EXTENSION

Nebraska On-Farm Research Network

Years:	2003-2005
Title:	Commercial Fertilizer vs. Biosolids
Crop:	Corn (2003), Soybeans (2004), Corn (2005)
Study ID:	134053200301M3
County:	Dodge County
Objective:	To determine and document the effect of replacing commercial fertilizer with municipal biosolids on the profitability of corn/soybean production, under furrow irrigation.
Soil Tests:	pH 6.6, OM 5.1%, P 24 ppm, K 470 ppm
Treatments:	Commercial fertilizer vs. 29 ton/ac biosolids Biosolids were applied in fall 2002. Subsequent years of data are residual effects.

Nebraska Soybean & Feed Grains Profitability Project

University of Nebraska Lincoln

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Results: Corn 2003 (Garst 9476 BT)

Variable	Fertilizer	Biosolids	Prob >/T/
Yield, bu/ac at 15.5%	184	188	0.224 ns
Moisture, %	17.6	17.5	0.684 ns
Cost/ac (Comm Fert)	$32.68*		
Cost/ac (spreading)		$15.50	

* Nitrogen applied = 130/lbs.

Results: Soybeans 2004

Variable	Fertilizer	Biosolids	Prob >/T/
Yield, bu/ac at 13%	50	52	0.0043 ***
Moisture, %	10.4	10.5	0.7878 ns
Cost/ac (spreading)		$7.75	

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Results: Corn 2005

Variable	Fertilizer	Biosolids	Prob >/T/
Yield, bu/ac at 15.5%	170	181	0.0683 *
Moisture, %	14.4	14.4	1.0000 ns
Cost/ac (fertilizer)	$33.35*	$33.35*	
Cost/ac (spreading)	---	3.88	

* Nitrogen applied = 146/lbs.

Summary: In 2003, there was no significant difference in grain yield or moisture at harvest due to treatment. In 2004, soybean seed yield was higher where biosolids were applied in the fall, 2002. Corn yield was higher for biosolids in 2005.

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