

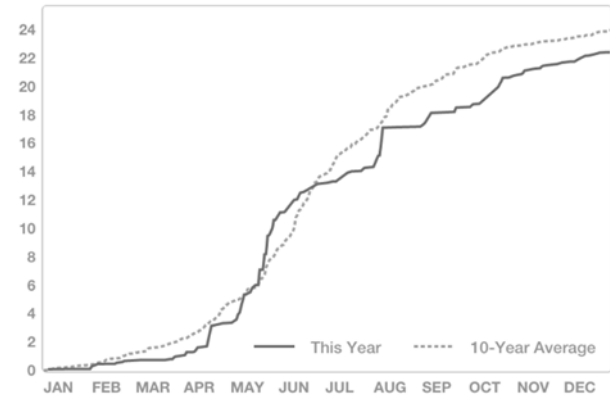
Nebraska On-Farm Research Network

Foliar Iron Fertilizer on Popcorn

Study ID: 197029201501
County: Chase
Soil Type: Tassel-Duda loamy sand; Blanche very fine sandy loam;
Planting Date: 4/28/2015
Harvest Date: 11/18/15
Population: 31,000
Row Spacing (in.) 30
Hybrid: Channel 209-69 VT3PRIB
Reps: 4
Previous Crop: Corn
Tillage: No-Till
Herbicides: *Pre:* 0.375 gal/ac LUMAX and 0.25 gal/ac Touchdown on 4/30/15 after planting. *Post:* 0.048 gal/ac Dual II Magnum, 0.45 gal/ac Halex, and 0.25 gal/ac Touchdown on 6/18/15. 25 gal/ac Touchdown on 7/7/15.
Seed Treatment: none
Foliar Insecticides: none
Foliar Fungicides: none
Soil Samples:

Fertilizer: 96 lb/ac 11-50-0 and 63 lb/ac 21-0-0-24 S on 4/24/15; 222 lb/ac 32-0-0 on 4/29/15; 400 lb/ac 28-0-0-5 S sidedress on 6/10/15; 12 gal 26-0-35 + 7 gal 32-0-0 on 6/20/15 and 7/17/15 through pivot.

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	6.3	13.9	34.0	66.0	120.0	502	241	1815	14.0	2.8	6.0	26.0	1.2	0.5

Introduction: This study is looking at the effect of foliarly-applied Versa Iron (Fe) liquid Fe on popcorn 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.aqrian.com/pdfs/Versa_Fe_Liquid_Label1.pdf

Results:	Yield (bu/ac)†	Yield (lb/ac) †	Marginal Net Return (\$/ac)‡
Check	78 A*	4,387 A	\$833.53
Versa Fe	78 A	4,393 A	\$808.82
P-Value	0.9692	0.9692	N/A

†Bushels per acre and lb 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 \$0.19/lb popcorn, \$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	3.15 A	0.36 B	3.45 A	0.17 A	0.33 A	0.20 A	0.002 A	92 A	51 A	8 A	7.25 A	30 A
Versa Fe	3.20 A	0.39 A	3.62 A	0.16 A	0.33 A	0.21 A	0.002 A	94 A	48 A	8 A	7.50 A	32 A
P-Value	0.8388	0.0462	0.4589	0.7529	0.8962	0.391	0.1817	0.7333	0.5123	1	0.7177	0.4596

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



In Partnership with:



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