Sunflower Planting Rate

Trial ID: 2023-SFLP05 — R.M. of St. Andrews

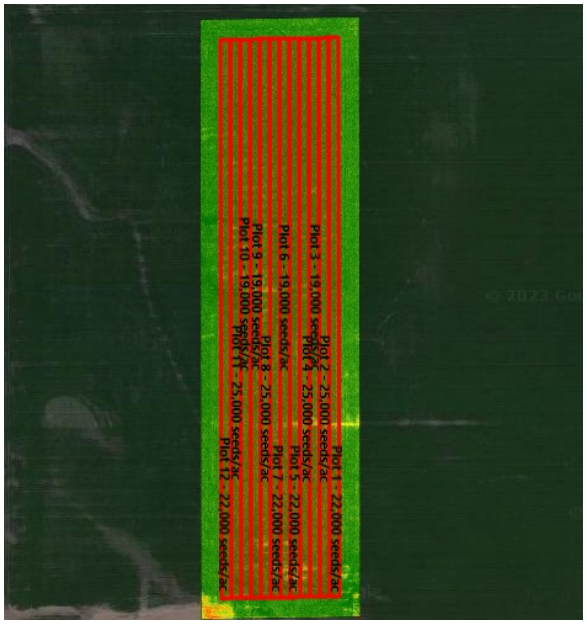
Objective: The purpose of this project is to quantify the agronomic and economic impacts of reducing and increasing normal planting rate in oil-type sunflower.

Summary: There was a significant yield difference between planting rates of 19,000, 22,000 and 25,000 plants/ac. As a result, the farmer's normal practice of 22,000 plants/ac was most profitable compared to the other two rates.

Trial Information

Treatment	19k vs. 22k vs. 25k
Soil Texture	Clay
Previous Crop	Soybeans
Tillage	Conventional Tillage
Planting Equipment	40' Planter
Planting Date	May 20
Variety	P63ME80 (oil-type)
Germination	88%
Row Spacing	30"
Harvest Date	November 04

NDVI Imagery August 14



Sunflower Response†

	Plant Stand (plants/ac)	TWT (lbs/bu)
19k	13,333	31.6
22k	13,917	31.3
25k	15,417	31.3

†Analysis performed by Scoular

Precipitation† (mm)

	May	June	July	Aug	Cumulative
Rainfall	9	58	69	70	**205**
Normal	56	92	82	75	**305**
% Normal	16%	63%	84%	93%	**67%**

†Growing season precipitation (mm)

Overall Yield & Economics

	Mean (lbs/ac)	Cost†	Change in Profit/ac††
19k	1460[B]	$43.70/ac	- $15/ac
22k	1539[A]	$50.60/ac	$0/ac
25k	1505[A]	$57.50/ac	- $6.90/ac
P-Value	0.0080	**Economics: There is a decrease in profit for the 19k seeding rate compared to the 22k seeding rate of $15/ac.**	
CV	1.52%		
Significance	Yes		

†Based on MB Agriculture 2023 Cost of Production Guidelines ($46.00/ac)
††Change in profit is calculated as the difference in cost between planting rate treatments. A price of $0.28/lb (Nov 2023) is used for the calculation of changes in profit between treatments.

MCA would like to thank Tone Ag Consulting Ltd. for the research support and Scoular for quality analysis for this trial.

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