



Barley

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Varietal Trials Results, January 2007



Barley varieties are compared in replicated trials in Crookston, Morris, St. Paul, Stephen and Roseau. Data collected from these trials should be used to make comparisons only among those varieties included in the trials. Descriptions of barley varieties are listed by year of release.

Variety Selection Criteria

Most barley producers in the region grow barley for malt and select varieties approved by the American Malting Barley Association (AMBA). The most important industry specifications for making malting grade are grain protein, kernel plumpness and deoxynivalenol (DON), the toxin produced by the Fusarium Head Blight (FHB) pathogen. Please consult the AMBA recommended varieties for the most current information about industry acceptance of malting barley varieties at www.ambainc.org. For most producers, the disease FHB and the presence of DON in harvested grain are the two most important factors limiting production of malting barley in the region. The only variety with partial resistance to FHB is MNBrite; however, MNBrite is not approved by AMBA as a malting variety. There are no significant differences among the current malting varieties for resistance to FHB.

General-Purpose Varieties

Stellar-ND – Medium yielding and medium maturity. Good lodging resistance and kernel plumpness. Six-rowed, semi-smooth awns, long rachilla hairs and colorless aleurone. Classified as a malting variety by AMBA. Resistant to spot blotch and slightly better net blotch resistance compared to Robust. Released by N.D. AES in 2005. **PVP (94)**

Tradition – High yielding and medium maturity. Medium lodging resistance and kernel plumpness. Six-rowed, semi-smooth awns, long rachilla hairs and colorless aleurone. Classified as a malting variety by AMBA. Resistant to spot blotch, slightly better net blotch resistance compared to Robust. Developed by Busch-Agricultural Resources Inc. (BARI). Released 2003. **PVP (94)**

Drummond – Medium yield and medium maturity. Very good lodging resistance and good kernel plumpness. Six-rowed, semi-smooth awns, long rachilla hairs, colorless aleurone. Classified as a malting

Grain yield as a percent of the mean of varieties in trials from 2004-2006 and 2006 alone.

	Crookston		Morris		Stephen		St. Paul		Roseau		State Mean	
	2006	3-Year	2006	3-Year	2006	2-Year*	2006	3-Year	2006	2-Year*	2006	3-Year
Robust	98	89	93	97	100	93	102	103	105	97	100	96
Stander	99	95	107	109	87	90	106	99	111	111	102	101
MNBrite	96	97	92	96	87	93	87	95	81	76	88	92
Lacey	98	98	95	112	107	103	96	101	87	93	97	102
Drummond	102	94	102	95	91	93	111	110	106	100	102	99
Stellar-ND	104	107	105	91	100	102	101	94	101	105	102	98
Legacy	103	103	109	99	108	108	121	110	100	107	108	105
Tradition	100	108	112	108	115	111	88	98	115	111	106	107
Conlon	99	109	85	93	106	107	90	90	93	100	95	100
LSD 0.05	8.4	8.7	16.4	12.1	21.1	7.2	10.9	7.8	11.7	9.5	7.6	4.1
Mean, Bu/A	119	103	79	91	90	98	101	102	111	95	100	98

* 2004 and 2006.

variety by AMBA. Resistant to spot blotch, slightly better net blotch resistance compared to Robust. Developed from crosses involving Azure, Bumper, Hazen and Stander. Released by N.D. AES in 2000. **PVP (94)**

Legacy – High yielding and medium-late maturity. Medium lodging resistance and kernel plumpness. Six-rowed, semi-smooth awns, long rachilla hairs and colorless aleurone. Classified as a malting variety by AMBA. Resistant to spot blotch; slightly better net blotch resistance compared to Robust. Developed by Busch Agricultural Resources Inc. (BARI) from a complex cross involving the parental varieties Bumper, Karl, Manker and Excel. Released 2000. **PVP (94)**

Lacey – High yield and medium maturity. Good lodging resistance and kernel plumpness. Six-rowed, semi-smooth awns, short rachilla hairs, colorless aleurone. Classified as a malting variety by AMBA. Resistant to spot blotch. Developed from crosses involving Robust, Excel and Stander. Released by Minn. AES in 2000. **PVP (94)**

Conlon – Medium yielding early maturity variety. Moderate lodging resistance and very plump kernels. Two-rowed, semi-smooth awns, long rachilla hairs, and colorless aleurone. Classified as a malting variety by AMBA. Resistant to net blotch but moderately susceptible to spot blotch compared to Robust. Released by N.D. AES in 1996. **PVP (94)**.

