REGISTRATION OF ‘WILLIS’ WINTER BARLEY

‘Willis’, PI 522271, is a winter feed barley (Hordeum vulgare L.) (Reg. no CV-105) developed and released by the Cornell Agricultural Experiment Station for production in northeastern USA. Willis originated as a single plant selection in 1973 from a male-sterile facilitated recurrent selection population designated as MS22. The male-sterile parent population used to develop MS22 was derived from crosses between a male-sterile spring barley population of unknown origin and bulk pollen from ‘Forrest’, ‘Swan’, ‘Kindred’, ‘Trophy’, ‘Larker’, ‘Traill’, ‘Manchuria’, ‘Mars’, N.D.B112, ‘Shaft’, ‘Vantage’, ‘Trebi’, ‘Aim’, ‘Husky’, ‘Proctor’, and ‘Olli’, followed by bulk crossing to many different winter barleys, and designated as 1966 4% Tucson malt population. The MS22 population resulted from crosses made in 1967 between male-sterile F₂ plants from the 4% Tucson malt population and bulk pollen from ‘Dover’, ‘Hudson’, ‘Dutchess’, ‘Schuyler’, NY5618-33, and NY5809-1. This population was harvested in bulk and then cleaned with moderate selection for large kernel size on an air-screen cleaner. A sample of the selected population was planted each fall from 1967 to 1972. Willis was tested in state and regional trials as MS22F₂,6-1. It has been tested in New York since 1980 and first entered the Uniform Winter Barley Nursery (Hardy Varieties) in 1983.

Willis is a 6-rowed barley with very dense, semi-rough awned spikes, and white aleurone. Thousand kernel wt. has averaged 30 g and plump kernels have averaged 50% on a screen with 0.24 by 1.9 cm slots. The stem neck is slightly crooked, and spikes are erect to slightly nodding at maturity. Willis has a V-shaped collar, short rachilla hairs, and the rachis has hairy edges. Glumes exhibit a hairy band and have awns approximately the same length as the glume. The lemma is smooth with few teeth and no hairs.

In 8 yr of regional testing in New York, yield (4527 kg ha⁻¹), test wt. (61 kg hL⁻¹), lodging resistance, and maturity of Willis have been similar to those of Schuyler, the most popular cultivar in the state. Winter hardiness of Willis is slightly superior to that of Schuyler, and both are consistently among the most winter-hardy under New York State growing conditions. Willis is slightly shorter than Schuyler and averages 78 cm in height.

Willis is moderately resistant to loose smut [incited by Ustilago nuda (Jens.) Rostr.] and powdery mildew (incited by Erysiphe graminis DC. ex Merat f. sp. Hordei) (Ineson.) J.J. Davis] but susceptible to scald [incited by Rhynchosporium secalis (Oud.) J.J. Davis] and barley yellow dwarf virus. The reaction of Willis to other pathogens is unknown.

The generation sequence of seed production will be breeder, foundation, and certified. This cultivar will not be protected under the Plant Variety Protection Act, Public Law 91-577.

Willis was approved for release in 1983 and breeder seed was planted for increase that year. Certified seed was available to farmers in the fall of 1985. Breeder and foundation seed will be maintained by the New York Seed Improvement Cooperative, 249 Emerson Hall, Cornell University, Ithaca, NY 14853.

M. E. Sorrells* and N. F. Jensen

References and Notes


Published in Crop Sci. 29:1086 (1989).

REGISTRATION OF ‘ASPEN’ KENTUCKY BLUEGRASS

‘Aspen’ Kentucky bluegrass (Poa pratensis L. PI 527692) was developed and released by Northrup King Company of Minneapolis, MN in August 1986. Germplasm obtained from the New Jersey Agricultural Experiment Station was used in the development of Aspen. ‘Aspen’ originated as a first generation hybrid from the progeny of the cross ‘Bellevue’ × ‘Belturf’ Kentucky bluegrass. An unreduced egg of Bellevue was fertilized by a reduced gamete from Belturf resulting in a facultatively apomictic hybrid possessing approximately