



Barley Seeding Rate

Trial ID: 2023-BP01 — R.M. of De Salaberry

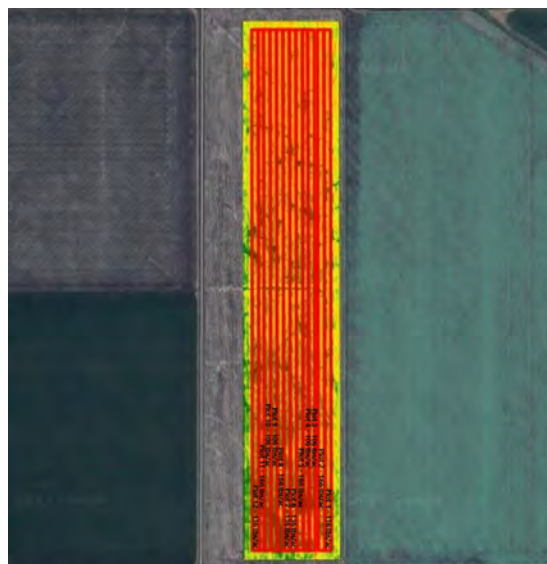
Objective: The purpose of this project is to quantify the agronomic and economic impacts of reducing and increasing normal seeding rate in barley.

Summary: There was no significant yield difference between seeding rates of 106, 136 and 166 lbs/ac. As a result, there was a decrease in profit equivalent to the increase in seed cost for the higher seeding rates.

Trial Information

Treatment	106 lbs vs. 136 lbs vs. 166 lbs
Soil Texture	Clay
Previous Crop	Soybeans
Tillage	Minimal Tillage
Seeding Equipment	60' Disc Drill
Seeding Date	May 05
Variety	CDC Austenson
Germination	100%
Row Spacing	10"
Harvest Date	August 14

NDVI Imagery July 20



Barley Response

	Plants/ft ²	Protein (%)	TWT (kg/hL)	Grade
106 lbs	23	—	—	—
136 lbs	27	12.8	67	1
166 lbs	27	—	—	—

Precipitation[†] (mm)

	May	June	July	Aug	Cumulative
Rainfall	10	69	44	17	140
Normal	69	102	86	84	340
% Normal	15%	68%	51%	21%	41%

[†]Growing season precipitation (mm)

Overall Yield & Economics

	Mean (bu/ac)	Cost [†]	Change in Profit/ac ^{††}
106 lbs	81.8	\$31.90/ac	+ \$8.70/ac
136 lbs	79.1	\$40.60/ac	\$0/ac
166 lbs	79.7	\$49.30/ac	- \$8.70/ac
P-Value	0.2622	Economics: There is an increase in profit for the lower seeding rate due to the lower cost of seed/acre.	
CV	2.72%		
Significance	No		

[†]Based on MB Agriculture 2023 Cost of Production Guidelines (\$29.00/ac)

^{††}Change in profit is calculated as the difference in cost between seeding rate treatments.



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



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Barley Seeding Rate

Trial ID: 2023-BP02 — R.M. of Oakland-Wawanesa

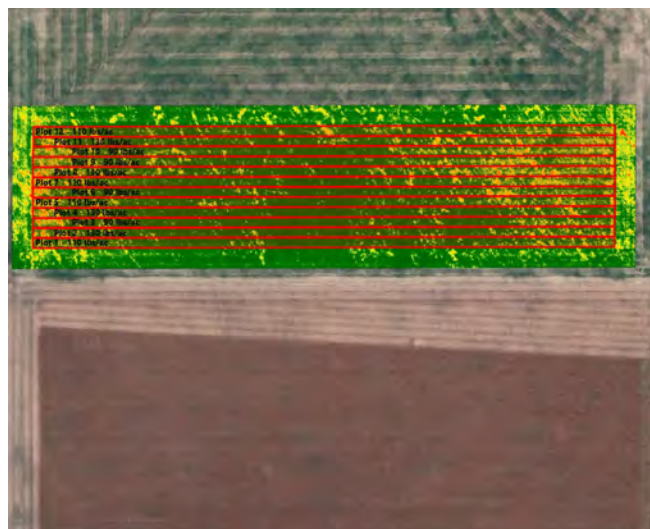
Objective: The purpose of this project is to quantify the agronomic and economic impacts of reducing and increasing normal seeding rate in barley.

Summary: There was no significant yield difference between seeding rates of 90, 110 and 130 lbs/ac. As a result, there was a decrease in profit equivalent to the increase in seed cost for the higher seeding rates.

