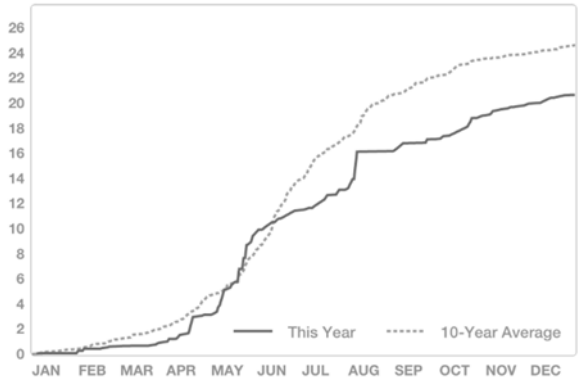
Nebraska On-Farm Research Network

Foliar Iron Fertilizer on Corn

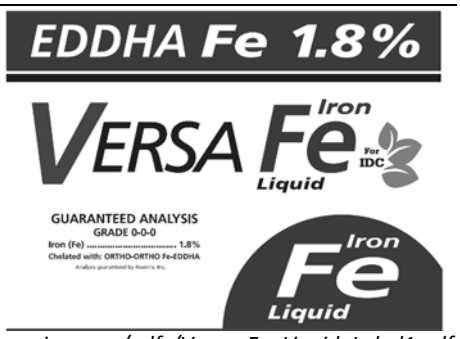
Study ID: 191029201501
County: Chase
Soil Type: Rosebud loam; Canyon loam;
Planting Date: 4/25/15
Harvest Date: 11/21/15
Population: 31,000
Row Spacing (in.) 30
Hybrid: Pioneer 1151
Reps: 4
Previous Crop: Corn
Tillage: Minimum Till
Herbicides: ***Pre:*** 2 pt/ac Dual ***Post:*** 32 oz/ac Roundup
Seed Treatment: None
Foliar Insecticides: None
Foliar Fungicides: None
Fertilizer: 240 lbs N/ac
Soil Samples:

Note: No Hail
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"	2.5	8.0	21.4	41.0	39.0	118.0	528	192	3695	15.0	5.2	2.0	10.0	0.7	1.0

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	197 A*	$719.05
Versa Fe liquid Fe + Lockdown surfactant	209 A	$737.00
P-Value	0.1273	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	3.12 A	0.47 A	3.49 A	0.15 A	0.31 A	0.21 B	0.006 A	56 A	72 A	11 A	10.50 A	42 A
Versa Fe	3.38 A	0.53 A	3.47 A	0.14 A	0.34 A	0.22 A	0.005 A	68 A	71 A	12 A	10.75 A	41 A
P-Value	0.2684	0.1266	0.9105	0.4444	0.2412	0.0577	0.7027	0.1038	0.8961	0.5195	0.391	0.9129

Summary: While there was not a significant yield difference at the alpha level of 0.10, there was a 12 bu/ac increase for using the Versa Iron treatment and the p-value was nearing significance (p=0.1273). Additionally, while foliar iron test was not significantly different, the p-value was also nearing significance (p=0.1038) and was higher for the Versa Iron treatment. Foliar samples showed sulfur was significantly different between the treated and untreated check.

In Partnership with: