Nebraska On-Farm Research Network

Years:	**2003-2005**
Title:	**Commercial Fertilizer vs. Biosolids**
Crop:	**Pivot Irrigated Corn (2003-2004), Soybeans (2005)**
Study ID:	**004053200301M3**
County:	**Dodge County**
Objective:	**To determine and document the effect of replacing commercial fertilizer with municipal biosolids on the profitability of corn/soybean production.**
Soil Test:	**pH 5.8, OM 2.0%, P 26 ppm, K 380 ppm (2002)**
Treatments:	**2003 - Commercial N fertilizer (28% side-dressed) or vs. 30 ton/acre biosolids vs. 33 ton/ac biosolids. 2004 – 185 pounds of NH3 applied to entire field 2005- No additional fertilizer**

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Results: **2003 Corn (H9679HX)**

Variable	Comm N	Bio@30	Bio@33	Prob >F
Yield, bu/ac at 15.5%	196	204	203	0.322 ns
Moisture, %	17.7	17.4	17.0	0.154 ns
Cost/ac	$45.00*	$17.50**	$17.50**	

N applied = 180 lbs (2003) and 185 lbs (2004)
* * Spreading charge

Results: **2004 Corn (Triton 9679)**

Variable	Comm N	Bio@30	Bio@33	Prob >F
Yield, bu/ac at 15.5%	206	210	211	0.505 ns
Moisture, %	19.2***	18.3	18.4	0.001***
Cost/ac (NH3)	$38.35	$38.35	$38.35	
Cost/ac (Spreading)		$8.75	$8.75	

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Results: **2005 Soybeans (NHC9)**

Variable	Comm N	Bio@30	Bio@33	Prob >F
Yield, bu/ac at 13%	67	71	73	0.158 ns
Cost/ac, spreading	---	$4.38	$4.38	

Summary: In 2003, there was no significant difference in grain yield or moisture at harvest due to treatment. In 2004, grain yields were not significantly different; however, grain moisture was lower at harvest where biosolids were applied in 2002. There was no significant effect of treatments on soybean yields in 2005.

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