Nebraska On-Farm Research Network

No-Tillage vs Conventional-Tillage in Soybeans

Study ID: 120155199001

County: Saunders

Year: 1990

Objective: To determine and document the effect on profitability of a no-till system versus a conventional till system.

TREATMENT

NO-TILL

Early preplant application of .375 pounds Sencor DF, 1 pint 2,4-D ester, and 1 pint Prowl

Planting: Asgrow 3127

Application of 2 pints Lasso

Ropewick application of Roundup

Post-emergence application of .25 pounds Classic, .2 pints surfactant, and 1 gallon 28% UAN

Bean buggy application of Roundup

CONVENTIONAL-TILL

Disking

Field cultivation: incorporation of 3 pints Squadron

Planting: Asgrow 3127

Ropewick application of Roundup

Cultivation

Bean buggy application of Roundup

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COMPARATIVE COST BUDGET

Chemicals:		Chemicals:	
.375 pounds Sencor DF	$ 8.14	3 pints Squadron	$18.69
1pint 2,4-D ester	1.49	Roundup	1.50
1pint Prowl	2.89		
2 pints Lasso	5.60		
.5 ounces Classic	8.32		
.2 pints Crop oil concentrate	0.10		
1gallon 28% UAN	0.90		
Roundup	3.00		
Field operations:		**Field operations:**	
Spraying(3 times)	$ 5.13	Disking	$ 4.72
Planting coulters	0.27	Field cultivation/PP!	6.05
Bean buggy application	4.00	Cultivation	5.37
		Bean buggy application	2.00
Equipment cost:		**Equipment cost:**	
Planter coulters ($900)		Disk ($11000)	
Sprayer ($2800)		PPI sprayer attachments ($1000)	
		Field cultivator ($8000)	
		Cultivator ($3800)	
Comparative cost	$39.84	Comparative cost	$38.33

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ON-FARM RESEARCH COMPARISON RESULTS

VARIABLE	1990
Early population	
No- till	183000 **
Conventional-till	171000
Final population	
No-till	180000
Conventional-till	164000
Plant height	
No-till	28.8" **
Conventional-till	30.1"
Pod height	
No-till	5.0" *
Conventional-till	4.0"
Moisture	
No-till	12.0% *
Conventional-till	10.9%
Sample weight	
No-till	57.0
Conventional-till	57.1
Yield (13%)	
No-till	35.3
Conventional-till	36.5

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

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