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AND

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AND

OREGON AGRICULTURAL EXPERIMENT STATION
OREGON STATE UNIVERSITY
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AND

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
WASHINGTON, DC 20250

**RELEASE OF 'BOB' (WA8682-96) (PI 629288)
A NEW TWO-ROW SPRING BARLEY CULTIVAR**

The Washington Agricultural Research Center, the Idaho Agricultural Experiment Station, the Oregon Agricultural Experiment Station, and the United States Department of Agriculture - Agricultural Research Service jointly announce the release of 'Bob' barley to farmers and seedsmen for commercial production. Bob was developed by the Washington Agricultural Research Center and named for two renowned "Barley Bobs", who are/were barley geneticists and breeders, Robert A. Nilan, retired from Washington State University and Robert F. Eslick (deceased), from Montana State University and native of Dayton, WA.

Bob was initially selected in 1996 in the F₄ generation from the 1993 cross A308 ('Lewis' somaclonal line) / 'Baronesse'. Lewis is a two-row spring feed/malting type developed by the USDA-ARS and Montana Agricultural Experiment Station and released in 1985. Baronesse is a two-row spring feed type developed by Nordsaat in Germany and released in the USA in 1992. Bob was tested under the line designation WA8682-96. Bob is a midseason, medium height, two-row, spring, covered, feed barley with lax nodding spikes, rough long awns, and plump white kernels with long rachilla hairs. It has mixed deficiens-wild type head types at a ratio of approximately 44%:56%. Bob is widely adapted across eastern Washington and in general across Idaho and Oregon.

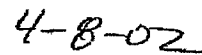
Bob was tested in the Washington State Uniform Spring Barley Nursery in 2000 and 2001. The yield of Bob was 4585 lb/a or 98% of Baronesse (leading cv in WA) averaged over 26 location-years in eastern Washington. For the same set of tests Bob yielded 106, 107, 106, 113, 102, and 102% of 'Harrington' (leading malting cv), 'Gallatin' (major feed barley), 'Bancroft', 'Orca' (barley stripe rust resistant cultivars), Farmington, and Steptoe (leading six-row feed cv.), respectively. Over the 15 test locations in eastern Washington during the two years of testing, Bob out-yielded or equaled Baronesse (94-123%) at 13 locations. In the same tests, Bob's average test weight and kernel plumpness were 51.9 lb/bu and 90% compared to 50.9 lb/bu and 85% for Baronesse and 49.6 lb/bu and 89% for Harrington. Maturity of Bob is 1 d later than that of Baronesse and equal to Harrington. Bob had an average plant height of 28 in. and lodging of 7% compared to 27 in. and 18% for Baronesse, 29 in. and 19% for Harrington, and 30 in. and 16% for Gallatin measured over the 26 location-years (2000-2001). In the USDA-ARS coordinated Western Regional Spring Barley Nursery in 2001, Bob's yield relative to Baronesse over the nine test locations was 100%. In the Pacific Northwest locations, the yield of Bob relative to Baronesse was 94% at Pullman, WA; 92% at Moscow, 102% at Bonners Ferry, 98% at Aberdeen, and 125% at Idaho Falls, ID; and 106% at Klamath Falls, OR. Bob ranked number one in yield among 70 entries averaged over the five locations in the 2001 Idaho Barley Variety Enhancement Program Advanced Yield Nursery. Bob yielded 103% of Baronesse over all locations and 78, 96, 110, 126, and 96% of Baronesse at Fairfield, Parma, Craigmont, Tammany, and Potlatch, respectively.

Bob had malting quality comparable to Harrington based on four year averages from USDA-ARS Cereal Crops Research Unit, Madison, WI micromalt analyses. However, it did not pass American Malting Barley Association first year pilot scale tests. Further tests will be conducted to definitively determine its potential. Feed quality of Bob should be acceptable based on its high test weight and kernel plumpness and moderate grain protein level (12.6 % average). Bob has partial resistance to barley stripe rust (*Puccinia striiformis* f. sp. *Hordei*) and to leaf rust (*Puccinia graminis* f.sp. *hordei*). It has no other known highly susceptible or resistant reactions to other diseases.

Breeder's seed of Bob was produced in 2001, and foundation seed will be produced in 2002. Breeder's and foundation seed of Bob will be produced and maintained by the Washington State Crop Improvement Association Foundation Seed Program. Requests for seed can be made to the WSCIA Foundation Seed Program, Washington State University, Pullman, WA 99164-6420. It is requested that appropriate recognition be given when Bob contributes to research or the development of new breeding lines or cultivars. Application for Plant Variety Protection will be made.



Director, Washington Agricultural Research Center
Washington State University



Date

Yes, the Idaho Agricultural Experiment Station wishes to join in the release of 'Bob' the barley and has signed below.

Richard C. Sennel

Director, Idaho Agricultural Experiment Station
University of Idaho
Moscow, ID 83844

6/11/2002

Date

Yes, the Oregon Agricultural Experiment Station wishes to join in the release of 'Bob' the barley and has signed below.

MTB-he

Director, Oregon Agricultural Experiment Station
Oregon State University
Corvallis, OR 97331

10/23/02

Date

Yes, the USDA-ARS wishes to join in the release of 'Bob' the barley and has signed below.

Cassid E. Reynolds

Administrator, USDA Agricultural Research Service
Washington, D.C.

5-20-02

Date