

Reduced-Tillage vs. Conventional-Tillage

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Private Industry Cooperator: Jerry Mulliken

OBJECTIVE: To determine and document the effect on profitability of a reduced-till system versus a conventional-till system.

REDUCED-TILLAGE

Treatment:

Fall Disking

Herbicide: 1.25 pints **Basagran**, 1 pint Roundup and 0.78 pounds Ammonium Sulfate, banded 1.5 quarts Freedom and 28% UAN.

Planting

Cultivation

CONVENTIONAL-TILLAGE

Treatment:

Fall Disking

Herbicide: 1 pint Roundup and 0.78 pounds Ammonium Sulfate, banded 1.5 quarts of Freedom and 28% UAN.

Field Cultivation

Field Cultivation

Planting

Cultivation

Comparative cost (per acre)

Herbicide \$ 20.90
Operations \$ 42.90

Total **\$ 63.80**

Comparative cost (per acre)

Herbicide \$ 14.90
Operations \$ 54.40

Total **\$ 69.30**

**Reduced-Tillage vs. Conventional-Tillage,
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VARIABLE	1990	1991	1992
Early population			
Reduced-till	110000	138000**	130000
Conventional-till	103000	123000	132000
Final population			
Reduced-till	113000	102000	120000
Conventional-till	106000	98000	125000
Population loss			
Reduced-till		23.1%	8.9%
Conventional-till		15.1%	3.6%
Plant height			
Reduced-till	36.0"	19.5"	30.6"
Conventional-till	36.1"	20.0"	30.4"
Pod height			
Reduced-till	4.6"	4.0"	4.0"
Conventional-till	4.9"	4.5"	4.2"
Moisture			
Reduced-till	10.2%	7.8%	11.1%
Conventional-till	10.4%	7.8%	11.1%
Sample weight			
Reduced-till	55.7	56.6	54.8**
Conventional-till	55.9	57.2	54.4**
Yield (13%)			
Reduced-till	40.8	47.1	49.1*
Conventional-till	40.1	46.3	49.0

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

