

7.5-Inch vs. 15-Inch Row-Width Evaluation for Soybeans

Andy Kleinschmidt, Agriculture and Natural Resources Extension Agent

Gary Prill, Farm Focus Research Coordinator

Ed Lentz, Extension Agronomy Specialist

Objective

To evaluate yields of two different soybean varieties as affected by two different row widths.

Background

Cooperator:	Marsh Foundation/ Farm Focus	Fertilizer:	None
County:	Van Wert	Herbicide:	POST: Roundup Ultra (1.5 pt/A)
Nearest Town:	Van Wert	Varieties:	Wellman 3836 RR (treated) Wellman 3731 RR (treated)
Soil Type:	Hoytville silty clay loam	Planting Date:	May 17, 1999
Drainage:	Tile	Planting Rate:	See methods
Tillage:	Fall deep till/ spring cultivate (2x)	Row Width:	See methods
Previous Crop:	Corn	Harvest Date:	September 28, 1999
Soil Test:	pH 6.2, P 57 ppm, K 188 ppm		

Methods

Each soybean variety was grown in separate test blocks with each variety block containing three replicates of the two spacing treatments. For the 7.5-inch row-spacing treatment, planting population was 195,000 seeds/acre. For the 15-inch row-spacing treatment, planting population was 180,000 seeds/acre. Soybeans were drilled with a John Deere 750 no-till drill for the 7.5-inch row-spacing treatment and planted with a John Deere 7000 Max Emerge planter with splitter attachment for the 15-inch row-spacing treatment. Harvest plot size was 28 feet wide x 1,075 feet long. Each plot was harvested and weighed by a weigh wagon to determine grain yield at 13% moisture. Harvest populations were estimated by counting the number of plants in three-foot sections from two adjacent rows. Counts were made at three different locations in each plot.

Results

Table 2. Yields and Results.

Variety	Treatment	Harvest Population (plants/A)	Yield (bu/A)
Wellman 3731 RR	7.5 inch drilled	205,216	38.3
	15 inch planted	154,880	39
Wellman 3836 RR	7.5 inch drilled	236,192	37.3
	15 inch planted	138,747	34.2

Wellman 3731 RR: Yield difference not significant at P = 0.05, CV = 2.2%.
Wellman 3836 RR: Yield difference not significant at P = 0.05, CV = 3.8%.

Summary

In this study, row-width evaluation on soybeans showed no significant difference between yields at 7.5-inch row-spacing treatment and 15-inch row-spacing treatment. There were inconsistent results between harvest population and target seeding population rates using the drill. Harvest population with the splitter was more consistent with the target seeding rate. Yields were not reduced statistically, however, between the two row-spacing treatments. In conclusion, this one-year study suggests that there is no significant effect on yields between the 7.5-inch row-spacing treatment and the 15-inch row-spacing treatment. Results may be different in another year with normal rainfall, since yields were reduced at this site due to dry weather.

Acknowledgments

The authors express their appreciation to Wellman Seeds, Inc., and Monsanto for donating material used in this study.

For additional information, contact:

Andy Kleinschmidt
The Ohio State University Extension
kleinschmidt.5@osu.edu