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UNIVERSITY OF IDAHO
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AND

OREGON AGRICULTURAL EXPERIMENT STATION
OREGON STATE UNIVERSITY
Corvallis, Oregon

AND

WASHINGTON AGRICULTURAL RESEARCH CENTER
WASHINGTON STATE UNIVERSITY
Pullman, Washington

RELEASE OF 'CREEL' BARLEY
A SIX-ROWED SPRING FEED BARLEY VARIETY

The Agricultural Research Service, U.S. Department of Agriculture, and the Idaho, Colorado, and Oregon Agricultural Experiment Stations announce the joint release of 'Creel', a six-rowed spring feed barley (*Hordeum vulgare* subsp. *vulgare*) variety developed cooperatively by Agricultural Research Service, U.S. Department of Agriculture; and the Idaho Agricultural Experiment Station.

Creel is from the cross M44/80Ab49//799Ab10719. The parent M44 is a selection from Minnesota. The parent 80Ab4952 is from the cross 73Ab152 (=Minn II/Cayuse 54-34-432)/M71-88 (a Minnesota selection). The parent 79Ab10719 was the original selection from which 'Colter' was selected and was from the cross 73Ab2199 ('Steptoe'/'Larker')/74Ab4302 (RPB10/'Sherbet'). Creel originated at Aberdeen, Idaho as a F_3 generation selection in 1993 and was identified as 93Ab688 prior to release. Breeder seed of Creel originated as a bulk increase of seed from 700 head rows grown at the Tetonia Research and Extension Center. Creel is a early to mid-season, covered, white aleurone, six-rowed spring barley with medium-lax, erect spikes, smooth awns, and long rachilla hairs. It is adapted to dryland production areas in Idaho, eastern Washington, and eastern Oregon, and has reasonable production under irrigation in southeastern Idaho.

Creel has been grown in replicated trials at Aberdeen since 1995. It is currently being evaluated in irrigated and dryland trials at several locations in Idaho. Creel was entered in the Western Spring Barley Nursery from 1996 until 2001. In 5 years of testing in irrigated trials at Aberdeen, 1997-2001, Creel averaged 9486 kg ha^{-1} (176.3 bu/A) or 103% of Colter and 145% of Morex. In these same trials Creel was approximately equal to Colter and 'Morex' in test weight and heading date. It was nearly 3 cm shorter than Colter and 10 cm shorter than Morex. Creel lodged more than Colter (18% and 7%, respectively) but less than Morex (32%). Creel's kernel plumpness was equal to Colter but 6% less than Morex under irrigation at Aberdeen. It was entered in the Western Regional Dryland Spring Barley Nursery in 1999 and tested for 2 years. In three years of testing in dryland trials at Tetonia, 1999-2001, Creel averaged 3822 kg ha^{-1} (71.1 bu/A) or 101% of 'Baronesse' and 107% of 'Legacy',. Its test weight was 14 kg m^{-3} (1.1 lbs/bu) less than Baronesse and slightly less (3.9 kg m^{-3}) than Legacy. Kernel plumpness of Creel at Tetonia was 15% less than Baronesse 10% less than Legacy. It was 3 d earlier than Legacy and 5 d earlier than Baronesse at Tetonia. Creel was the same height as Baronesse and 6 cm shorter than Legacy. Creel was grown in the Western Regional Dryland Spring Nursery at Genesse in 2000 and 2001. It averaged 7977 kg ha^{-1} (148.4 bu/A), or 110% of Baronesse and 126% of Morex. Creel's test weight of 645 kg m^{-3} (50.1 lbs/bu) was considerably less than the 683 kg m^{-3} (53.1 lbs/bu) of Baronesse, the 656 kg m^{-3} (51.0 lbs/bu) of Legacy, and the 662 kg m^{-3} (51.5lbs/bu) of Morex. Kernel plumpness of Creel was very low at 52%, while Legacy averaged 61%, but equal to 'Millennium'. The heading date of Creel at Genesse was 3 d earlier than Baronesse and 1 d later than Morex. Creel was grown in the Advanced Yield Nursery at five locations (Fairfield, Parma, Craigmont, Tammany and Potlatch, Idaho), in 2001. Over all locations, Creel averaged 4558 kg ha^{-1} (84.8 bu/A) or 97% of Baronesse, 112% of Colter, and 119% of Morex. The test weight and kernel plumpness of Creel was also lower than Baronesse and Morex in these trials, but slightly better than Colter. The heading date was 2 d later than Baronesse and 5 d later than Morex. These are the only trials where Creel was later in heading date than any of these entries. Creel was equal in height to Baronesse and Colter and 10 cm (4 in) shorter than Morex at these locations. The yield performance of Creel in northern Idaho in comparison to Baronesse, which is the standard for yield in this area, and its good yield record in southeast Idaho, make it potentially valuable feed barley variety.

Creel was evaluated for malt quality in 1996. It had low malt extract, barley and wort protein, soluble to total protein percentage, diastatic power, and alpha-amylase, with high beta-glucan. Creel is not acceptable as a malting barley variety and is being released strictly as a feed barley variety.

Breeder's seed of Creel was increased in 2000, and foundation seed was produced in 2001. Breeder and Foundation seed of Garnet will be maintained by the Idaho Agricultural Experiment Station, Foundation Seed Program. Requests for seed should be directed to the Coordinator, Foundation Seed Program, College of Agriculture, Kimberly Research and Extension Center, 3793 N 3600 E, Kimberly, Idaho 83341. It is requested that appropriate recognition of source be given when this germplasm contributes to research or development of a new breeding line or cultivar. The U.S. Department of Agriculture has no seed for distribution.