Trial Information

Treatment	90 lbs vs. 110 lbs vs. 130 lbs
Soil Texture	Fine Loams
Previous Crop	Canola
Tillage	Minimal Tillage
Seeding Equipment	40' Hoe Drill
Seeding Date	May 10
Variety	AAC Connect
Germination	91%
Row Spacing	10"
Harvest Date	August 17

NDVI Imagery July 12



Barley Response

	Plants/ft ²	Protein (%)	TWT (kg/hL)	Grade
90 lbs	22 ^B	12.3	61	2
110 lbs	26 ^A	12.0	61	2
130 lbs	26 ^A	12.2	61	2

Precipitation[†] (mm)

	May	June	July	Aug	Cumulative
Rainfall	22	104	15	39	180
Normal	76	97	78	69	321
% Normal	29%	108%	20%	56%	56%

[†]Growing season precipitation (mm)

Overall Yield & Economics

	Mean (bu/ac)	Cost [†]	Change in Profit/ac ^{††}
90 lbs	85.7	\$26.60/ac	+\$5.60/ac
110 lbs	86.6	\$32.20/ac	\$0/ac
130 lbs	91.2	\$37.80/ac	-\$5.60/ac
P-Value	0.2752	Economics: There is an increase in profit for the lower seeding rate due to the lower cost of seed/acre.	
CV	5.25%		
Significance	No		

[†]Based on MB Agriculture 2023 Cost of Production Guidelines (\$29.00/ac)

^{††}Change in profit is calculated as the difference in cost between seeding rate treatments.



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Barley Seeding Rate

Trial ID: 2023-BP03 — R.M. of Westlake-Gladstone

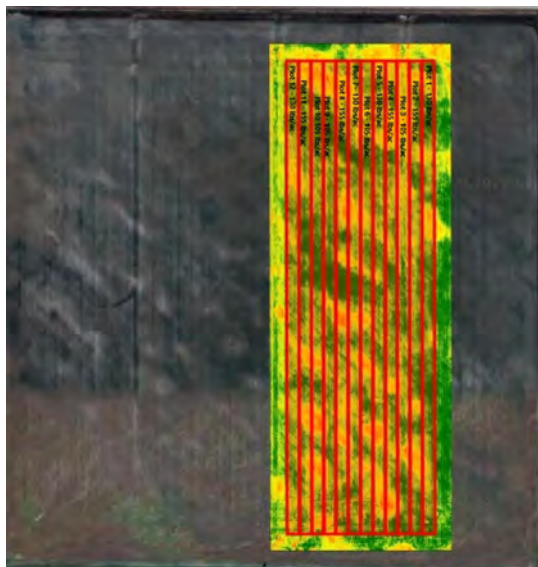
Objective: The purpose of this project is to quantify the agronomic and economic impacts of reducing and increasing normal seeding rate in barley.

Summary: There was a significant yield difference between seeding rates of 105, 130 and 155 lbs/ac. As a result, there was a decrease in profit for the 105 lbs/ac rate versus the 130 and 155 lbs/ac rates based on seed costs and grain price.

Trial Information

Treatment	105 lbs vs. 130 lbs vs. 155 lbs
Soil Texture	Clay Loams
Previous Crop	Wheat
Tillage	Minimal Tillage
Seeding Equipment	60' Disc Drill
Seeding Date	May 10
Variety	CDC Austenson
Germination	98%
Row Spacing	10"
Harvest Date	August 19

NDVI Imagery July 19



Barley Response

	Plants/ft ²	Protein (%)	TWT (kg/hL)	Grade
105 lbs	11	13.7	63	1
130 lbs	13	13.2	63	1
155 lbs	15	12.5	62	2

Precipitation[†] (mm)

	May	June	July	Aug	Cumulative
Rainfall	25	65	14	31	135
Normal	62	89	78	66	295
% Normal	40%	73%	18%	47%	46%

[†]Growing season precipitation (mm)

Overall Yield & Economics

	Mean (bu/ac)	Cost [†]	Change in Profit/ac ^{††}
105 lbs	70.7 ^B	\$31.72/ac	-\$7.55/ac
130 lbs	76.9 ^A	\$39.27/ac	\$0/ac
155 lbs	75.6 ^A	\$46.82/ac	-\$7.55/ac
P-Value	0.0253	Economics: There is a decrease in profit for the lower seeding rate due to the lower yield/acre than the higher seeding rates.	
CV	3.05%		
Significance	Yes		

[†]Based on MB Agriculture 2023 Cost of Production Guidelines (\$29.00/ac)

^{††}Change in profit is calculated as the difference in cost between seeding rate treatments. A price of \$7.00/bushel for #1 grade feed barley is used in the economic calculation (Nov 2023)



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Barley Seeding Rate

Trial ID: 2023-BP04 — R.M. of St. Clements

Objective: The purpose of this project is to quantify the agronomic and economic impacts of reducing and increasing normal seeding rate in barley.

