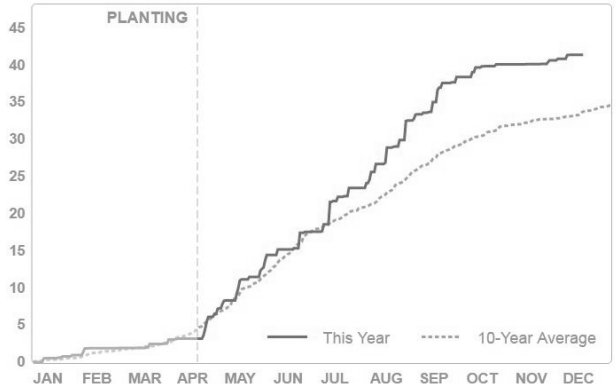
2x2 Starter Fertilizer on Rainfed Corn

Study ID: 030109201603
County: Lancaster
Soil Type: Yutan silty clay loam 6-11% slopes, eroded; Judson silt loam 2-6% slopes; Aksarben silty clay loam 2-6% slopes; Mayberry silty clay loam 3-6% slopes, eroded
Planting Date: 4/14/16
Harvest Date: 11/2/16
Population: 30,000
Row Spacing (in): 30
Hybrid: Dekalb 67-58
Reps: 8
Previous Crop: Soybean
Tillage: No-Till
Herbicides: ***Pre:*** 1.5 qt/ac Bicep ***Post:*** 3 oz/ac Callisto® and 32 oz/ac Roundup PowerMAX®

Foliar Insecticides: None
Foliar Fungicides: None
Fertilizer: 160 lb/ac actual N fall applied NH3
Irrigation: None
Rainfall (in):



Soil Test:

O.M.	pH	BpH	C.E.C.	Total NO3 (0-8")	Total NO3 (8-24")	P Bray 1	P Bray 2	K	Mg	Ca	S	%K	%Mg	%Ca	%H	%Na
--%--				lb/ac	lb/ac	----------ppm----------						--------Percent Base Saturation-------				
3.0	5.7	6.5	20.4	53	29	87	134	203	413	2403	31	2.6	16.9	58.9	20.9	0.7

Approximately 27 ton/ac bio-solids were applied in 2009 on half of the field. The field has received a bio-solid application 3-4 times in the last 25 years.

Introduction: The objective of this study was to determine if using 10 gal/acre of 32% N (35 lb/acre actual N) applied 2 x 2 at planting resulted in higher yield and profit.

Results:

	Moisture (%)	Yield (bu/acre)†	Marginal Net Return‡ ($/ac)
Check	15.5 A	214 B	$652.70
Starter (10 gal 32% 2x2)	15.5 A	217 A	$646.35
P-Value	0.563	0.0538	N/A

*Values with the same letter are not significantly different at a 90% confidence level.
†Bushels per acre corrected to 15.5% moisture.
‡Marginal net return based on $3.05/bu corn and $15.50/acre starter fertilizer cost.

Summary: The 32% nitrogen treatment resulted in a 3 bu/acre increase over the unfertilized check. With current prices, the increase in yield did not cover the increased treatment cost.

Sponsored by: University of Nebraska Lincoln; Nebraska Corn Board

In Partnership with: Nebraska Soybean Checkoff; Nebraska Corn Growers Association; Nebraska Dry Bean Commission