

**NDSU North Central Research Extension Center, Minot
Barley Seeding Rates in North Central North Dakota**

Variety Comparisons

Variety	Plant Height	Lodging	% Plump	% Thin	Test Weight	Protein	Grain Yield
	inches	0-9 ^a	>6/64	<5/64	lbs/bu	%	bu/A
Tradition	30	2	92	1	48.2	12.9	96.6
ND Genesis	30	1	96	0	48.6	11.1	98.1
LSD 0.05	NS	NS	1	NS	0.3	0.2	NS

Seeding Rate Comparisons

Seeding Rate	Plant Height	Lodging	% Plump	% Thin	Test Weight	Protein	Grain Yield	Gross Return*
1000's/A	inches	0-9 ^a	>6/64	<5/64	lbs/bu	%	bu/A	\$/A
500	30	2	93	0	48.4	12.1	92.7	341
750	30	2	94	0	48.4	12.1	95.5	348
1000	30	1	94	0	48.6	11.9	99.2	359
1250	30	1	94	0	48.4	12.0	101.8	366
LSD 0.05	NS	NS	NS	NS	NS	NS	3.7	--

Variety by Seeding Rate Interactions

Variety	Seeding Rate	Plant Height	Lodging	% Plump	% Thin	Test Weight	Protein	Grain Yield
	1000's/A	inches	0-9 ^a	>6/64	<5/64	lbs/bu	%	bu/A
Tradition	500	30	2	91	1	48.1	12.9	92.7
	750	30	1	92	0	48.0	13.0	93.7
	1000	30	2	93	0	48.7	12.8	99.5
	1250	30	2	92	1	48.2	12.9	100.3
ND Genesis	500	31	1	96	0	48.6	11.2	92.7
	750	31	2	96	0	48.8	11.2	97.4
	1000	30	1	96	0	48.5	11.0	99.0
	1250	30	1	96	0	48.6	11.1	103.3
LSD 0.05		NS	NS	NS	NS	NS	NS	NS

^a Lodging: 0 = none, 9 = lying flat on the ground.

NS = no statistical difference between treatments.

*Gross Return: Yield x \$3.75 contract price - \$0.125/lb certified seed cost.

Summary: Barley malting varieties Tradition and ND Genesis were seeded at four different seeding rates and at four locations, Mohall, Rugby, Garrison and Wilton. Variety by seeding rate interactions were not detected, meaning that these variables should be treated independently. Statistically significant differences between varieties were observed for % plump, test weight and protein. Statistically significant differences between seeding rates were observed only for grain yield, with the 500,000 seeding rate producing less grain yield than higher rates. There were no statistical differences for any characteristic between 750k, 1000k or 1250k seeding rates. The optimum seeding rate was 750,000 seeds per acre but the highest gross return was achieved at 1,250,000 seeds per acre.