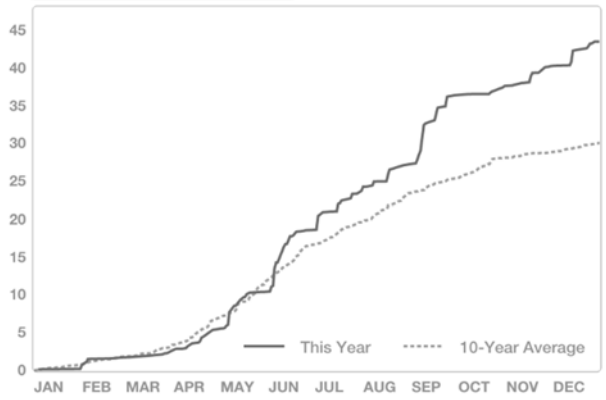
Nebraska On-Farm Research Network

Manganese on Soybean

Study ID: 026185201502
County: York
Soil Type: Hastings silt loam;
Planting Date: 5/12/15
Harvest Date: 10/3/15
Population: 140,000
Row Spacing (in.) 30
Hybrid: Pioneer 93Y15
Reps: 6
Previous Crop: Corn
Tillage: Ridge-Till
Herbicides: ***Pre:*** 24 oz/ac Roundup PowerMax and 5 oz/ac Authority First on 5/12/15 ***Post:*** 32 oz/ac Roundup PowerMax on 6/9/15, 40 oz/ac Roundup PowerMax, and 6 oz/ac Targa on 6/30/15
Seed Treatment: Unknown
Foliar Insecticides: Unknown
Foliar Fungicides: Unknown
Fertilizer: None other than product being tested

Irrigation: Pivot, Total: 4"
Rainfall (in.):



Soil Tests:

					Phosphorus (P)		Ammonium Acetate (ppm)						% Base Saturation				
ID	Soil pH 1:1	OM LOI-%	0-10" Nitrate (ppm)	11-24" Nitrate (ppm)	Weak Bray 1:7 (ppm)	Strong Bray 1:7 (ppm)	K	Ca	Mg	Ca-P Sulfate (ppm S)	Zn (ppm)	Sum of Cations (me/100g)	H	K	Ca	Mg	Na
1	6.8	2.9	5	4	17	33	467	2416	358	19	3.4	16.3	0.0	7.3	74.4	18.3	-
2	7.0	2.8	7	3	28	61	441	2066	299	15	4.3	14.0	0.0	8.1	74.1	17.8	-
3	7.1	2.2	4	-	26	128	414	4003	757	13	2.4	27.4	0.0	3.9	73.1	23.0	-

Introduction: Conklin® Feast® Micro Master (6.0% chelated manganese) was applied at 1 pt/ac on 6/30/15 with herbicide application (40 oz/ac Roundup, 6 oz/ac Targa, 1 lb/ac sugar). Soil sample test results for the study area are reported above. The application was 24 rows wide; the grower harvested the center 20 rows of each strip to eliminate spray drift contamination. The purpose of this study was to determine if the application of the manganese product increased soybean yields and profit.

Results:

	Yield (bu/ac)†	Moisture (%)	Marginal Net Return ($/ac)‡
Check (Roundup + Targa + Sugar)	79 A*	11.7 A	703.10
Check (Roundup + Targa + Sugar) + Manganese	80 A	11.7 A	707.50
P-Value	0.4083	<0.0001	N/A

†Bushels per acre corrected to 13% moisture.
*Values with the same letter are not significantly different at a 90% confidence level.
‡Net Return based on $8.90/bu soybeans and $4.50/acre Manganese product cost.

Summary: The application of manganese did not increase soybean yields or result in grain moisture differences.

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