Nebraska On-Farm Research Network

Effects of Lime in a Corn/Soybean Rotation

Study ID: 079155199601M4

County: Saunders

OBJECTIVE: To determine and document the effect of lime broadcast according to soil test vs. pelleted lime in furrow vs. no lime on the profitability of corn/soybean rotation. Soil pH 5.6, Buffer pH: 6.4, Lime Requirement 3 ton 60% Effective Calcium Carbonate Equivalent/acre.

LIME BROADCAST	**IN-FURROW**	**NONE**
Treatments: 1996 2.4 ton/acre 75% ECCE lime	**Treatments: 1996** Pelleted Lime	**Treatments: 1996** None
Treatments: 1997 Incorporate lime applied in 1996	**Treatments: 1997** Pelleted Lime	**Treatments: 1997** None
Treatments: 1998 None	**Treatments: 1998** Pelleted Lime	**Treatments: 1998** None
Treatments: 1999 None	**Treatments: 1999** ----------	**Treatments: 1999** None

Comparative cost (per acre)		**Comparative cost (per acre)**		**Comparative cost (per acre)**	
CORN	**1996**		**1996**		1996
$28.80/7 years	$4.11	150 pounds/acre	$5.40	None	$0.00
		Application	$1.50		
		Total	**$6.90**		
SOYBEANS	**1997**		**1997**		1997
2nd year	$4.11	150 pounds/acre	$5.40	None	$0.00
Incorporation	$6.00	Application	$1.50		
	$10.11	**Total**	**$6.90**		
CORN	**1998**		**1998**		1998
3rd year	$4.11	150 pounds/acre	$5.40	None	$0.00
		Application	$1.50		
		Total	**$6.90**		
SOYBEANS	**1999**		**1999**		1999
4th year	$4.11		No in-furrow	None	$0.00

Nebraska Soybean & Feed Grains Profitability Project

Nebraska On-Farm Research Network

Effects of Lime in a Corn/Soybean Rotation, Kremlacek
Page 2

RESULTS:	**1996 CORN** @15.5%	**1997 SOYBEANS** @13%	**1998 CORN** @15.5%	**1999 SOYBEANS** @13%
Moisture (%)				
Lime broadcast	17.3	10.8	18.2***	8.7
In-furrow	17.4	10.8	18.7	-----
None	17.4	10.8	18.7	8.6
Test Weight (pounds/bushel)				
Lime broadcast	58.3	55.0	54.1	58.1
In-furrow	58.2	55.1	54.0	-----
None	57.9**	55.0	53.7*	58.0
Yield (bushel/acre)				
Lime broadcast	122	46***	165	48***
In-furrow	123	44	165	-----
None	122	44	166	45

* significantly different at 90% confidence level
** significantly different at 95% confidence level
*** significantly different at 99% confidence level

Summary: **Lime did not affect grain yield in 1996; however, test weight was lower where no lime was applied. In 1997, seed yield was increased by the lime that was broadcast in 1996 and incorporated in 1997. Lime broadcast in 1996 resulted in drier grain at harvest 1998. Also the lowest test weight occurred in the no-lime treatment. In 1999, seed yield was significantly higher where lime was broadcast in 1996.**