019 - average of study area):

Irrigation: None

Rainfall (in):



Soil pH	Soluble Salts 1:1	Excess Lime	Organic Matter	Nitrate -N	Nitrate lb N/A	Mehlich P-III	Ammonium Acetate (ppm)				DTPA (ppm)				CaNO3			% Base Saturation					
							K	Ca	Mg	Na	ppm S	Zn	Fe	Mn	Cu	Boron ppm	Chloride ppm Cl	CEC me/100g	H	K	Ca	Mg	Na
6.7	0.19	None	1.3	12.4	30	74	388	1856	249	14	9.9	1.51	39.4	8.0	0.69	0.50	3.0	12.4	0	8	75	17	0

Introduction: Analysis of producer survey data revealed: (1) an average yield gap of 20-30% between current farmer yield and potential yield as determined by climate, soil, and genetics, and (2) a number of agronomic practices that, for a given soil-climate context, can be fine-tuned to close the gap and improve soybean producer profit. In Nebraska, three practices were identified as being important for improving yield and producer profit. These practices relate to planting date, seeding rate, and the use of foliar fungicides and insecticides. This study collectively tested the "baseline" practices versus the "improved" practices.

In this study, both the baseline and improved treatment were planted at a rate of 150,000 seeds/ac. The baseline treatment was planted on May 16 with no foliar fungicide or insecticide. The improved treatment was planted on May 6 with a fungicide (Priaxor®) and insecticide (Sniper®) on July 24.

Soybean cyst nematode tests for this field came back negative.

Results:

	Stand Count (plants/ac)	Test Weight (lb/bu)	Moisture (%)	Yield (bu/ac)†	Marginal Net Return‡ (\$/ac)
Baseline: Late Planted, No Fungicide & Insecticide	131,689 A*	56 A	11.6 A	66 B	531.52 A
Improved: Early Planted, Fungicide and Insecticide	114,757 B	56 A	11.5 A	73 A	552.11 A
P-Value	0.083	0.621	0.74	0.006	0.137

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

†Bushels per acre adjusted to 13% moisture.

‡Marginal net return based on \$8.10/bu soybean and \$40/ac for fungicide, insecticide, and application for the improved treatment.

Summary:

- Despite using the same seeding rate, stand counts were different between the two treatments.
- The improved treatment (early planting and fungicide and insecticide application) resulted in a 7.5 bu/ac yield increase. Marginal net return was not significantly different between the treatments.
- Treatment differences were not visible in aerial imagery at this site.

This study was conducted in cooperation with a regional study funded by the North Central Region Soybean Research Program.

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