

**NEBRASKA AGRICULTURAL EXPERIMENT STATION  
UNIVERSITY OF NEBRASKA-LINCOLN  
DEPARTMENT OF AGRONOMY**

**RELEASE OF P-713 WINTER FEED BARLEY**

The Nebraska Agricultural Experiment Station releases a new six-rowed, winter, feed barley variety (*Hordeum vulgare* L.) named P-713. P-713 was previously tested as NE95713. P-713 was selected from the cross P-954/Pennco which was made in 1989 by Dr. P. Stephen Baenziger or his student, Dr. Laura Oberthur. The pedigree of P-954 is Hitchcock/Maury//Hitchcock (<http://agronomy.unl.edu/grain/barleyrel2.PDF>, verified March 26, 2004). P-713 is an F<sub>3</sub>-derived line that was selected in the F<sub>4</sub> generation on the basis of its maturity, plant height, straw strength, and winter hardiness. Replicated agronomic testing began in 1995. P-713 was released on the basis of its superior winter hardiness, straw strength, and grain yield under rainfed conditions.

P-713 has rough awns, and its covered kernels are amber have long rachilla hairs and a yellowish aleurone. The flag leaf is twisted in the late boot stage. The plant has a prostrate growth habit as is expected of winter barley cultivar. The plant is green in color with green auricles. The spike is medium lax and medium in length. In 17 trials grown in Nebraska (1998-2003), P-713 yielded 4290 lbs/a (4810 kg/ha). This yield was higher than P-721 (3830 lbs/a, 4300 kg/ha), P-954 (3930 lbs/a, 4810 kg/ha), Weskan (3560 lbs/a, 3990 kg/ha) and Perkins (3690 lbs/a, 4610 kg/ha). Grain volume weight of P-713 (46.2 lbs/bu, 59.5 kg/hl) is lower than that of Perkins (47.3 lbs/bu, 60.8 kg/hl) and P-954 (47.4 lbs/a, 61.0 kg/hl) and higher than that of P-721 (45.8 lb/bu, 59.0 kg/hl) and Weskan (45.2 lbs/bu, 58.1 kg/hl). At mature plant height, P-713 (33 in, 83 cm) is about 2 inches (5 cm) taller than P-954, 3 inches (7.5 cm) taller than Weskan and P-721 and has good straw strength. P-713 flowers 1 day earlier than P-954 and P-713 and 2 days earlier than Weskan. P-713 has excellent winter hardiness that would be considered as near the highest level of winter barley, similar to Dictoo, Kearney, P-954 and Dundy but superior to Perkins. P-713 is moderately resistant to powdery mildew (incited by *Erysiphe graminis* DC. f. sp. *Hordei* Em. Marchal and to barley yellow dwarf virus (BYDV) and is moderately susceptible to leaf rust (incited by *Puccinia hordei* G. Otth) and net blotch (incited by *Pyrenophora teres* f. sp. *teres* Drechs.). Based on current information, P-713 is best adapted to dryland production in Nebraska and the southern Great Plains where winterkilling is less frequent.

Small quantities (10 g) of seed of P-713 for crossing is freely available from Dr. P. S. Baenziger, 330 Keim Hall, University of Nebraska, Lincoln, 68583-0915 to interested plant breeders. Exclusive seed production and marketing rights for P-713 have been licensed to Paramount Farms, 7682 County Road Z, Quinter, Kansas 67752 who will maintain the commercial classes of seed. This cultivar will be protected by contract with Paramount Farms.

**Development Team: P. S. Baenziger, Beau Behrens, Kyung-moon Kim, Jill Petrisko, Laura Oberthur, and Terry Berke.**

**Approval**

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**Director, Nebraska Agricultural  
Experiment Station**

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