Summary: There was no significant yield difference between seeding rates of 105, 135 and 165 lbs/ac. As a result, there was a decrease in profit equivalent to the increase in seed cost for the higher seeding rates.

Trial Information

Treatment	105 lbs vs. 135 lbs vs. 165 lbs
Soil Texture	Clay Loams
Previous Crop	Soybeans
Tillage	Zero Till
Seeding Equipment	65' Disc Drill
Seeding Date	May 10
Variety	AAC Synergy
Germination	98%
Row Spacing	10"
Harvest Date	August 29

Barley Response

	Plants/ft ²	Protein (%)	TWT (kg/hL)	Grade
105 lbs	24	11.8	60	2
135 lbs	28	11.8	60	2
165 lbs	28	11.9	59	2

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Precipitation[†] (mm)

	May	June	July	Aug	Cumulative
Rainfall	11	73	31	27	142
Normal	58	88	87	76	309
% Normal	19%	83%	35%	36%	46%

[†]Growing season precipitation (mm)

Overall Yield & Economics

	Mean (bu/ac)	Cost [†]	Change in Profit/ac ^{††}
105 lbs	81.9	\$31.90/ac	+ \$8.70/ac
135 lbs	80.2	\$40.60/ac	\$0/ac
165 lbs	80.3	\$49.30/ac	- \$8.70/ac
P-Value	0.2613	Economics: There is an increase in profit for the lower seeding rate due to the lower cost of seed/acre.	
CV	1.77%		
Significance	No		

[†]Based on MB Agriculture 2023 Cost of Production Guidelines (\$29.00/ac)

^{††}Change in profit is calculated as the difference in cost between seeding rate treatments.



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Barley Seeding Rate

Trial ID: 2023-BP05 — R.M. of St. Francois Xavier

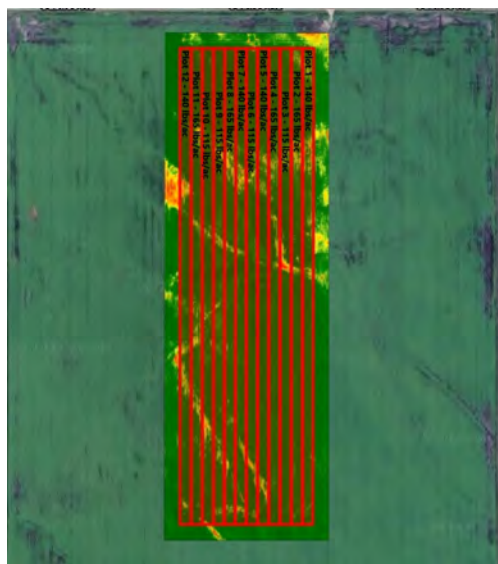
Objective: The purpose of this project is to quantify the agronomic and economic impacts of reducing and increasing normal seeding rate in barley.

Summary: There was no significant yield difference between seeding rates of 115, 140 and 165 lbs/ac. As a result, there was a decrease in profit equivalent to the increase in seed cost for the higher seeding rates.

Trial Information

Treatment	115 lbs vs. 140 lbs vs. 165 lbs
Soil Texture	Clay
Previous Crop	Soybeans
Tillage	Minimal Tillage
Seeding Equipment	60' Disc Drill
Seeding Date	May 15
Variety	Claymore
Germination	99%
Row Spacing	10"
Harvest Date	August 21

NDVI Imagery July 19



Barley Response

	Plants/ft ²	Protein (%)	TWT (kg/hL)	Grade
115 lbs	22 ^B	12.7	65	1
140 lbs	23 ^B	12.0	65	1
165 lbs	27 ^A	11.9	66	1

Precipitation[†] (mm)

	May	June	July	Aug	Cumulative
Rainfall	8	61	74	22	165
Normal	60	98	76	68	302
% Normal	14%	62%	97%	32%	54%

[†]Growing season precipitation (mm)

Overall Yield & Economics

	Mean (bu/ac)	Cost [†]	Change in Profit/ac ^{††}
115 lbs	106.1	\$34.80/ac	+ \$7.25/ac
140 lbs	105.2	\$42.05/ac	\$0/ac
165 lbs	113.3	\$49.30/ac	- \$7.25/ac
P-Value	0.2264	Economics: There is an increase in profit for the lower seeding rate due to the lower cost of seed/acre.	
CV	5.94%		
Significance	No		

[†]Based on MB Agriculture 2023 Cost of Production Guidelines (\$29.00/ac)

^{††}Change in profit is calculated as the difference in cost between seeding rate treatments.



