Registration of ‘Maranna’ Barley

‘Maranna’ (Reg. no. CV-250, PI 584508) spring barley (Hordeum vulgare L.) was developed by the Oregon State University Agricultural Experiment Station and released in 1993. The Washington State University and University of Idaho Agricultural Experiment Stations joined in the release.

Maranna, tested as ORS-2, was derived from the cross OSB74133/M33. OSB74133 is a six-row spring germplasm line of Coast type developed at Oregon State University. M33 is a six-row spring Manchurian-group germplasm line developed at the University of Minnesota. Progeny were advanced in a modified pedigree system. Bulked seed from a single F4 head row was increased and evaluated at multiple testing sites in Oregon prior to submission to the Western Regional Spring Barley Nursery (WRSBN) in 1990. ORS-2 was tested in the WRSBN for 3 yr (1990–1992). Approximately 1000 head rows were grown at Corvallis, OR, in 1992 and harvested in bulk for breeder seed.

Maranna is a six-row, smooth-awned, white-aleurone feed barley, with a semi-lax spike. It is a short-statured, lodging-resistant selection. Averaged over 48 environments in the WRSBN, the yield of Maranna was 5830 kg ha−1. This yield was equal to that of ‘Steptoe’ and was 14% higher than ‘Morex’. Averaged over 11 station-years in Oregon, the yield of Maranna was 6910 kg ha−1, which was a 13% advantage over Steptoe, a 21% advantage over Morex, and a 5% advantage over ‘Westbred Gustoe’. The average height of Maranna over 3 yr of testing in the WRSBN was 68 cm. This represents a 16% reduction compared with Steptoe and a 25% reduction compared with Morex. Lodging scores for Maranna, Steptoe, and Morex were 12, 39, and 46%, respectively. In Oregon trials, where no lodging was observed in Westbred Gustoe, lodging in Maranna did not exceed 13%. Maranna was 4 d later to head than Morex or Steptoe in the WRSBN. Later maturity, coupled with shorter stature, made Maranna most suitable for high-input irrigated conditions. Under dryland or stress conditions, Maranna may not achieve its grain-filling potential. In the WRSBN, the average test weight of Maranna was 61.6 kg hl−1, a value comparable to Steptoe but 2% lower than Morex and the nursery average. In these same trials, the percentage of plump seed remaining on a 2-mm sieve for Maranna, Steptoe, and Morex was 74, 83, and 81%, respectively. Maranna is similar to currently available Pacific Northwest spring barley cultivars in terms of reaction to common diseases. No specific resistances have been noted; like all other currently available cultivars in this region, Maranna is susceptible to the Russian wheat aphid [Diuraphis noxia (Mordvilko)] and barley stripe rust (caused by Puccinia striiformis Westend. f. sp. hordei).

Breeder and Foundation seed will be maintained by the Oregon State University Foundation Cereal Seeds Advisory Committee in cooperation with the Washington State University Foundation Seed Project and the Idaho Agricultural Experiment Station. Seed for research purposes may be obtained from the corresponding author.

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References and Notes


2. L.R.F. M’Ragwa, Kenya Agric. Res. Inst., National Agriculture Co-op Society, Agricultural Research Institute, Nairobi, Kenya. Acknowledged are the helpful cooperation with the Washington State University Foundation Seed Project and the Idaho Agricultural Experiment Station.}

Registration of ‘KAT/PM-2’ Pearl Millet

‘KAT/PM-2’ pearl millet [Pennisetum glaucum (L.) R. Br., Reg. no. CV-11, PI 584758] was developed by the Western Regional Research Institute (KARI), National Dryland Farming Research Center (NDFRC), Katumani, Machakos, Kenya, in September 1985. KAT/PM-2 was released based on its high yield potential and uniformity compared with currently grown cultivars.

The female parent of KAT/PM-2 was Serere 6A, which has been designated S6A, P26, or KNP26 in various trials. The male parents of KAT/PM-2 were ex-Gatunga, P164, and P188. Three male parents (ex-Gatunga, P164, and P188) were advanced by the pedigree method to the F4 generation. In 1983, equal quantities of seed of 12 superior F4 families were advanced by the pedigree method to the F5 generation.

KAT/PM-2 is open-pollinated, flowers in approximately 52 d, and matures in 80 to 90 d. It has three erect stalks and a large panicle. When sown at 15 to 20 kg ha−1, it produces an average of 15 to 20 tillers. Plant height ranges from 165 to 170 cm. The panicle is compact, cylindrical (15 cm long, 8 cm thick), and has a set of 12 to 15 rows. The bracts are obovate in shape, gray in color, and have a 5 to 6 pericarp. The seed can weigh approximately 10 g. Mean grain yield was 1825 kg ha−1 over 18 environments in Kenya (1). This was 35% greater than that of currently grown local cultivars. Grain yield as high as 2500 kg ha−1 has been reported. Crude protein, ash, and fiber constituted 14.5, 2.24, and 4.47%, respectively, of the grain on a dry weight basis.

KAT/PM-2 can be grown between 50 and 1500 m altitude in semiarid areas of Kenya. Breeder seed is maintained by the Dryland Farming Research Center of the Kenya Agricultural Research Institute (KARI, NDFRC). Classes of seed allowed are Foundation and Certified.

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