

Soybean Seeding Rate Trial

Trial ID: 2020-SP07 – R.M. of Woodlands

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

Summary: The 130,000 seeds/ac treatment yielded significantly less than the 160,000 and 190,000 seeds/ac treatments. Increasing the seeding rate to 160,000 seeds/ac was economic, however, increasing the seeding rate to 190,000 seeds/ac was not economic.

Trial Information

Treatment	130K vs 160K vs 190K
Soil Texture	Clay
Previous Crop	Wheat
Tillage	Conventional
Seeding Equipment	40 ft Air Drill
Seeding Date	May 23
Variety	Merritt R2X
Row Spacing	10"
Harvest Date	September 23

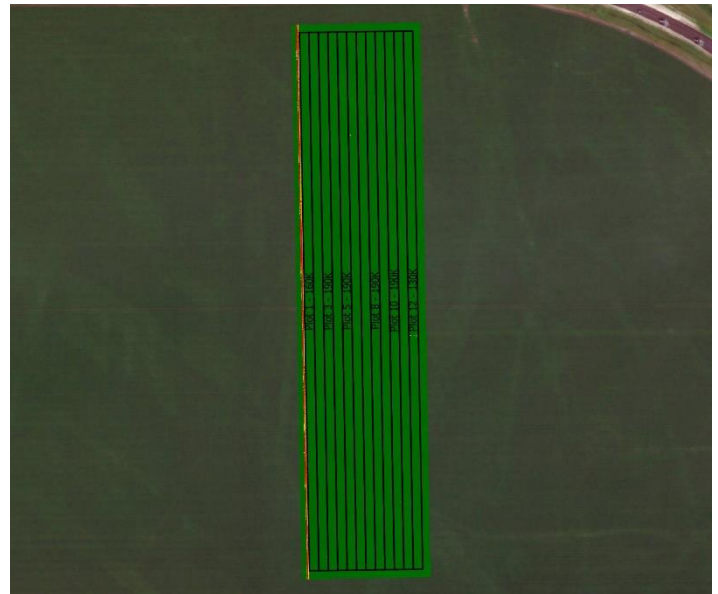
Precipitation (mm)

	May	June	July	August
Normal	53.8	92	66.4	63.3
Rainfall	36.2	51	47.1	91.5

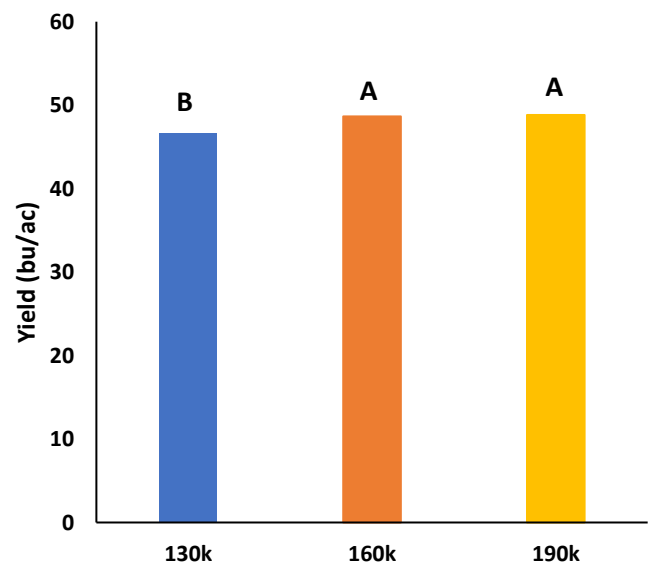
Plant Stand (plants/ac)

	V1	R6
130k	123 000	119 000
160k	141 000	129 000
190k	192 000	168 000

NDVI Field Image August 18



Yield by Treatment





Overall Yield & Economics

	Mean (bu/ac)	Cost †	Change in Profit/ac (@ soybean price of \$10-\$12/bu) ††
130k	46.7	\$62/ac	
160k	48.7	\$76/ac	130k → 160K: +\$6 to +\$10/ac
190k	48.8	\$90/ac	130k → 190K: -\$7 to -\$3/ac
P-Value	0.0004		
CV	2.2%		
Significance	Yes	Economic	130k → 160k Yes 130k → 190k No 160k → 190k No

† Based on MB Agriculture 2020 Cost of Production Guidelines (\$66.50/unit)

†† Change in profit is the difference between the change in income/ac, from a significant difference in yield, and the change in cost/ac with the change in seeding rate. Profit is presented as a range across soybean prices of \$10/bu to \$12/bu