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Barley Seeding Rate

Trial ID: 2023-BP06 — R.M. of MacDonald

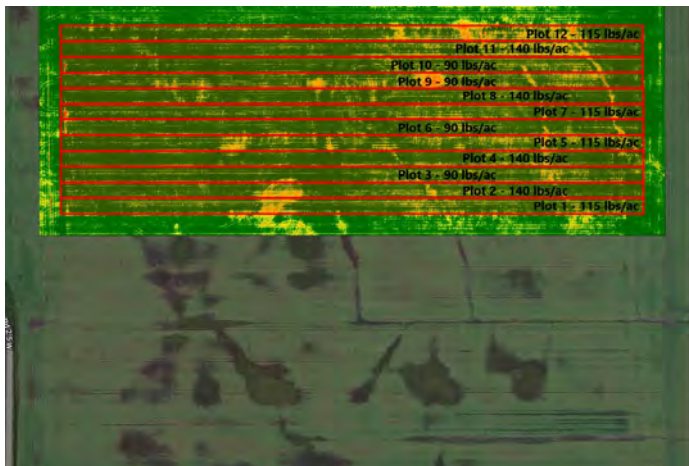
Objective: The purpose of this project is to quantify the agronomic and economic impacts of reducing and increasing normal seeding rate in barley.

Summary: There was no significant yield difference between seeding rates of 90, 115 and 140 lbs/ac. As a result, there was a decrease in profit equivalent to the increase in seed cost for the higher seeding rates.

Trial Information

Treatment	90 lbs vs. 115 lbs vs. 140 lbs
Soil Texture	Clay
Previous Crop	Canola
Tillage	Conventional Tillage
Seeding Equipment	60' Disc Drill
Seeding Date	May 17
Variety	AAC Connect
Germination	94%
Row Spacing	10"
Harvest Date	August 30

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Barley Response

	Plants/ft ²	Protein (%)	TWT (kg/hL)	Grade
90 lbs	9	11.3	62	2
115 lbs	10	11.3	62	2
140 lbs	13	11.1	63	1

Precipitation[†] (mm)

	May	June	July	Aug	Cumulative
Rainfall	40	58	26	36	159
Normal	60	84	77	75	295
% Normal	66%	69%	34%	48%	54%

[†]Growing season precipitation (mm)

Overall Yield & Economics

	Mean (bu/ac)	Cost [†]	Change in Profit/ac ^{††}
90 lbs	88.2	\$26.60/ac	+\$7.00/ac
115 lbs	83.8	\$33.60/ac	\$0/ac
140 lbs	90.3	\$40.60/ac	-\$7.00/ac
P-Value	0.0938	Economics: There is an increase in profit for the lower seeding rate due to the lower cost of seed/acre.	
CV	4.00%		
Significance	No		

[†]Based on MB Agriculture 2023 Cost of Production Guidelines (\$29.00/ac)

^{††}Change in profit is calculated as the difference in cost between seeding rate treatments.



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Barley Seeding Rate

Trial ID: 2023-BP07 — R.M. of Cartier

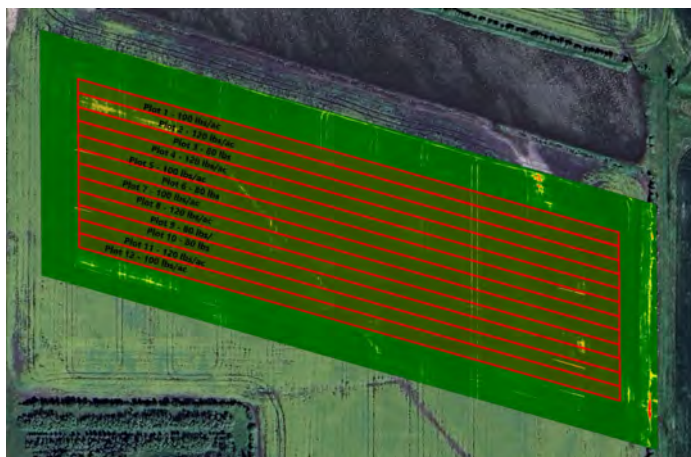
Objective: The purpose of this project is to quantify the agronomic and economic impacts of reducing and increasing normal seeding rate in barley.

