Sunflower Planting Rate

Trial ID: 2022-SFLP03 — R.M. of Springfield

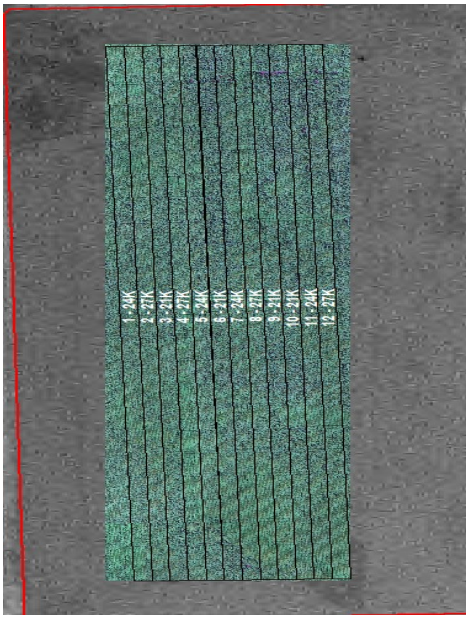
Objective: The purpose of this project is to quantify the agronomic and economic impacts of reducing and increasing normal planting rate in oil-type sunflower.

Summary: There was a significant yield difference between planting rates of 21,000, 24,000 and 27,000 plants/ac. As a result, the farmer's normal practice of 24,000 plants/ac was most profitable compared to the other two rates.

Trial Information

Treatment	21k vs. 24k vs. 27k
Soil Texture	Clay
Previous Crop	Soybeans
Tillage	Conventional
Planting Equipment	44' Planter
Planting Date	May 26
Variety	P63ME80 (oil-type)
Germination	94%
Row Spacing	22"
Harvest Date	November 01

RGB Imagery August 13



Sunflower Response†

	Plant Stand (plants/ac)	Oil (%)	TWT (lbs/bu)	Sizing 8 Slot	Grade
21k	19,000^{B}	44.4	31.0	89.0	—
24k	20,500^{AB}	47.0	30.8	84.0	—
27k	22,400^{A}	45.1	30.5	85.0	—

†Analysis performed by Scoular will be included at a later date

Precipitation† (mm)

	May	June	July	Aug	Total
Rainfall	154	69	70	146	**439**
Normal	54	68	69	101	**292**
% Normal	286%	100%	101%	144%	**150%**

†Growing season precipitation (mm) - May 01—Aug 31

Overall Yield & Economics

	Mean (lbs/ac)	Cost†	Change in Profit/ac††
21k	2,018^{B}	$48/ac	-$40/ac
24k	2,136^{A}	$55/ac	$0/ac
27k	2,219^{A}	$62/ac	-$7/ac
P-Value	0.0047	**Economics: There is a decrease in profit for the 21k seeding rate compared to the 24k seeding rate of $40/ac.**	
CV	2.45%		
Significance	Yes		

†Based on MB Agriculture 2022 Cost of Production Guidelines ($46.00/ac)
††Change in profit is calculated as the difference in cost between planting rate treatments. A price of $0.40/lb (Nov 2022) is used for the calculation of changes in profit between treatments.

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