

Nebraska Soybean & Feed Grains Profitability Project

Years: 2001-2007
Title: Crop Production without Tillage
Crop: Soybeans (01, 03, 05, 07)
 Corn (02, 04, 06)
NSFGPP Operator: Bill Kremlacek, Saunders County
Private Industry Cooperator: Jerry Mulliken
Objective: To determine & document the effect of no-till planting on the profitability of soybean/corn production.
Treatments: Pre-plant tillage vs. no-till planting

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Results: 2001		Soybeans		
<u>Variable</u>	<u>Tilled</u>	<u>No-Till</u>	<u>Prob >/T/</u>	
Yield, bu/ac @ 13%	40	39	0.420	ns
Moisture, %	9.6	9.6	0.695	ns
Test Wt, lbs/bu	55.7	55.7	0.474	ns
Cost/ac	\$13.00	---		
Results: 2002		Corn		
<u>Variable</u>	<u>Tilled</u>	<u>No-Till</u>	<u>Prob >/T/</u>	
Yield, bu/ac @ 15.5%	85	89	0.263	ns
Moisture, %	14.8	15.1	0.0038	***
Test Wt, lbs/bu	57.8	57.2	0.0015	***
Plants, 1000/ac	17.6	17.1	0.440	ns
Cost/ac	\$13.00	---		

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Results: 2003		Soybeans (Stine 3300-1)		
<u>Variable</u>		<u>Tilled</u>	<u>No-Till</u>	<u>Prob >/T/</u>
Yield, bu/ac @ 13%		37	38	0.203 ns
Moisture, %		8.2	8.2	0.604 ns
Test Wt, lbs/bu		57.4	57.8	0.027 **
Plants, 1000/ac		154.2	157.0	0.479 ns
Cost/ac (burndown & herb + appl)	\$12.00			
Cost/ac	\$13.00		---	
Results: 2004		Corn (Renze 9363)		
<u>Variable</u>		<u>Tilled</u>	<u>No-Till</u>	<u>Prob >/T/</u>
Yield, bu/ac @ 15.5%		164	157	0.0820 *
Moisture, %		14.6	14.6	0.6563 ns
Plants, 1000/ac		18.7	17.4	0.0210 **
Cost/ac (burndown & herb + appl)	\$12.00			

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Results: 2005		Soybeans (Renze 2914)		
<u>Variable</u>		<u>Tilled</u>	<u>No-Till</u>	<u>Prob >/T/</u>
Yield, bu/ac @ 13%		56	50	<0.0001 ***
Moisture, %		9.5	9.5	0.887 ns
Cost/ac (burndown & herb + appl)	\$12.00			
Cost/ac	\$16.00		---	
Results: 2006		Corn (Renze 9363)		
<u>Variable</u>		<u>Tilled</u>	<u>No-Till</u>	<u>Prob >/T/</u>
Yield, bu/ac @ 15.5%		132	103	<0.0001 ***
Moisture, %		14.4	14.3	0.596 ns
Test Wt, lbs/bu		58.7	58.6	0.456 ns
Cost/ac (burndown & herb + appl)	\$12.00			
Cost/ac (disc & fld cult)	\$16.00		---	---

Planting Date: 5/8/06 Harvest Date: 11/2/06

July 15 - rain, hail and wind caused greensnap in no-till treatment. Hail credited with 6% loss. Original stand was 20,419. Following windstorm tilled population was 18,500 and no-till populations was 15,500

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Results: 2007

<u>Variable</u>	<u>Soybeans</u>		
	<u>Tilled</u>	<u>No-Till</u>	<u>Prob >/T/</u>
Yield, bu/ac @ 13%	54	54	0.920 ns
Moisture, %	12.2	12.2	0.771 ns
Cost/ac (burndown & herb + appl)	\$12.00		
Cost/ac	\$16.00	---	

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Summary: Growth & seed yield of soybeans was not affected by tillage in 2001. In 2002, tillage resulted in lower grain moisture at harvest & slightly higher test weight for corn. In 2003, tillage resulted in slightly lower soybean seed test weight. Plant stands for corn were higher with tillage in 2004 & grain yield was significantly higher. In 2005, seed yield of soybeans was significantly higher with tillage. Corn yield was significantly higher with tillage in 2006. Tillage had no effect on soybeans in 2007. Excellent erosion control has been observed in the no-till treatments.