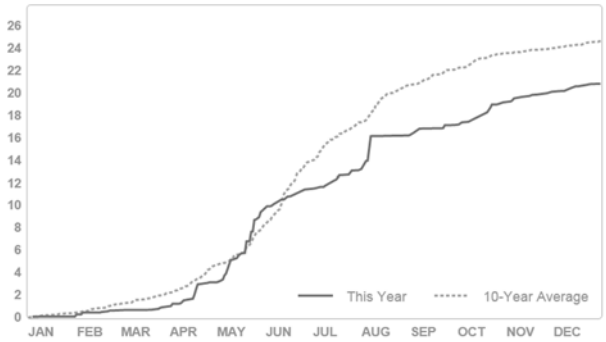
Nebraska On-Farm Research Network

Foliar Iron Fertilizer on Corn

Study ID: 191029201502
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/ac Nitrogen
Note: No hail
Irrigation: Pivot, Total: unknown
Rainfall (in.):



Soil Samples:

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"	2.3	7.8	18.8	53.0	51.0	144.0	495	175	3216	17.0	6.7	2.0	10.0	0.6	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. 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	211 B*	$770.15
Versa Fe liquid Fe + Lockdown surfactant	221 A	$780.81
P-Value	0.012	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	3.03 A	0.45 B	3.33 A	0.15 A	0.33 A	0.20 A	0.003 A	60 A	67 A	11 A	10.25 A	40 A
Versa Fe	3.17 A	0.50 A	3.23 A	0.14 A	0.34 A	0.21 A	0.003 A	70 A	69 A	12 A	11.25 A	43 A
P-Value	0.3503	0.019	0.7198	0.1817	0.4481	0.4119	1	0.1938	0.7521	0.6042	0.2522	0.5424

Summary: The Versa Iron treatment had a significantly higher yield than the check. The Versa Iron treatment also had significantly higher foliar phosphorus than the check.

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