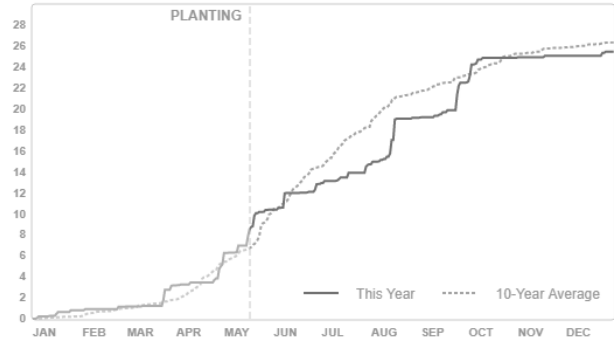


Organic Corn Yield Response to Organic Fertilizer

Study ID: 641047201703
County: Dawson
Soil Type: Cozad silt loam; Cozad silt loam saline-alkali; Cozad fine sandy loam
Planting Date: 5/17/17
Harvest Date: 11/2/17
Population: 32,500
Row Spacing (in): 36
Hybrid: Great Harvest 58E4
Reps: 5
Previous Crop: Corn
Tillage: Disk
Herbicides: *Pre:* None *Post:* None
Seed Treatment: SoilBiotics humic acid
Foliar Insecticides: None

Foliar Fungicides: None
Fertilizer: 14.72 tons/ac beef manure on 2/17/16
Irrigation: Gravity, Total: 15"
Rainfall (in):



Introduction: Several fertilizer products were tested for organic corn production. Fertilizers were applied in 6" bands using a modified Krause drill. The crop was then planted into the band after application.

Nature Safe 13-0-0

Treatments tested include:

- Nature Safe 13-0-0 (150 lb/ac)
- Nature Safe 13-0-0 (300 lb/ac)
- Beju pelleted manure containing micronutrients (100 lb/ac)
- Humic DG (10 lb/ac)

Nature Safe was a 1/8" pellet, Beju was a 1/4" pellet, and Humic DG was a prill. 14.72 ton/ac of beef manure was applied in Feb. 2016.

GUARANTEED ANALYSIS:	
Total nitrogen (N)	13%
Ammoniacal nitrogen	0.19%
Water-insoluble nitrogen	12.04%
Water-soluble organic nitrogen	0.77%
Sulfur (S)	1.25%
SOURCE OF NUTRIENTS:	
Hydrolyzed feather meal, meat meal and blood meal.	
The nitrogen source is derived from premium quality hydrolyzed feather meal, meat meal and blood meal. 13-0-0 is allowed under NOP guidelines validating its use in the production of organic certified crops.	

Product information from:
<http://www.midwesternbioag.com/wp-content/uploads/2012/12/13-0-0bulk.pdf>

Humic DG

CONTAINS NON-PLANT FOOD INGREDIENT	
Soil amending ingredient	
Humic Acid (derived from leonardite)	70%
Total Other Ingredients (inactive components of leonardite, proprietary binding agent, water)	
	30%

Product information from: https://andersonshumates.com/wp-content/uploads/2015/05/HumicDG_ASPHUDG40C15.pdf

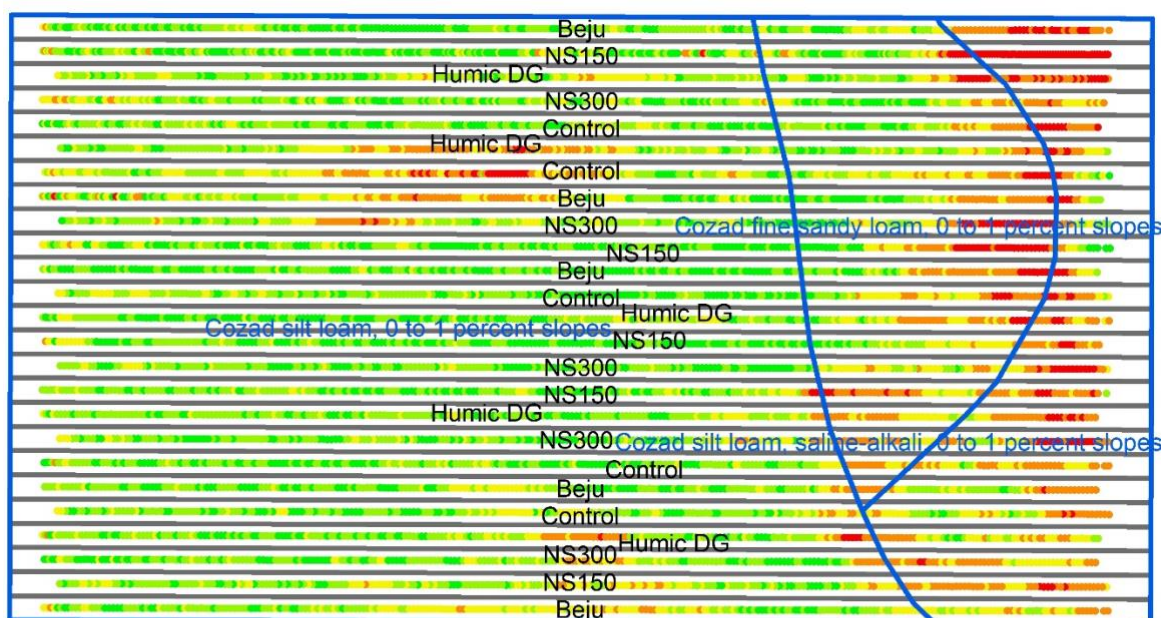
Results:

	Moisture (%)	Yield (bu/acre)†	Marginal Net Return‡ (\$/ac)
Check	16.1 A*	212 A	1,904.24 A
Nature Safe - 150 lb/ac	15.9 A	213 A	1,841.31 AB
Nature Safe - 300 lb/ac	16.0 A	213 A	1,770.14 B
Beju	15.9 A	214 A	1,851.71 AB
Humic DG	16.0 A	209 A	1,867.99 A
P-Value	0.554	0.685	0.008

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

†Yield values are from cleaned yield monitor data. Bushels per acre corrected to 15.5% moisture.

‡Marginal net return based on \$9/bu organic corn, \$75.50/ac Nature Safe at 150 lb/ac rate, \$143/ac Nature Safe at 300 lb/ac rate, \$78/ac Beju, and \$16.75/ac Humic DG. Costs of all products include \$8/ac for an extra trip across the field.



Yield 15.5% (bu/ac)

- 49.5 - 146.5
- 146.6 - 184.4
- 184.5 - 211.6
- 211.7 - 232.6
- 232.7 - 292.8

Summary:

- None of the products tested increased yield compared with the untreated check.
- Nature Safe at 300 lb/ac significantly decreased marginal net return compared with the check.

Sponsored by:



In Partnership with:



Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska–Lincoln cooperating with the Counties and the United States Department of Agriculture. University of Nebraska–Lincoln Extension educational programs abide with the nondiscrimination policies of the University of Nebraska–Lincoln and the United States Department of Agriculture.