REGISTRATION OF CROP CULTIVARS

REGISTRATION OF 'RUSSELL' BARLEY

'RUSSELL,' spring barley (Hordeum vulgare L.) (Reg. no. 210) (PI 483127) was developed cooperatively by USDA-ARS and the Idaho Agricultural Experiment Station. It was released in 1985 by these agencies and the Oregon Agricultural Experiment Station.

Russell was selected from a cross of 'Karla'/ND 1265. Karla was developed at Aberdeen, ID by USDA-ARS and the Idaho Agricultural Experiment Station from a cross of 63Ab2987-9/2*Conquest'. ND 1265 is a line selected at North Dakota State University from a cross of 'Beacon'/'Nordic'. The F₂ selection from which Russell originated was made at Aberdeen in 1978 and designated 78Ab9009. Detailed evaluations of a series of F₂ breeder seed rows of 78Ab9009 in 1981 revealed that both long and short haired rachilla lines were present. In other respects, the lines appeared identical, so 119 short-haired rachilla lines were bulked and the resulting seed lot was designated 78Ab9009-SRC. All of the seed used in tests in Idaho since 1982 and in all regional trials traces to the 1981 78Ab9009-SRC lot, which became Russell. Russell is a white-aleuroned, six-rowed spring barley that matures in midseason. It has relatively lax, midlong spikes, smooth awns, and short-haired rachillas.

Russell's testing in replicated yield trials began at Aberdeen in 1980. It has been tested widely in both irrigated and dryland trials in Idaho since that time. It was tested in the regional Western Spring Barley Nursery from 1982 to 1984 and in the Western Dryland Barley Nursery from 1983 to 1986. In 57 station-yr of testing in the Western Spring Barley Nursery, Russell's yield averaged 93% of 'Steptoe' and 109% of 'Morex'. In these trials, Russell averaged 9% lodging vs. 22% for Steptoe and 32% for Morex. Compared to Steptoe, Russell was superior in test weight and similar in height and heading date. In 34 station-yr of testing in Idaho irrigated and dryland trials from 1980 to 1985, Russell's yield averaged 96% of Karla, 86% of Steptoe, and 120% of Morex. Russell was superior to these three cultivars in test weight and lodging resistance. At Aberdeen, Russell headed 1 d earlier than Steptoe and Morex, and 2 d earlier than Karla.

In 20 station-yr of testing from 1982 to 1984 in the Western Spring Barley Nursery, Russell averaged 80.2% malt extract vs. 78.6% for Morex. Russell was superior to Morex in fine-coarse difference, soluble protein, and alpha amylase, but was inferior in diastatic power. In these comparisons, Russell averaged 11.3% protein vs. 12.7% for Morex. Similar results were observed in Idaho trials from 1980 to 1986. The USDA-ARS Cereal Crops Research Unit, Madison, WI, and the American Malting Barley Association (AMBA), Milwaukee, WI, cooperated in the early testing of malting and brewing quality. Plant-scale evaluations of malting and brewing quality were initiated in 1985 in cooperation with the AMBA and the Great Western Malting Company, Vancouver, WA.

Russell is named after Osborne Russell (1814–1892), an early Rocky Mountain fur trapper. Mr. Russell traveled extensively in the southwestern Idaho area from 1834 to 1843, maintaining a detailed journal that was later published under the title "Journal of a Trapper". Breeder and Foundation seed of Russell will be maintained by the University of Idaho, Tetonia Research and Extension Center, P.O. Box 1231, Star Route, Newdale, ID 83436. The USDA has no seed for general distribution.

D. M. Weisenberg,* J. C. Whitmore, G. S. Robbins, and B. L. Jones (1)

References and Notes

1. D. M. Weisenberg, USDA-ARS, Univ. of Idaho Aberdeen Res. and Ext. Ctr., P.O. Box AA, Aberdeen, ID 83210; J. C. Whitmore, Univ. of Idaho Tetonia Res. and Ext. Ctr., P.O. Box 1231, Star Route, Newdale, ID 83436; and G.S. Robbins and B.L. Jones, USDA-ARS Cereal Crops Res. Unit, 501 North Walnut St., Madison, WI 53705. Cooperative investigations of USDA-ARS and the Idaho Agricultural Experiment Station, Madison, WI, in the development and evaluation of Russell barley.

Published in Crop Sci. 28:574 (1988).

REGISTRATION OF 'TAMCOT CD3H' COTTON

'TAMCOT CD3H' cotton (Gossypium hirstum L.) (Reg. no. 94) (PI 513381) was developed and released in 1986 by the Texas Agricultural Experiment Station Multi-Adversity Resistance (MAR) Genetic Improvement Program. This program uses MAR techniques to select for broad spectrum resistance to plant pathogens, insects, and environmental stresses.

Tamcot CD3H was developed from a cross between 'Tamcot SP37H' and CDPS-1-77. Individual F₂ plants were selected using the MAR procedure (2) and the resulting F₂ progeny row was designated TX-CDP37HH-1-83 (3).

Tamcot CD3H has the B₂B₃B₄B₅ major genes, and minor and modifier genes that confer high resistance to the 19 designated U.S. races of the bacterial blight pathogen [Xanthomonas campestris pv malvacearum (Smith) Dye]. Tamcot CD3H has higher levels of resistance to insects (fleahopper, Pseudatomoscelis seriatus Reut.; boll weevil, Anthonomus grandis Boh.; and Heliothis spp.) than 'Tamcot CAMD-E', and the same level of resistance to plant pathogens (1,3).

Tamcot CD3H is as hirsute as Tamcot SP37H, has a cylindrical shaped growth habit, flowers with yellow pollen, and storm resistant bolls. Plants are medium height and less determinant than Tamcot CAMD-E. Tamcot CD3H has a higher yield potential than Tamcot CAMD-E, SP37H, 'SP21S', and 'CAB-CS', and matures significantly earlier than Tamcot CAMD-E (3).

Lint percentage of Tamcot CD3H is higher (38%) than other Tamcot cultivars (average 37%). The fiber is slightly shorter and lower in uniformity, but equal in fiber strength to the other Tamcot cultivars (3). Bolls average 6.48 g seed cotton.

The Foundation Seed Service of the Texas Agricultural Experiment Station will produce and sell foundation seed to producers of registered and certified classes. Tamcot CD3H