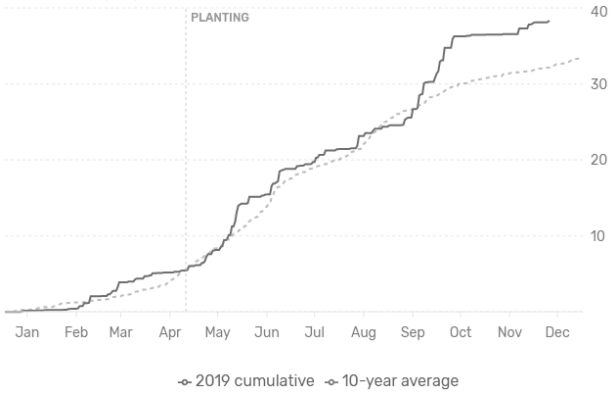
Comparison of Starter Fertilizers on Non-irrigated Corn

Study ID: 0029053201901
County: Dodge
Soil Type: Moody silty clay loam, terrace, 0-2% slopes; Moody silty clay loam, 2-6% slopes
Planting Date: 4/25/19
Harvest Date: 10/30/19
Seeding Rate: 28,500
Row Spacing (in): 30
Variety: Hoegemeyer® 8326 AM™
Reps: 6
Previous Crop: Soybean
Tillage: No-Till
Herbicides: ***Pre:*** 1.8 qt/ac Keystone® and 0.5 pt/ac 2,4-D ***Post:*** 22 oz/ac Roundup® and 3 oz/ac Resource®
Foliar Insecticides: None
Foliar Fungicides: None
Fertilizer: 145 lb N/ac as UAN
Irrigation: None
Rainfall (in):



Soil Test (Nov. 2019 – 1 soil sample in study area):

		Organic	Bray	Bray	Ammonium Acetate (ppm)			CEC	% Base Saturation			
Soil pH 1:1	Buffer pH	Matter LOI %	P1	P2	K	Ca	Mg	me/100g	H	K	Ca	Mg
5.8	6.6	3.3	8	11	236	2668	426	21.6	19	2.8	61.8	16.4

Introduction: The objective of this study was to evaluate starter fertilizer rates and placement. Five gal/ac 10-34-0 fertilizer applied in-furrow was compared to 13 gal/ac 10-34-0 fertilizer applied in a 2x2 band placement (2" to the side and 2" deep). Aerial multispectral imagery was collected on the field during the growing season. The normalized difference vegetation index (NDVI) values are presented for August 28, 2019.

Results:

	NDVI Aug. 28	Moisture (%)	Yield (bu/ac)†	Marginal Net Return‡ ($/ac)
5 gal/ac 10-34-0 in-furrow	0.435 A*	19.1 A	155 A	575.91 A
13 gal/ac 10-34-0 banded	0.426 A	18.8 A	158 A	557.97 A
P-Value	0.326	0.108	0.692	0.487

*Values with the same letter are not significantly different at a 90% confidence level.
†Bushels per acre adjusted to 15.5% moisture.
‡Marginal net return based on $3.83/bu corn, $17.47/ac for the 5 gal/ac 10-34-0 in-furrow, and $45.43/ac for the 13 gal/ac 10-34-0 banded.

Summary: There was no difference in yield, grain moisture, NDVI, or net return between the two starter fertilizer treatments.

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