

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
Washington, D.C.
and
IDAHO AGRICULTURAL EXPERIMENT STATION
UNIVERSITY OF IDAHO
Moscow, Idaho

RELEASE OF 'GARNET' (P.I. 605472)
A NEW TWO-ROWED SPRING BARLEY VARIETY

The Agricultural Research Service, U.S. Department of Agriculture, and the Idaho Agricultural Experiment Station announce the joint release of 'Garnet' (P.I. 605472), a two-rowed spring barley variety developed cooperatively by Agricultural Research Service, U.S. Department of Agriculture, and the Idaho Agricultural Experiment Station.

Garnet is from a cross of 'Harrington'/78Ab6871. The parent Harrington was developed by the University of Saskatchewan at Saskatoon, Saskatchewan from a cross of 'Klages'/3/'Gazelle'/'Betzes'/'Centennial'. The parent 78Ab6871 is equivalent to 'Crystal' and originated at Aberdeen, Idaho from a cross of 'Columba'/Klages. Garnet originated at Aberdeen, Idaho as a F₃ generation selection in 1986 and was identified as 86Ab2317 prior to release. Breeder seed of Garnet originated as a bulk of seed from the original F₃ head row grown at the Aberdeen Research and Extension Center. Garnet is a midseason, white aleurone, two-rowed spring barley with medium-lax spikes, rough awns, and long rachilla hairs.

Garnet was first tested in replicated trials in Idaho in 1988. It has been widely tested in both irrigated and dryland trials in Idaho and other western states. It was tested in the regional Western Spring Barley Nursery in 1991-94 and in the Western Dryland Spring Barley Nursery in 1991-95. In eight station-years of testing in irrigated trials at Aberdeen, Idaho in 1988-94 and 1996-98, Garnet averaged 142.2 bu/A or 94% of 'Crystal', 100% of 'Harrington', and 104% of Klages. In these same trials, Garnet exhibited good kernel plumpness, averaging 95% over a 6/64 screen vs. 92% for Crystal, 89% for Harrington, and 85% for Klages. Garnet averaged 53.2 lbs/bu in test weight in these trials and slightly lower than the check varieties, averaging 1.6 lbs/bu less than Crystal, 0.6 lbs/bu less than Harrington, and 0.5 lbs/bu less than Klages at Aberdeen. It is similar to these varieties in heading date and height at Aberdeen, averaging the same as Crystal in both of these characteristics. It is also similar to Crystal in lodging resistance, but superior in lodging resistance to Harrington and Klages in trials at Aberdeen. In nine station-years of testing in irrigated trials at Teton, Idaho in 1990-98, Garnet averaged 96.5 bu/A or 97% of Crystal, 103% of Harrington, and 105% of Klages. Garnet also has an excellent record relative to kernel plumpness under irrigation at Teton, averaging 94% over a 6/64 screen and exceeding all check varieties for this trait. In six station-years of testing in dryland or non-irrigated trials at Teton, Idaho in 1990-95, Garnet averaged 69.2 bu/A or 96% of Crystal.

98% of Gallatin, 95% of Harrington, and 85% of Hector. In these dryland trials Garnet was superior to all of these check varieties in kernel plumpness, averaging 87% vs. 71% for Crystal, 82% for Gallatin, 79% for Harrington, and 78% for Hector. In 16 station-years of testing in trials at Bonners Ferry, Craigmont, Potlatch, and Tammany in northern Idaho in 1995-98, Garnet averaged 84.3 bu/A or 88% of 'Baronesse', 94% of 'Chinook', 106% of 'Crest', 98% of Crystal, and 102% of Harrington. Garnet was superior to all of these check varieties in kernel plumpness in the trials in northern Idaho, averaging 91% vs. 84% for Baronesse, 86% for Chinook, 81% for Crest, 84% for Crystal, and 76% for Harrington.

Garnet has good malting quality characteristics and is currently being evaluated in plant-scale tests of malting and brewing quality. It is a potential malting barley variety. Garnet is expected to compete favorably with existing two-rowed spring barley varieties in irrigated and many non-irrigated or dryland environments in Idaho and other western states. 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. The U.S. Department of Agriculture has no seed for distribution.

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Date