

Hobbit vs. Keltgin Soybean Varieties Under Two Row Width Strategies

Lynn Vinduska

Private Industry Cooperator: Steve Mills

OBJECTIVE: To determine and document the profitability of Hobbit versus Keltgin soybean varieties using a wide (30 inches) versus narrow (7 inches) row planting strategy.

NARROW ROWS

Treatment:

Drill: Hobbit 87 and Keltgin,
74 pounds/acre

Herbicide: 19924 ounces Pursuit,
3 pints Prowl and 28% UAN

19934 ounces Pursuit,
1 pint Roundup and
28% UAN

19944 ounces Pursuit,
1 pint Roundup and .5 gallons
28% UAN

Harvest

WIDE ROWS

Treatment:

Plant: Hobbit 87 and Keltgin,
70 pounds/acre

Herbicide: 1992-4 ounces Pursuit,
3 pints Prowl and 28% UAN

19934 ounces Pursuit,
1 pint Roundup and
28% UAN

1994-4 ounces Pursuit
1 pint Roundup and .5 gallons
28% UAN

Harvest

-Comparative cost (per acre)

	1992	1993	1994	
			Hobbit	Keltgin
Seed	\$ 9.20	\$18.20	\$19.50	\$21.00
Drilling	\$ 8.97	\$ 8.97	\$ 8.97	\$ 8.97
Total	\$28.17	\$27.17	\$25.47	\$29.97

Comparative cost (per acre)

	1992	1993	1994	
			Hobbit	Keltgin
Seed	\$13.70	\$13.30	\$15.86	\$17.08
Planting	\$ 9.08	\$ 9.08	\$ 9.08	\$ 9.08
Total	\$22.78	\$22.38	\$24.88	\$26.16

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VARIABLE		1992 SOYBEANS	1993 SOYBEANS	1994 SOYBEANS
Final population (seeds/acre)				
	Drilled Hobbit	157,000 *** , */1	204,600 ***	N/A
	Drilled Keltgin	171,000	201,000	N/A
	Planted Hobbit	193,000	126,400	N/A
	Planted Keltgin	199,000	127,800	N/A
Plant height				
	Drilled Hobbit	28.7" ***	18.6" ***/1	N/A
	Drilled Keltgin	38.8"	28.6"	N/A
	Planted Hobbit	26.4"	20.0"	N/A
	Planted Keltgin	38.3"	28.8"	N/A
Pod height				
	Drilled Hobbit	7.8" ***	5.73"	N/A
	Drilled Keltgin	7.3"	6.23"	N/A
	Planted Hobbit	8.4"	5.70"	N/A
	Planted Keltgin	7.3"	6.47"	N/A
Moisture (%)				
	Drilled Hobbit	12.6	11.4	14.1
	Drilled Keltgin	12.2	11.0	13.4
	Planted Hobbit	12.2	11.3	13.9
	Planted Keltgin	12.0	11.1	13.3

*** row spacing significantly different at 99% confidence level
 */1 varieties significantly different at 90% confidence level
 ***/1 varieties significantly different at 99% confidence level

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VARIABLE	1992 SOYBEANS	1993 SOYBEANS	1994 SOYBEANS
Moisture continued (%)			
Mean for Drilled	11.2	11.2	13.7 **
Mean for Planted	11.2	11.2	13.6
Mean for Hobbit	11.3	11.4 */1	14.0 ***/1
Mean for Keltgin	11.1	11.0	13.4
Test weight (pounds/bushel)			
Drilled Hobbit	56.4 ***	56.8 ***, */1	52.9
Drilled Keltgin	57.1	57.3	54.1
Planted Hobbit	56.0	56.6	53.1
Planted Keltgin	57.3	56.9	52.1
Yield (13 %) (bushels/acre)			
Drilled Hobbit	52 **	29 *	61 ***, ***/2
		(3 Yr. Avg. = 47)	
Drilled Keltgin	45	33.0	57
		(3 Yr. Avg. = 45)	
Planted Hobbit	53	27	49
		(3 Yr. Avg. = 43)	
Planted Keltgin	46	31	51
		(3 Yr. Avg. = 43)	

* row spacing significantly different at 90% confidence level
 ** row spacing significantly different at 95 % confidence level
 *** row spacing significantly different at 99% confidence level
 */1 varieties significantly different at 90% confidence level
 ***/1 varieties significantly different at 99% confidence level
 ***/2 variety and row spacing interaction significantly different at 99% confidence level

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VARIABLE	1992 SOYBEANS	1993 SOYBEANS	1994 SOYBEANS
Yield continued (13 %) (bushels/acre)			
Mean for Drilled	48 **	31 *	59 ***, ***/2
Mean for Planted	49	29	50
Mean for Hobbit	52 ***/1	28 */1	55
Mean for Keltgin	46	32	54

* row spacing significantly different at 90% confidence level

** row spacing significantly different at 95% confidence level

*** row spacing significantly different at 99% confidence level

*/1 varieties significantly different at 90% confidence level

***/1 varieties significantly different at 99% confidence level

***/2 variety and row spacing interaction significantly different at 99% confidence level

Summary: There have been yield differences between the row and drilled treatments in all three years. In 1992, Hobbit had a significantly higher yield than Keltgin 5327 at the 99% confidence level. In 1993, the yield difference between Keltgin 5327 and Hobbit was statistically significant at the 90% confidence level.

In 1994, the drilled soybeans yielded significantly higher than the wide row soybeans. The Hobbit variety benefitted more from drilling than did Keltgin in 1994. Moisture content was also significantly different. Seed expenses have been \$4-\$6/acre higher for the drilled beans each year.