region of North Carolina should make it an attractive alternative to Boone, the current predominant cultivar.

Authorized seed classes of Mollybloom will be limited to breeder, foundation, registered, and certified. Breeder seed of Mollybloom will be maintained by NCARS. Foundation, registered, and certified classes will be maintained by the North Carolina Foundation Seed Producers, Inc., 8220 Riley Hill Road, Zebulon, NC 27597.

Registration of 'Stander' Barley

'Stander' six row-spring barley (Hordeum vulgare L.), (Reg. no. CV-236, PI 564743) was developed by the Minnesota Agricultural Experiment Station and released February 1993. Stander, whose experimental designation was M64, has the pedigree ‘Excel’/M80–224. M80–224 has the pedigree ‘Robust’/‘Bumper’ thus the pedigree of Stander can be written Excel//Robust/Bumper. Excel and Robust are closely related as Robust is a parent of Excel. Excel (3) and Robust (2) are currently grown malting cultivars and Bumper is an older malting cultivar. Stander appears to be best adapted to the barley-growing area of the upper midwestern USA.

The cross that led to Stander was made in 1984. There was no selection in early generations with the population being advanced in the F_3 and F_4 generations via single seed descent in a glasshouse. Stander originated from a single plant taken at random from a selected F_5 line. The F_5 line was chosen because it was comparatively short and apparently resistant to lodging. Replicated agronomic and disease testing began in Minnesota in 1987 and regional testing in 1989. Evaluation of malting quality began in 1986 (F_5 line testing) and industry malting and brewing evaluation began in 1989.

Stander has smooth-awns and its covered kernels have short rachilla hairs and a white aleurone. The spike is medium-lax, medium-long and semierect. Stander is similar to Excel in height (about 81 cm) and 6 cm shorter than Robust. In Minnesota and regional trials, it has been 1 to 2 d later heading than Robust.

Lodging resistance of Stander is very good and was the basis for choosing its name. Average lodging percentages of Stander, Robust, and Morex (1) in seven Minnesota trials (1989–1992) where lodging occurred were 26, 38, and 52, respectively. In nine midwestern regional trials (1989–1992) where lodging occurred, the respective lodging percentages were 16, 19, and 36.

Stander was 18% higher yielding than Morex and 6% higher yielding than Robust in 32 trials in Minnesota (1988–1992). In these trials, Stander produced an average of 4897 kg ha^{-1}. In 25 midwestern regional trials (1989–1992), Stander was 10 and 1% higher yielding than Morex and Robust, respectively. Stander has a high percentage of plump kernels, i.e., similar to Robust. Stander, Morex, and Robust had 70, 64 and 71% plump kernels, respectively, in 22 Minnesota trials (1989–1991) and 75, 62 and 70% respectively, in 12 midwestern regional trials (1989–1991).

Stander possesses the ND B112 gene for resistance to spot blotch [Bipolaris sorokiniana (Sacc.) Shoemaker]. It has the Rpg1 (T) gene for resistance to stem rust [Puccinia graminis (Pers.:Pers.) var. tritici] which conditions resistance to current races of stem rust except race QCC. Its reaction to race QCC is moderately susceptible to intermediate compared to barley lines tested. Stander is susceptible to loose smut [Ustilago tritici (Pers.) Rostr.].

Stander’s malting quality traits, determined in cooperation with the USDA Cereal Research Unit at Madison, WI, and industry testing in cooperation with the American Malting Barley Association, appear similar to Morex, the industry six-row quality standard. Diastatic power and alpha-amylase levels are similar to Morex. In comparison to Robust, the most widely grown cultivar, Stander was 36% higher in alpha-amylase in 14 trials (1987–1992). In 12 regional trials (1989–1991), extract level of Stander was 1.2% above Morex and its grain protein was 1.0% below Morex. Stander is currently being evaluated for malting and brewing quality by the American Malting Barley Association. Breeder seed is maintained by the Minnesota Agricultural Experiment Station, St. Paul, MN 55108. United States Plant Variety Protection no. 9300074 was issued for Stander.

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References and Notes

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