

Origin of select barley

varieties currently grown in
North Dakota:

- Innovation** – BAR LLC, 2010
- Celebration** – BAR LLC, 2009
- Rasmusson** – U of M, 2008
- Stellar-ND** – NDSU, 2005
- Tradition** – BAR LLC, 2003
- Legacy** – BAR LLC, 2000
- Lacey** – U of M, 2000
- Drummond** – NDSU, 1999

For additional information

about barley varieties, refer to the most recent **Barley Variety Selection Guide** www.ext.nodak.edu/extpubs/plantsci/smgrains/a1049w.htm or contact the NDSU barley breeder or extension agronomist at 701-231-7971.

For more information on the Innovation Barley Seed Increase Program contact:

NDSU Foundation Seedstocks Project
Department of Plant Sciences
NDSU Dept. 7670
Loftsgard Hall, P.O. Box 6050
Fargo, ND 58108-6050/701-231-8140
www.ndfss.com

The production and distribution of Foundation Innovation barley seed is a cost-recovery service provided by the North Dakota Foundation Seedstocks Project for the benefit of North Dakota producers. Neither NDSU nor the ND Crop Improvement and Seed Association (NDCISA) make any guarantee as to the crop yield and quality of Innovation barley or any other crop variety.

Producers who purchase and grow Innovation barley are assuming the same risks associated with producing any other barley variety.

Plant Quality Certified Seed

Certified seed is an assurance of variety identity, germination, and purity. Contact your local seed producer or dealer for quality certified seed.

Seed producers or dealers can be found in the North Dakota Field Inspected Seeds Directory. The directory is available from the North Dakota State Seed Department (NDSSD), North Dakota Crop Improvement & Seed Association, your local county agent, or under the field seeds program of the NDSSD website.

www.ndseed.com



All varieties listed in the brochure are protected under PVP Title V and must be sold as a class of certified seed.

Every seed lot sold must be accompanied by a seed analysis tag or certificate.



NDSU[®]
AGRICULTURE

Innovation Barley



Brought to you through the cooperation of Busch Agricultural Resources, Inc., the North Dakota State University Foundation Seedstocks Project, and the North Dakota Crop Improvement and Seed Association.



www.ndcropimprovement.org

Innovation Barley

The Innovation Barley Seed Increase Program:

Through a collaborative agreement between the North Dakota State University Foundation Seedstocks project (NDFSS) and Busch Agricultural Resources LLC (BAR LLC), all foundation seed of Innovation barley will be produced and distributed by the NDFSS.

Under the terms of this agreement the increase and distribution of Innovation barley seed will be handled in much the same way as publicly developed varieties with only minor differences.

Breeder seed will be maintained by BAR LLC at Fort Collins, CO. Foundation seed will be produced and distributed at Research Extension Centers across the state and provided to the North Dakota Crop Improvement and Seed Association (NDCISA) for a registered seed increase by qualified seed growers. Certified seed is produced by independent seed growers.

Innovation barley was developed by the barley breeding program at Busch Agricultural Resources LLC (BAR LLC) and was released in 2010. Innovation is a spring-type, mid-season, six-rowed malting barley. It was tested as 6B03-4478. Innovation is a Midwestern variety well adapted to Minnesota, North Dakota, Idaho, and Montana. It has excellent malting quality. Innovation was derived from the cross 6B98-9432/6B97-2331 in the greenhouse in May 2000 at Ft. Collins, CO. Both parents were included in a “Low DON” crossing block specifically devoted to lowering Deoxinivalenol (DON) toxin accumulation caused by *Fusarium graminearum*.

Innovation Barley General Characteristics

- Spring-type mid-season, six-rowed malting barley
- Well adapted to Minnesota, North Dakota, Idaho, and Montana
- Excellent malting quality

Agronomic comparison of Innovation barley to other barley varieties across several locations in ND (NDSU Variety Trial 2010).

Variety	Yield (bu/ac)	Days to Heading (Julian)	Lodging (1-9) ¹	Plant Height (in)	Test Weight (lb/bu)	Protein (%)
Innovation	104	66	5	35	46.5	12.9
Celebration	106	67	4	36	43.5	13.3
Tradition	105	67	6	36	47.1	12.7

¹Lodging of 1 = no lodging and 9 = severe lodging.

²Diseases of 1 = resistant and 9 = susceptible.

Malt quality comparisons of Innovation and other six-rowed cultivars grown in North Dakota yield trials, 2009-2010¹.

Variety	Kernel Weight (mg)	Plump Kernels (%)	Barley Protein (%)	Barley Color ³	Malt Extract (%)	Wort Color ⁴	Wort Clarity ⁵	Wort Protein (%)	S/T ² (%)	Diastatic Power (°L)	Alpha-Amylase (20° DU)	Beta-Glucan (ppm)
Innovation	35.1	93.4	13.4	41.4	80.2	1.9	1	5.98	46.5	163	74.9	236
Celebration	32.4	91.1	13.8	43.6	80.3	1.7	1	5.96	45.2	193	82.7	137
Lacey	35.4	92.4	13.7	39.7	79.9	1.8	1	5.85	44.5	183	71.9	134
Stellar-ND	35.2	94.8	13	44.3	80.6	1.8	1	5.68	46	180	74.7	169
Tradition	34.3	93	13.6	43.3	79.9	1.6	1.1	5.31	40.9	195	71.3	250
Locs./year	7	11	7	7	7	7	7	7	7	7	7	7

¹Data courtesy of USDA-ARS Cereal Crops Research Unit, Madison, WI.

²Soluble protein to total protein ratio.

³Higher barley color score indicates brighter grain color.

⁴Higher wort color score indicates darker wort color.

⁵Wort clarity scale — 1 = clear, 2 = slightly hazy, 3 = hazy.