Robust – Low yield and medium maturity. Medium lodging resistance and good kernel plumpness. Six-rowed, semi-smooth awn, short rachilla hairs, colorless aleurone. Classified as a malting variety by AMBA. Resistant to spot blotch. Developed from crosses involving Morex and Manker. Released by Minn. AES 1983. **PVP**

Special-Purpose Varieties

MNBrite – Medium yield and early maturity. Medium lodging resistance and kernel plumpness. Six-rowed, semi-smooth awns, colorless aleurone. Not classified as a malting variety., Resistant to kernel discol-

oration; has some resistance to FHB. Resistant to spot blotch; has slightly better net blotch resistance compared to Robust. Released by Minn. AES 1998.

Royal – Intended for use as a forage-companion crop and feed-grain variety. Not a malting variety. Six-rowed, semi-smooth awn, blue aleurone, semidwarf stature. Superior in forage quality (RFV) compared to taller varieties, based on digestibility and intake potential; low in fiber and lignin. Similar to Robust in forage protein and forage yield at the soft dough stage. Compared to taller barley and oat varieties, it competes less with underseeded forage legumes because of its short stature and superior lodging resistance. Resistant to spot blotch. Developed from crosses involving Robust, Azure and semidwarf Minn. M32. Released by Minn. AES 1994. **PVP (94)**

Stander – Medium yield, late maturity. Very good lodging resistance and good kernel plumpness. Six-rowed, semi-smooth awn, short rachilla hairs, colorless aleurone, short stature. Not classified as a malting variety. Resistant to spot blotch. Developed by Minnesota Agricultural Experiment Station from crosses involving Excel, Robust and Bumper. Released 1993. **PVP**

Barley	
Planting Rate and Date	
Bushel Weight, Pounds.....	48
Seeds/Pound.....	14,300
Planting Rate, Pounds/Acre.....	85
Planting Rate, Seeds/Sq. Ft.....	28
Planting Date.....	Early Spring

Characteristics of barley varieties, 2000–2006.

Variety	Type	Use	Heading (DAP)	Height (inches)	Lodging (%)	Plump (%)	Protein (%)
Robust	6-row	Malt	57	35	Med.	84	13.3
Stander	6-row	Feed	57	32	Strong	86	12.9
MNBrite	6-row	Feed	57	35	Med.	84	14.4
Lacey	6-row	Malt	57	32	Strong	85	13.3
Drummond	6-row	Malt	56	33	V. Strong	81	13.3
Stellar ND ¹	6-row	Malt	58	32	Strong	86	13.0
Legacy	6-row	Malt	58	34	Med.	78	13.0
Tradition ²	6-row	Malt	57	33	Med.	86	13.9
Conlon ²	2-row	Malt	58	31	Med.	92	13.6
No. of Trials			23	23	12	20	17

DAP = days after planting

¹ Only three years of plump and protein data, 2000-2001 and 2006.

² Only three years of plump and protein data, 2003-2005.

Disease reactions¹ of barley varieties; 2001-2006.

Variety	FHB	Net Blotch	Septoria Speckled Leaf Blotch	Spot Blotch	Stem Rust
Robust	8	8	9	2	1
Excel	8	8	9	2	1
Stander	9	8	9	2	1
MNBrite	6	6	9	1	1
Lacey	8	8	9	2	1
Drummond	8	7	9	2	1
Legacy	7	5	9	2	1
Tradition	8	7	9	2	1

¹ Most Resistant = 1, Most Susceptible = 9.