



Nebraska On-Farm Research Network

Years: 2003-2006

Title: Calcium Sulfate on High pH Soils

Crop: Corn/Soybean Rotation

Study ID: 076053200301M4

County: Dodge

Objective: To determine and document the effect of calcium sulfate for correcting iron chlorosis on the profitability of producing corn/soybeans.

Soil Test: At start of study OM 3.2%, P_{bic} 7 ppm, pH 8.3

Treatments: (Rates of calcium sulfate)

2003: None vs. 1 Ton/ac vs 3 Ton/ac.

2004: Residual (No new application, yield measured on previously applied strips.)

2005: Residual (No new application, yield measured on previously applied strips.)

2006: Residual (No new application, yield measured on previously applied strips.)

Nebraska Soybean & Feed Grains Profitability Project



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Results: 2003

	<u>Variable</u>	<u>None</u>	<u>1 Ton</u>	<u>3 Tons</u>	<u>Prob > F</u>
Soybeans DeKalb 2651	Yield, bu/ac at 13.0%	48	49	48	0.418 ns
	Moisture, %	8.7	8.7	8.7	0.849 ns
	Test Wt., bu/ac	56.5	56.5	56.2	0.210 ns
	Plants, 1000 plants/ac	87.9	88.6	88.8	0.856 ns
	Plant Ht., inches	31.9	31.6	32.8	0.704 ns
	Cost/ac	-----	\$8.66*	\$5.55**	

(Costs Pro-rated: *3 years, ** 9 years)

(\$12 per ton hauling, \$14 per acre spreading)

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Results: 2004

	<u>Variable</u>	<u>None</u>	<u>1 Ton</u>	<u>3 Tons</u>	<u>Prob > F</u>
Corn GH 9164	Yield, bu/ac at 15.0%	218	224	223	0.229 ns
	Moisture, %	15.7	15.8	15.7	0.782 ns
	Plants, 1000 plants/ac	28.2	29.5*	28.0	0.113 ns
	Cost/ac	-----	\$8.66*	\$5.55**	

(Costs Pro-Rated: * 3 years, ** 9 years)

Results: 2005

	<u>Variable</u>	<u>None</u>	<u>1 Ton</u>	<u>3 Tons</u>	<u>Prob >F</u>
Soybeans	Yield, bu/ac at 13%	55	57	54	0.142 ns
	Moisture, %	8.5	8.6	8.8	0.193 ns
Asgrow 2703	Cost/ac	--	\$8.66 *	\$5.55 **	

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Results:

2006

Corn (Asgrow 752 YG)

<u>Variable</u>	<u>None</u>	<u>1 Ton</u>	<u>3 Ton</u>	<u>Prob >F</u>
Yield, bu/ac @ 15%	185	187	185	0.855 ns
Moisture, %	16.7	16.7	16.7	1.000 ns
Test Wt, lbs/bu	55.5	55.6	55.4	0.894 ns
Cost/ac	---	*	\$5.55**	---

(Costs Pro-rated: * 3 years, ** 9 years)

Harvest Date: 10/20/06

Summary: The application of calcium sulfate had no effect on the growth of corn in 2004 and 2006 or on the growth of soybeans in 2003 and 2005.

Note: Treatment contains approximately 300 pounds of sulfur per ton.

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