Registration of Crop Cultivars

REGISTRATION OF WINTERMALT BARLEY
(Reg. No. 178)

N. F. Jensen, L. H. Edwards, E. L. Smith, and M. E. Sorrells

‘WINTERMALT’ barley (Hordeum vulgare L.), C.I. 15767, is a winter malting barley developed at the Cornell Univ. Agric. Exp. Stn. and released jointly with the Oklahoma Agricultural Experimental Station. Wintermalt is a pure line selection (formerly N.Y. 6005-18) from the 1960 Ithaca hybrid of ‘Traill’ (spring malting) × ‘Hudson’ (winter feed) cultivars. Wintermalt is believed to be the first winter malting barley to be developed in the United States.

In preliminary trials, Wintermalt exhibited satisfactory malting quality from New York and Oklahoma production fields. Quality evaluations were made by the Barley and Malt Laboratory, ARS-S&E-USDA, Madison, Wis. and by industry laboratories. The overall quality of Wintermalt has often been marginal when compared to spring malting cultivars but has been superior when compared to winter cultivars. Malt quality is good enough to make the cultivar commercially desirable, especially in a year when the supply of spring malting barley is limited. In the Southwestern U.S. it appears to be better adapted to irrigated rather than dryland production. In New York, Wintermalt performs as well as ‘Schuyler’ or Hudson under fall-sown rainfed conditions but it should be planted later because of more rapid early growth with consequent danger from fall bolting and winter smothering.

Wintermalt is a medium short 6-rowed, semi-rough, awned winter barley with good lodging resistance and early midseason maturity. The kernels have a white (yellow) aleurone and an acceptable range of plump kernels when grown under irrigation or favorable rain-fed conditions. The spike is medium short and compact and rachilla hair length is short. Winter hardiness equals that of local varieties; however, Wintermalt has the characteristic of rapid fall growth with risk of winter smothering if sown too early.

In 110 tests grown over a period of 5 years (1969-1973) in the Uniform Winter Barley Nursery of Hardy Varieties, Wintermalt had mean performance records compared with Schuyler, respectively, as follows: yield, 3,557 vs. 3,563 kg/ha; test weight, 59.7 vs. 57.8 kg/ha; survival, 66 vs. 78%; date headed, 17.0 May vs. 22.4 May; height, 82 vs. 79 cm; and lodging, 20 vs. 17%. In 12 years of tests at Ithaca, N.Y., Wintermalt exceeded Schuyler in yield 3,694 to 3,471 kg/ha and in test weight 61.8 to 60.9 kg/ha.

In Oklahoma, the 6-year mean yield (kg/ha) of Wintermalt vs. ‘Kerr’, respectively, at selected sites was: Stillwater 1,683 vs. 2,125, Lahoma 2,471 vs. 2,548, Altus 1,403 vs. 1,303, and Goodwell (irrigated) 4,928 vs. 4,518. Under commercial field conditions at Goodwell, Okla. over a period of 4 years, Wintermalt consistently yielded over 5,376 kg/ha. Other Wintermalt vs. Kerr mean comparisons over 6 years at Goodwell were: test weight, 62.6 vs. 63.2 kg/hl; height, 84 vs. 87 cm; heading date, 9 May vs. 1 May; and lodging (2 years), 69 vs. 82%.

In New York, Wintermalt has shown moderate resistance to loose smut, incited by Ustilago nuda (Jens.) Rostr., covered smut, incited by Ustilago hordei (Pers.) Lagerh., and powdery mildew, incited by Erysiphe graminis (DC.) Merat. In a classification test, however, to barley yellow dwarf virus and Rhynchosporium secalis (Oud.) J. J. Davis.

The generation sequences of seed production will be Foundation, and Certified with the Registered class an option in Oklahoma. Breeder seed will be maintained by the Oklahoma Agric. Exp. Stn., Ithaca, NY 14853.

REGISTRATION OF PINDAK PINTO BEAN
(Reg. No. 23)

A. A. Schneiter, D. W. Burke, and J. R. Venette

‘PINDAK’ pinto bean (Phaseolus vulgaris L.) was developed by the ARS-S&E-USDA at the Irrigated Agriculture Research and Extension Center, Prosser, Wash., in cooperation with the Washington Agric. Exp. Stn. Pindak was named and released in 1980 as IP-982 by the Washington Agric. Exp. Stn. and ARS-S&E-USDA on the recommendation of the USDA National Cooperative Dry Bean Trial.

The parentage of Pindak is an early maturing, Japanese bush bean (name lost) × [(Pinto UI-114 × resistant P.I. 209598) × Pinto UI-114]. Pedigree seed for initial performance selections were made at Prosser in 1980. Pindak was tested extensively at several dryland locations in North Dakota from 1977 through 1980 under the experimental designation 6R-354. Pindak was tested in the 1980 National Cooperative Dry Bean Trial in 1980. Pindak is a commonly grown cultivar in North Dakota in the major bean-growing areas of North Dakota.

In the National Cooperative Dry Bean trial grown at 13 locations in Canada in 1980, the yield of Pindak averaged 64 t/ha, compared to 62.5 t/ha for UI-114, the check cultivar. In the 1980-1981 season Pindak matures 3 to 4 days earlier and has stronger vines than Pinto UI-114. The flowers are yellow instead of red.

Pindak matures 3 to 4 days earlier and has stronger vines than Pinto UI-114. The flowers are yellow instead of red. Pindak is more uniform in size and more plump; fewer seeds of Pindak are lost in handling.

Pindak is resistant to the prevalent type and N. B. common mosaic virus. Pindak is immune to Fusarium root rot caused by Fusarium solani (Mart.) Sacc. f. sp. phaseoli (Burk.) A. A. Schneiter, D. W. Burke, and J. R. Venette

In field evaluations Pindak appeared to be resistant to prevalent bean rust (incited by Uromyces phaseoli Wint.) races found in North Dakota during the 1980-1981 season.

Canning tests conducted by S. R. Drake at Prosser indicated that Pindak produces a cooked product similar to popular Pinto UI-111. Pindak was rated equal to or better than other popular pinto bean cultivars in nutritional analyses, and in cooked product evaluation, by trained panelists.

Breeder seed will be maintained by the Seedstocks Project, North Dakota Agric. Exp. Stn., Fargo, ND 58105. Increment seed will be limited to Foundation and one generation each of Foundation and Registered.