

Soybean Seeding Rate Trial

Trial ID: 2022-SSR14 – R.M. of Minitonas-Bowman

Objective: Quantify the agronomic and economic impacts of different soybean seeding rates.

Summary: The low seeding rate (166,000 seeds/ac) yielded significantly less than the medium seeding rate (196,000 seeds/ac) by a difference of 1.2 bu/ac. The change in profit that resulted from increasing the low seeding rate to the medium seeding rate was economical. The high seeding rate (226,000 seeds/ac) was statistically similar to the yields from the other two seeding rates, yielding 0.7 bu/ac less than the medium seeding rate and 0.5 bu/ac more than the low seeding rate.

Trial Information

Treatment	166k vs 196k vs 226k
Soil Texture	Clay Loam
Previous Crop	LL Canola
Tillage	Conventional
Seeding Equipment	Hoe Drill
Seeding Date	May 24
Variety	S001-D8X
Germination	80%
Row Spacing	12"
Harvest Date	October 8

Precipitation (mm)

	May	Jun	Jul	Aug	Total
Rainfall	114.1	59.7	42.7	41.9	258.4
Normal	45.4	84.2	85.6	68.3	283.5
% Normal	251%	71%	50%	61%	91%

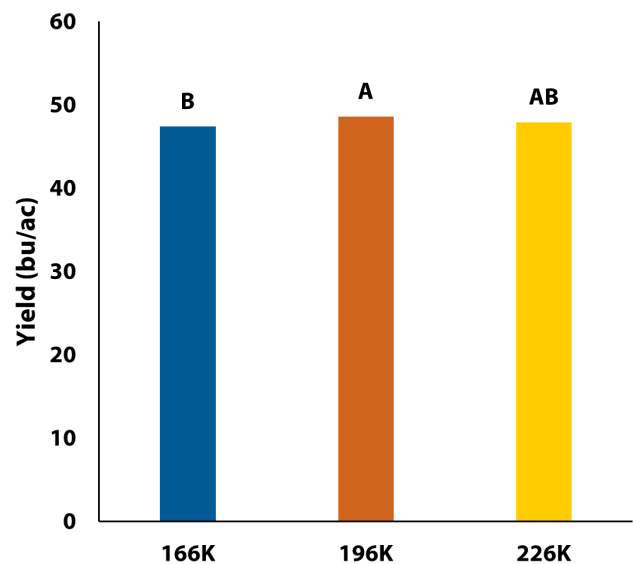
Plant Stand (plants/ac)

	V2	R5
166k	146,000	138,000
196k	157,000	164,000
226k	177,000	168,000

NDVI Field Image August 11



Yield by Treatment





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Overall Yield & Economics

	Mean (bu/ac)	Cost †	Change in Profit/ac ⁺⁺	
			Long-Term Average (\$9.64-\$15.20/bu)	Current Conditions (\$16-\$21/bu)
166k	47.4	\$81/ac		
196k	48.6	\$95/ac	-\$3/ac to \$4/ac	\$5/ac to \$11/ac
226k	47.9	\$110/ac	-\$24/ac to -\$22/ac	-\$21/ac to -\$19/ac
P-Value	0.0326	Economic	166K to 196K → Yes⁺⁺⁺	166K to 196K → Yes
CV	2.2%		166K to 226K → No	166K to 226K → No
Significance	Yes		196K to 226K → No	196K to 226K → No

† Based on Manitoba Agriculture's 2022 Cost of Production Guidelines (\$67.90/unit); does not include application cost.

++ Change in profit/ac is calculated from profit gained or lost due to yield differences, treatment cost/ac, and market prices; Long-term average prices are based on Manitoba Agriculture's Historical Manitoba Crop Prices (2017-2021).

+++ Economic at the higher range of long-term average prices.