Summary: There was no significant yield difference between seeding rates of 80, 100 and 120 lbs/ac. As a result, there was a decrease in profit equivalent to the increase in seed cost for the higher seeding rates.

Trial Information

Treatment	80 lbs vs. 100 lbs vs. 120 lbs
Soil Texture	Clay
Previous Crop	Canola
Tillage	Conventional Tillage
Seeding Equipment	30' Hoe Drill
Seeding Date	May 20
Variety	CDC Churchill
Germination	97%
Row Spacing	8"
Harvest Date	August 19

NDVI Imagery July 19



Barley Response

	Plants/ft ²	Protein (%)	TWT (kg/hL)	Grade
80 lbs	13 ^C	10.4	65	1
100 lbs	16 ^B	10.7	64	1
120 lbs	20 ^A	10.7	63	2

Precipitation[†] (mm)

	May	June	July	Aug	Cumulative
Rainfall	40	58	26	36	159
Normal	60	84	77	75	295
% Normal	66%	69%	34%	48%	54%

[†]Growing season precipitation (mm)

Overall Yield & Economics

	Mean (bu/ac)	Cost [†]	Change in Profit/ac ^{††}
80 lbs	87.6	\$23.80/ac	+\$5.60/ac
100 lbs	97.8	\$29.40/ac	\$0/ac
120 lbs	96.8	\$35.00/ac	-\$5.60/ac
P-Value	0.1770	Economics: There is an increase in profit for the lower seeding rate due to the lower cost of seed/acre.	
CV	7.84%		
Significance	No		

[†]Based on MB Agriculture 2023 Cost of Production Guidelines (\$29.00/ac)

^{††}Change in profit is calculated as the difference in cost between seeding rate treatments.



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Barley Seeding Rate

Trial ID: 2023-BP08 — R.M. of Rockwood

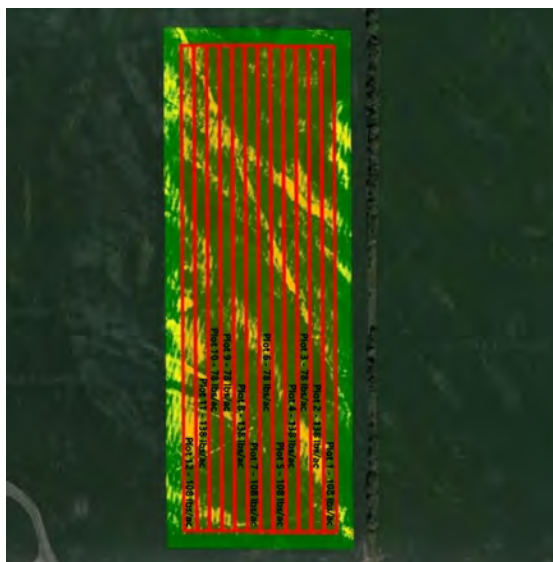
Objective: The purpose of this project is to quantify the agronomic and economic impacts of reducing and increasing normal seeding rate in barley.

Summary: There was no significant yield difference between seeding rates of 78, 108 and 138 lbs/ac. As a result, there was a decrease in profit equivalent to the increase in seed cost for the higher seeding rates.

Trial Information

Treatment	78 lbs vs. 108 lbs vs. 138 lbs
Soil Texture	Clay Loams
Previous Crop	Soybeans
Tillage	Conventional Tillage
Seeding Equipment	60' Disc Drill
Seeding Date	May 24
Variety	CDC Austenson
Germination	100%
Row Spacing	10"
Harvest Date	September 01

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Barley Response

	Plants/ft ²	Protein (%)	TWT (kg/hL)	Grade
78 lbs	18	13.4	68	1
108 lbs	20	13.7	67	1
138 lbs	21	13.4	65	1

Precipitation[†] (mm)

	May	June	July	Aug	Cumulative
Rainfall	15	132	37	71	254
Normal	57	90	80	77	303
% Normal	26%	146%	46%	92%	84%

[†]Growing season precipitation (mm)

Overall Yield & Economics

	Mean (bu/ac)	Cost [†]	Change in Profit/ac ^{††}
78 lbs	91.7	\$22.40/ac	+ \$9.10/ac
108 lbs	92.2	\$31.50/ac	\$0/ac
138 lbs	92.0	\$40.60/ac	- \$9.10/ac
P-Value	0.9831	Economics: There is an increase in profit for the lower seeding rate due to the lower cost of seed/acre.	
CV	3.74%		
Significance	No		

[†]Based on MB Agriculture 2023 Cost of Production Guidelines (\$29.00/ac)

^{††}Change in profit is calculated as the difference in cost between seeding rate treatments.



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