

### Registration of 'Horizon' Proso Millet

'Horizon' (Reg. no. CV-232, PI 633425) is a white proso millet (*Panicum miliaceum* L.) developed by the Nebraska Agricultural Experiment Station in cooperation with the University of Wyoming, South Dakota State University, Colorado State University, and the USDA-ARS Central Great Plains Research Station, Akron, CO, and tested as NE-9217. It was released jointly by the above cooperators in February 2003 for seed production.

Horizon traces to a single-plant  $F_4$  selection made in 1992 from a bulk population that was developed in the greenhouse. The bulk population included 'Sunup' (Nelson, 1990), 'Rise' (Nelson, 1984), 'Dawn' (Nelson, 1976), 'Cope' (Hinze et al., 1978), and three lines that were later released as 'Earlybird' (Baltensperger et al., 1995a), 'Sunrise' (Baltensperger et al., 1997), and 'Huntsman' (Baltensperger et al., 1995b). The population was created by hot water emasculation of one-half the plants, and random pollination for two generations, followed by single-seed descent for three generations. Horizon has been tested in Nebraska yield nurseries starting in 1994 and in regional trials from 1998 to 2002.

Horizon has a white seed coat (lemma and palea) and a compactum (closed)-type panicle. The foliage is green in color and is similar to Sunup. In regional trials, mean grain yields of Horizon, Sunrise, Huntsman, and Earlybird were similar. Horizon has been broadly adapted across the High Plains region, yielding well from South Dakota to Colorado and Wyoming.

Horizon is similar in maturity to Sunrise and Earlybird, and later than Dawn. Dawn is generally ready for harvest at least 1 wk earlier than Horizon. Flowering is similar to Sunrise and Earlybird, but the seed fill period is shorter with appropriate moisture for harvest being reached 2 to 3 d earlier. Seed size of Horizon (158 seeds  $g^{-1}$ ) is similar to Sunrise, Earlybird, and Huntsman. Grain-volume weight of Horizon (725  $g L^{-1}$ ) is similar to Earlybird (721  $g L^{-1}$ ) and Sunrise (728  $g L^{-1}$ ), and over the past 4 yr has generally been higher than other released cultivars. Horizon (84 cm) is similar in height to Earlybird, Sunrise, Sunup, and Huntsman (89 to 91 cm), but taller than Dawn (71 cm). The straw strength of Horizon is similar to Sunup. Less than 0.1% partially red seed coat is present in Horizon.

Horizon has shown no susceptibility to Russian wheat aphid [*Diuraphis noxia* (Mordvilko)]. Dawn and other lines have been attacked by head rot associated with stem boring insects

such as stem maggot (*Meromyza* spp.) and European corn borer [*Ostrinia nubilalis* (Hübner)] in the same nurseries where Horizon has not shown symptoms. Horizon may have escaped because of preference based on relative maturity rather than resistance.

Breeder seed of Horizon will be maintained by the Nebraska Agricultural Experiment Station. Foundation seed can be obtained from the Nebraska Foundation Seed Division, Department of Agronomy and Horticulture, 3115 N. 70th, University of Nebraska-Lincoln, Lincoln, NE 68507-2104. Seed classes will be Breeder, Foundation, Registered, and Certified. Horizon will not be submitted for U.S. Plant Variety Protection but will be trademarked.

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