Registration of Crop Cultivars

REGISTRATION OF ‘HITCHCOCK’ BARLEY

‘HITCHCOCK’ barley (Hordeum vulgare L.) (Reg. no. 198), PI 485594, was developed by the Nebraska Agricultural Experiment Station and released in 1984. It is a six-rowed, awned winter feed barley. Hitchcock is a composite of six F₉ lines selected in 1980 from NE76138, an F₂-derived line from the cross ‘Dicktoo’/‘Reno’/‘Shonan’/‘Randolph’/8/OAC WB2-11/‘Decatur’. The original F₂-derived line was tested as NE76138 in Nebraska yield nurseries from 1977 through 1980, and in the Barley Winter Hardiness Nursery and Uniform Winter Barley Nursery of Hardy Varieties in 1980. The six-line composite was tested under the same number (NE76138) in Nebraska nurseries only from 1981 through 1983.

In Nebraska tests for 1981 through 1983, Hitchcock has been similar to ‘Kearney’ in winterhardiness, shorter in plant height, about one day later in maturity, and much superior in lodging resistance. Hitchcock and Kearney are similar in test weight, but Hitchcock has outyielded Kearney by 51% and ‘Dundy’ by 4% during the 3 yrs of yield testing.

Tests for disease and insect resistance were minimal, but they indicate that Hitchcock is susceptible to scald, caused by Rynchosporium secalis (Oud). J.J. Davis, and to greenbug (Schizaphis graminum Rondani). It appeared to be much less susceptible to chinch bug [Blissus leucopterus (Say)] than other winter barley cultivars in one field test.

The spike of Hitchcock is moderately dense and carried erect on a straight neck. Awns are long and moderately rough. The hull adheres and is slightly wrinkled. The glumes are long with slightly barbed awns. The rachilla hairs are long and the rachis edges are hairy. The collar is closed to slightly open and the basal mark is a depression. Aleurone color is pale blue to white.

Seed classes recognized for Hitchcock are breeder, foundation, registered, and certified. Breeder seed will be maintained by the Nebraska Agricultural Experiment Station.

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References and Notes

1. George Holmes professor, professor, and former graduate research assistant (now station manager, DeKalb-Pfizer Genetics, Grand Island, NE), respectively, Dep. of Agronomy, Univ. of Nebraska-Lincoln, Lincoln, NE 68583. Published as Paper no. 7670, Journal Series, Nebraska Agric. Exp. Stn. Registration by Crop Sci. Soc. of Am. Accepted 9 May 1985.

were conducted from 1981 and 1982 crops accepted for malting and brewing by AMB. Testing of Hitchcock was conducted by the USDA Cereal Crops Research Unit, Pullman, WA, cooperated in the testing of Andre for feed quality.

Andre is a two-rowed, mid-maturing spring barley. The spike is nodding, lax, and mid-long. Awns are long. Glumes are of medium length and covered with hairs. The medium-sized kernels taper at both ends, wrinkled, tightly adhering hulls, white aleurone, short rachilla hairs, and prominent lateral veins. The crease is narrow and shallow at the base, flaring toward the apex.

In extensive yield trials during 5 yrs in eastern Washington, Andre has outyielded ‘Vanguard’ about 15% under dryland conditions and by irrigation. The yield of Andre approaches that of particularly under dryland conditions in eastern Washington and Oregon. Andre outyielded Klages 12 of 17 location yrs in the Pacific Northwest in the USDA Western Regional Spring Barley Nursery (1). Yield levels for Andre under dryland conditions in eastern Washington were approximately 4000 and 6000 kg ha⁻¹. Andre has a higher test weight than Klages and Steptoe, plumpness about equal to Klages. It is narrower than Klages), moderately stiff-strawed, and about 3 to 4 days earlier than Klages. The only disease of concern was barley yellow dwarf virus. It appears to be more resistant to this disease than Steptoe and about equal to Klages.

Andre is best adapted to the higher rainfall areas of eastern Washington, Oregon, and Washington as is Steptoe, the current major cultivar in the Pacific Northwest (2).

The overall malting quality of Andre is similar to Klages. Andre resembles Klages in malt extract and alpha-amylase content, but has a slightly higher soluble:total protein ratio and alpha-amylase content, and is slightly lower in protein and diastatic power. Nutritional evaluations indicate Andre has good feeding value. In chick feeding trials Andre was equal to Klages and slightly better than two-rowed feed cultivars such as ‘Lud’ and the six-rowed feed cultivars such as ‘Lud’ and the cultivar Steptoe (3).

Breeder seed stock is maintained by the Washington State Crop Improvement Association, Yakima, WA 99164-6420, and foundation seed is available through the Washington State Crop Improvement Association, Yakima, WA 98901. Seed production under certified conditions is conducted by the Washington State Crop Improvement Association, Yakima, WA 99164-6420, and foundation seed is available through the Washington State Crop Improvement Association, Yakima, WA 98901. Seed production under certified conditions is conducted by the Washington State Crop Improvement Association, Yakima, WA 99164-6420, and foundation seed is available through the Washington State Crop Improvement Association, Yakima, WA 98901. Seed production under certified conditions is conducted by the Washington State Crop Improvement Association, Yakima, WA 99164-6420, and foundation seed is available through the Washington State Crop Improvement Association, Yakima, WA 98901.