REGISTRATION OF ‘BOWMAN’ BARLEY

‘BOWMAN’ barley (Hordeum vulgare L.) (Reg. no. 197), PI483237, was developed by the Agric. Exp. Stn., North Dakota State Univ., Fargo, ND, in cooperation with USDA-ARS and released 10 Jan. 1984. It was tested as ND4994 and traces to an F$_8$ reselection of an F$_4$ derived line from the cross, ‘Klages’/‘Fergus’/‘Nordic’/3/ND1156/4/‘Hector’, made by M.K. Anderson in 1975. Nordic and ND1156 are six-rowed spring barleys and the other cultivars are two-rowed spring barleys.

Bowman is a two-rowed spring barley which has semisooth awns and long rachilla hairs. A few, < 1%, rough awned plants are present in Bowman. The covered kernels are midlong and have a white wrinkled hull and colorless aleurone. Glumes are one-half the length of the lemma, glume awns are equal to the length of the glumes, and glume hairs are long and confined to a band. The spike is medium-short, medium-lax, strap shaped, and erect prior to maturation. Bowman is medium-tall and has good spike exertion, a closed collar, and a straight neck. The leaves are waxy and dark green in color, 11 to 13 mm wide, and 20 to 26 cm long. Flag leaves are semierect at the boot stage. Bowman tillers profusely and percentage of tiller abortion is low.

Bowman heads as early as the six-rowed cv. Glenn. It forms a less dense prejointing canopy than most two-rowed spring barley. Bowman has good tolerance to late-season lodging and post-maturity straw breakage. Straw strength consistently has been better than Hector. In 14 trials grown in North Dakota, Bowman has exceeded ‘Larker’ and Klages in percent plump kernels by 23 and 35% and in test weight by 8 and 9%, respectively. These advantages in plumpness and test weight were most pronounced in several trials in which severe heat and/or drought stress occurred after anthesis. Bowman has exceeded Larker and Klages in yield by 14 and 12%, respectively, in 19 North Dakota trials and ‘Morex’ and Hector in yield by 6 and 4%, respectively, in 16 North Dakota trials. Bowman appears to be well adapted to areas with lighter soils such as southwestern North Dakota where late-season drought and heat stress are common. Bowman has seed dormancy levels similar to those of recently released midwestern six-rowed barleys. Bowman is resistant to prevalent races of Puccinia graminis Pers. f. sp. tritici Eriks. & Hen. but is susceptible to Puccinia hordei Otth. It has slightly less field resistance than Glenn to Cochliobolus sativus (Ito & Kurib.) Drechs. ex Dast. and is equal to Glenn in resistance to Pyrenophora teres (Died.) Drechs. Bowman is susceptible to Ustilago nuda (Jens.) Rostr., U. hordii (Pers.) Lagerh., and barley yellow dwarf virus. Micromalt quality analyses conducted at North Dakota State Univ. and the International Rice Research Institute, The Philippines.

Bowman is nearly equal to Klages in malt extract, and is lower in enzymatic activity and test weight. Bowman has been classified as a non-malting variety by the American Malting Barley Association.

Breeders seed will be maintained by the Agric. Exp. Stn., Fargo, ND 58105.

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Reference and Notes

1. Associate professor and professor, Dep. of Agronomy; professor, Dep. of Plant Pathology; and former associate professor, Dep. of Science and Food Technology, respectively, North Dakota State Univ., Fargo, ND 58105. Published with the approval of the Director of the North Dakota Agric. Exp. Stn. as Journal Article no. 1991. Crop Sci. Soc. Am. Accepted 2 Apr. 1985.

REGISTRATION OF ‘LEMONT’ RICE

‘LEMONT’ (Oryza sativa L.), (Reg. no. 67) PI 475833, is an early maturing, semidwarf, long-grain cultivar developed at the Texas A&M Univ. Agric. Research and Extension Center at Beaumont, TX by ARS-USDA with the Texas Agric. Exp. Stn. Lemont was developed from a 1974 cross, ‘Lebonnet’/‘Glenn’ and test weight were most pronounced in several trials in which severe heat and/or drought stress occurred after anthesis. Lemont has been classified as a non-malting variety by the American Malting Barley Association.

Lemont was developed from a 1974 cross CI 9881/PI 331588, from which ‘Bellemont’ was developed. Cultivation from the cross ‘Bluebelle’/‘Belle Pat’ which Lebonnet was derived. PI 331581 is the backcross Bluebelle®/‘Taichung Native’ to Glenn in resistance to Cochliobolus sativus (Ito & Kurib.) Drechs. ex Dast. and is equal to Glenn in resistance to Pyrenophora teres (Died.) Drechs. Bowman is susceptible to Ustilago nuda (Jens.) Rostr., U. hordii (Pers.) Lagerh., and barley yellow dwarf virus. Micromalt quality analyses conducted at North Dakota State Univ.

Lemont possesses a semidwarf plant type and morphological characteristics most closely resemble among current U.S. cultivars. Grown under conditions, Lemont and Bellemont plant heights were 74 and 77 cm, respectively, in 12 tests over a 2-year period at Beaumont. In the same series of tests, ‘Leah’ averaged 91

Reference and Notes

1. Associate professor and professor, Dep. of Agronomy; and former associate professor, Dep. of Plant Pathology; and former associate professor, Dep. of Cereal Sci-