Registration of ‘Pennbar 66’ Barley

Pennbar 66 winter barley (Hordeum vulgare L.) (Reg. no. CV-239, PI555449) was developed by the Pennsylvania Agricultural Experimental Station and released in 1990. Pennbar 66 was tested under the experimental designation of PA 8444-66 and released for its high yield, test weight, winter survival, standability and field resistance to diseases.

Pennbar 66 was derived from a bulk population provided in 1979 by T.M. Starling of the Virginia Agricultural Experiment Station. The pedigree of the bulk population was ‘Harrison’/3/‘Cebada Capa’/‘Wong’/awnledet ‘Hudson’/4/‘Hanover’/‘Jefferson’/‘Barsoy.’ Pennbar 66 traces to a single head selection made in the F$_7$ generation in 1983.

Pennbar 66 was evaluated in replicated state yield trials from 1985 to 1990 in Centre County and in Lancaster County, PA, from 1987 to 1990. It was also evaluated in the USDA Uniform Winter Barley Yield Nursery at 26 locations in 1989 and 1990. Pennbar 66 was evaluated for winter hardiness in the USDA Uniform Barley Winter Hardiness Nursery in 1989 and 1990, and in a laboratory freezing test in 1986. In the state yield trials in Centre County, grain yield of Pennbar 66 was comparable to that of ‘Pennco’ and 4% better than that of Wysor. In Lancaster County, grain yield of Pennbar 66 was comparable to that of Wysor but 5% better than that of Penno. Bushel weight of Pennbar 66 was better than that of Pennco by 5.3 and 7.3% in Centre and Lancaster Counties, respectively. The winter hardiness of Pennbar 66 is comparable to that of Pennco based on field and laboratory evaluation. Over all locations in the Uniform Winter Barley Yield Nursery, Pennbar 66 averaged 3,717 kg ha$^{-1}$, which was 8 and 16% higher than Wysor and ‘Milton,’ respectively, the check entries for that nursery.

Pennbar 66 exhibits moderate field resistance to leaf rust (caused by Puccinia hordei G. Otth), net blotch (caused by Pyrenophora teres Drechs.) and scald (caused by Rhynchosporium secalis (Oudem.) J.J. Davis) as well as some resistance to powdery mildew (caused by Erysiphe graminis DC.) in Pennsylvania.

Pennbar 66 is a winter, six-rowed, rough awned, hulled, feed barley with medium height and medium maturity. The plants are semi-prostrate and deep green in the fall. Heads are semi-nodding to nodding at maturity and the stem neck is straight. The peduncle length ranges from 17 to 25 cm. The flag leaf is held predominantly upright and averages about 1.4 cm in width and 12.8 cm in length. Width and length of the second leaf average 1.6 and 18.4 cm, respectively. Basal leaf sheaths are pubescent and anthocyanin pigmentation is present; upper leaf sheaths are waxy; exposed stem nodes are green; auricles have a slight amount of anthocyanin.

Registration of ‘NuBlue’ Kentucky Bluegrass

NuBlue Kentucky bluegrass (Poa pratensis L.) (Reg. no. CV-47, PI 561037) is a cultivar released August, 1992, by Jacklin Seed Co., Post Falls, ID, and Medalist America, Inc., NJ. NuBlue was developed from germplasm at the New Jersey Agricultural Experiment Station. Kentucky bluegrass originated as a single apomictic plant selected from the F$_1$ progeny of P-59 × ‘Baron’ Kentucky bluegrass. The parent, NJE P-59, was a single plant selected from the fourteenth fairway of the Colonia Golf Course, Colonia, NJ. NJE P-59 is a breeding line with high seed yield potential, moderately low floral induction requirement, and a high proportion of reproductive tillers. This type of growth habit normally results in turf with many reproductive tillers in late summer and early winter. Under mowed turf, NJE P-59 is relatively low growing with a medium leaf texture, bright medium dark green color. It is noted for its spring color and ability to remain green in late early winter. Baron (2) is a widely used cultivar from an old turf in The Netherlands. Both Baron and NJE P-59 exhibit good turf performance, high seed yield potential, and resistance to many turfgrass pathogens. Following hybridization (1,3), vegetative propagules of the progeny were established in a spaced-plant nursery at Adelphia, NJ, in 1973. Hybrids were identified May and June, 1974, by their obvious morphological differences from the maternal parent, NJE P-59. Plants were harvested and maintained separately as vegetative propagules and used to establish turf trials at Medallist America, Inc., Albany, OR. In 1975 to evaluate the seed yield potential of these progeny trials were conducted to determine the level of apomictic reproduction. Replicated trials were established near Post Falls, ID, by Jacklin Seed Co., May and June, 1975 to evaluate the seed yield potential of these progeny trials. Two seed trials were collected prior to release of NuBlue. Replicated trials analyzed using flow cytometry and random amplified polymorphic DNA (RAPD) markers. NuBlue average nuclear 2C DNA content of 10.5 pg, suggesting an estimated chromosome number of approximately 79. These values are similar between NJE P-59 (8.03 ± 0.16 pg; 2n=2x=48 chromosomes) and the paternal parent Baron (11.05 ± 0.16 pg; about 84 chromosomes). Furthermore, NuBlue exhibited 119 Baron-specific markers between NJE P-59 (8.03 ± 0.16 pg; 2n=2x=48 chromosomes). Furthermore, NuBlue exhibited 119 Baron-specific markers.