

Nebraska On-Farm Research Network

Foliar Iron Fertilizer on Corn

Study ID: 197029201503

County: Chase

Soil Type: Tassel-Duda loamy sand; Jayem loamy fine sand; Valent sandy loam; Ascalon fine sandy loam;

Planting Date: 5/8/15

Harvest Date: 10/28/15

Population: 34000

Row Spacing (in.): 30

Hybrid: R98114

Reps: 4

Previous Crop: Soybean

Tillage: No-Till

Herbicides: Pre: 40 oz/ac Touchdown on 4/25/15; 57 oz/ac Bicep + Dual II Magnum and 32 oz/ac Touchdown on 5/14/15 **Post:** 1 pt/ac Dual via Pivot on 6/19/15

Seed Treatment: unknown

Foliar Insecticides: 6.4 oz/ac Tunder on 7/31/15

Foliar Fungicides: 10.5 oz/ac Quilt Xcel on 7/9/15 and 7/31/15

2 pt/ac NuCop on 7/31/15

Soil Samples:

Fertilizer: 37 lb/ac 11-52-0 on 4/28/15;

65 lb/ac 0-0-60 on 4/28/15;

65 lb/ac 21-0-0-24S on 4/28/15;

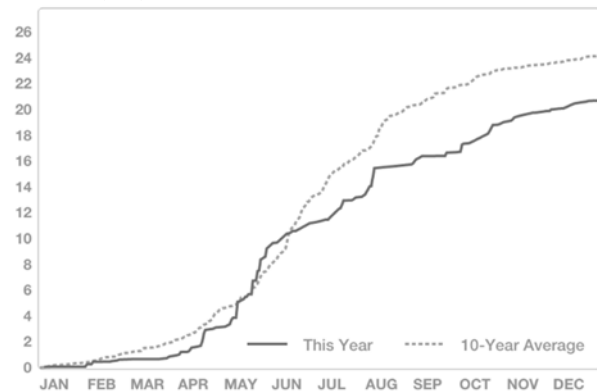
5 gal/ac 5-8-15 Bin Buster Starter;

110 lbs/ac 5-14 + 32-0-0;

38 gal/ac 26-0-3-5 via Pivot on 6/24/15 and 7/18/15

Irrigation: Pivot, Total: Unknown

Rainfall (in.):



Depth	O.M.	pH	C.E.C.	Total NO3	P Bray 1	P Bray 2	K	Mg	Ca	S	Zn	Mn	Fe	Cu	B
	--%--			---lb/ac---	-----ppm-----										
0-8"	1.8	7.5	17.7	84.0	13.0	130.0	390	146	3087	13.0	5.9	2.0	8.0	0.7	0.6

Introduction: This study is looking at the effect of foliarly-applied Versa Iron (Fe) liquid Fe on corn yield and nutrient concentrations in leaf tissue samples under high soil pH conditions (pH 7+). The foliar treatment used in this study was applied at a rate of 2.5 qt/ac, mixed with Lockdown surfactant (0.3 lbs/ac), and was applied aerially on June 26th at the V6 growth stage. Leaf samples were collected from treated and untreated strips approximately 1 month after application and analyzed for nutrient concentrations. Yields from treated and untreated strips were recorded with a yield monitor.



Product information from:

http://www.agrian.com/pdfs/Versa_Fe_Liquid_Label1.pdf

Results:

	Yield (bu/ac)†	Marginal Net Return (\$/ac)‡
Check	208 A*	\$759.20
Versa Fe liquid Fe + Lockdown surfactant	210 A	\$740.65
P-Value	0.5905	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/bu corn, \$25/gal Versa Fe, \$2.40/lb Lockdown, and \$9.50 aerial application cost.

Plant Tissue Samples												
	N	P	K	Mg	Ca	S	Na	Fe	Mn	B	Cu	Zn
	-----(%)-----							-----ppm-----				
Check	3.11 A	0.39 A	3.33 A	0.15 A	0.42 A	0.22 A	0.006 A	69 A	58 A	12 A	8.75 B	30 A
Versa Fe	3.31 A	0.40 A	3.23 A	0.13 A	0.41 A	0.23 A	0.007 A	72 A	57 A	16 A	9.75 A	30 A
P-Value	0.2535	0.6173	0.6955	0.4309	0.9282	0.1411	0.312	0.4849	0.5862	0.3575	0.0917	0.8716

Summary: The application of Versa Iron (Fe) on corn did not result in different yields. Leaf tissue samples from the Versa Iron (Fe) treatment had higher foliar concentrations of copper.



In Partnership with:



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