

On-Farm Comparison Results KING/GRAULICH

Nebraska Soybean & Feed Grains Profitability Project

Years:	2003-2006
Title:	Calcium Sulfate on High pH Soils
Crop:	Corn/Soybean Rotation
NSFGPP Operator:	Jeff King & Charlie Graulich, Dodge County
Private Industry Cooperator:	Rob Nielsen, Mark McKenzie & Bob Hecht
Objective:	To determine & document the effect of calcium sulfate for correcting iron chlorosis on the profitability of producing corn/soybeans.
Soil Test:	North Field - OM 3.9%, P _{bic} 13 ppm, pH 8.0 South Field - OM 3.2%, P _{bic} 7 ppm, pH 8.3
Treatments:	(Rates of calcium sulfate) North (Corn 03)-None vs 1 Ton/ac vs 2 Ton/ac South (Soybeans 03)-None vs 1 Ton/ac vs 3 Ton/ac South (Corn 04)-Residual South (Soybeans 05)-Residual South (Corn 06)-Residual

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Results:

2003

North Field

Corn - GH 9164 BT

Variable

None

1 Ton

2 Ton

Prob >F

Yield, bu/ac @ 15.5%

181

179

176

0.489 ns

Moisture, %

17.5

17.3

17.0

0.511 ns

Test Wt, bu/ac

55.0

55.2

55.4

0.178 ns

Cost/ac

\$8.66*

\$6.66**

(Costs Pro-rated: * 3 years, ** 6 years)

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

Gibbon Soil

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Results: <u>Variable</u>	2003		South Field		<u>Prob >F</u>
	Soybeans	DeKalb 2651	1 Ton	3 Ton	
Yield, bu/ac @ 13%	48	49	48	48	0.418 ns
Moisture, %	8.7	8.7	8.7	8.7	0.849 ns
Test Wt, bu/ac	56.5	56.5	56.2	56.2	0.210 ns
Plants, 1000/ac	87.9	88.6	88.8	88.8	0.856 ns
Plant Ht, inches	31.9	31.6	32.8	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: <u>Variable</u>	2004 South Field		Corn GH 9164	
	<u>None</u>	<u>1 Ton</u>	<u>3 Ton</u>	<u>Prob >F</u>
Yield, bu/ac @ 15%	218	224	223	0.229 ns
Moisture, %	15.7	15.8	15.7	0.782 ns
Plants, 1000/ac	28.2	29.5*	28.0	0.113 ns
Cost/ac	---	\$8.66*	\$5.55**	

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

Results: <u>Variable</u>	2005 South Field		Soybeans Asgrow 2703	
	<u>None</u>	<u>1 Ton</u>	<u>3 Ton</u>	<u>Prob >F</u>
Yield, bu/ac @ 13%	55	57	54	0.142 ns
Moisture, %	8.5	8.6	8.8	0.193 ns
Cost/ac	---	\$8.66*	\$5.55**	

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

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Results:

2006 **South Field**
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

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Summary: The application of calcium sulfate had no effect on the growth of corn or soybeans in 2003 in either field. In the south field, calcium sulfate had no effect on corn in 2004 & 2006 or on soybeans in 2005.

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