Washington Agricultural Research Center
Washington State University
Pullman, WA 99164-6240,

Idaho Agricultural Experiment Station
University of Idaho
Moscow, ID 83843,

Oregon Agricultural Experiment Station
Oregon State University
Corvallis, OR 97331;
and
United States Department of Agriculture
Agricultural Research Service
Washington, D.C.

RELEASE OF 'FARMINGTON' (PI 617034) 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 'Farmington' barley to farmers and seedsmen for commercial production. Farmington was developed by the Washington Agricultural Research Center and named for a small town on the eastern Palouse prairie of eastern Washington.

Farmington was initially selected in 1994 in the F_4 generation from the 1991 cross WA7190-86/'Maresi'. Maresi is a European two-row malting type developed in Germany. WA7190-90 is from the cross: WA10698-76 ('Klages'/WA8189-69) / WA8517-74 ('Piroline' Mutant/'Valticky' Mutant). Farmington was tested under the line designation WA9504-94. Farmington is a midseason, semidwarf two-row spring covered feed barley with lax nodding spikes, rough long awns, and plump white kernels with long rachilla hairs. Farmington is best adapted to the mid-high precipitation and irrigated areas of eastern Washington, northern and southern Idaho, and eastern and western Oregon.

Farmington was tested in the Washington State Uniform Spring Barley Nursery from 1997-2001. The yield of Farmington was 4438 lb/a or 94% of 'Baronesse' (leading cv in WA) averaged over 60 location-years in eastern Washington. For the same set of tests Farmington yielded 108, 107, 107, and 111% of 'Harrington' (leading malting cv), 'Gallatin' (major feed barley), 'Bancroft', and 'Orca' (barley stripe rust resistant cultivars), respectively. Over the 16 test locations in eastern Washington during the five years of testing, Farmington out-yielded or equaled Baronesse (95-114%) at nine locations. In the USDA-ARS coordinated Western Regional Spring Barley Nursery 1998-2000, Farmington's yield relative to Baronesse and/or 'Steptoe' (former leading cultivar in WA) in the Pacific Northwest was 112% at Pullman, WA; 115% at Moscow/Genesee, 111% at Bonners Ferry, 100% at Aberdeen, and 94% at Idaho Falls, ID; and 89% at

Klamath Falls, OR. Over 11 test sites in Oregon in 2000, Farmington's yield (4420 lb/a) averaged 98% of Baronesse's yield (4495 lb/a). Farmington's yield relative to that of Baronesse ranged from 100–122% at six sites. Farmington is a semi-dwarf type with average plant height of 24 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 60 location-years. In the same tests, Farmington's average test weight and kernel plumpness were 51 lb/bu and 81% compared to 51 lb/bu and 78% for Baronesse, 50 lb/bu and 80% for Harrington, and 52 lb/bu and 78% for Gallatin. Maturity of Farmington is similar to that of Baronesse.

Farmington had malting quality comparable to Harrington based on 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 Farmington should be acceptable based on its high test weight and kernel plumpness and moderate grain protein level (11% average). Farmington has partial resistance to barley stripe rust (*Puccinia striiformis* f. sp. *Hordei*) and resistance to leaf rust (*Puccinia graminis* f.sp. *hordei*). It has no other known highly susceptible or resistant reactions to other diseases.

Breeders and Foundation seed of Farmington was produced in 2000 and 2001, respectively. Breeder's and foundation seed of Farmington 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 Farmington contributes to research or the development of new breeding lines or cultivars.

_____Date_____
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Director, Oregon Agricultural Experiment Station
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_____Date_____
Administrator, USDA Agricultural Research Service
Washington, D.C.

Fully signed, release date 10/19/01