Registration of Crop Cultivars

REGISTRATION OF CLARK BARLEY

‘Clark’ barley (Hordeum vulgare L.) (Reg. no. 191), CI 15857, was developed cooperatively by USDA-ARS and the Montana Agricultural Experiment Station and released for commercial production in February 1981. It is a selection from the cross ‘Hector’/‘Klages’. The initial cross was made at Bozeman, MT in 1973. The F3 selection MT 547234 was tested in Montana and Western Regional barley nurseries from 1976 through 1982.

Clark is a two-rowed, white-kerned, midseasoned spring barley. It has mid lax, midlong spikes which are seminodding before maturity and nodding at maturity in a manner similar to Hector. The spike has rough awns; glume awns are equal to the length of the glume, which is covered with long hairs. Rachis edges have long hairs. The midsized kernels have adhering and finely wrinkled hulls without barbs on the lateral veins. Rachillas are long-haired.

Compared to Klages, Clark is 2 days earlier in heading, has 10% plumper kernels, has about the same plant height and lodging behavior, and showed more tolerance to spot blotch caused by Cochliobolus sativus (Ito & Kurib) Drechs. ex Dast, and net blotch incited by Pyrenophora teres Drechs. at three locations in both Montana and North Dakota. Clark is similar to Hector in tolerance to common root rot caused by C. sativus, but more tolerant than Klages or ‘Shabet’ (1). In 24 Montana yield trials, Clark yielded about 122% of Klages and 97% of Hector, with trial mean yields of 2.29 Mg/ha. In 40 Montana yield trials with mean yield levels of 4.30 Mg/ha, Clark yielded about 107% of Klages and 98% of Hector. In the 1979–1982 Western Regional Barley Nurseries, Clark yielded 106% of Klages and 91% of ‘Steptoe’ in 93-station comparison. However, in the 1979–1982 Western Regional Dryland Nurseries, Clark yielded 99% of Hector and 97% of Steptoe in a 62-station comparison.

On the basis of 60 Montana and Western Regional nursery samples grown in 1977–1982, Clark appears similar in malting quality to Klages. Pilot scale evaluation of malting and brewing quality of Clark in 1979 in cooperation with the Malting Barley Improvement Association indicated malting quality similar to Klages. Clark was approved as a malting barley by the American Malting Barley Association after plant scale malting and brewing tests from the 1981 and 1982 commercial crops. It is recommended for dryland and irrigated production in Montana as a feed and malting barley. It comprised 15.6% (146 780 ha) of the barley planted in Montana in 1984 and is especially adapted to dryland in the Great Plains area.

Breeder and foundation seed of Clark will be maintained by the Foundation Seed Stocks, Dep. of Plant and Soil Science, Montana State Univ., Bozeman, MT 59717; and superintendent, Central Agric. Exp. Stn., Moccasin, MT 59462. Cooperative investigations of the USDA-ARS and Montana Agric. Exp. Stn. J. Series no. 1472. Registration by the Crop Sci. Soc. of Am. Accepted 30 July 1984.

REGISTRATION OF BRISTOL KENTUCKY BLUEGRASS

‘Bristol’ Kentucky bluegrass (Poa pratensis L.) (Reg. no. 27) was developed and released by The O.M. Scott and Sons Company using germplasm obtained from the New Jersey Agricultural Experiment Station. ‘Anheuser Dwarf Kentucky bluegrass. An unreduced egg of Bellevue was fertilized by a reduced gamete from Anheuser Dwarf resulting in a facultatively apomorphic hybrid. ‘Anheuser Dwarf’ is a facultatively apomorphic hybrid developed from the cross ‘Bellevue’ X ‘Anheuser Dwarf’ Kentucky bluegrass. Anheuser Dwarf resulting in a facultatively apomorphic hybrid possessing approximately 98 chromosomes. Chamber tests and spaced field trials, 93% of the progeny of Bristol are indistinguishable from the parent which indicates a high level of facultative apomixis. The first commercial seed of Bristol was harvested in 1975. Its experimental designation was ‘Keme’. Bristol is a moderately low growing, leafy turf-type bluegrass with medium texture and a desirable color that is apparent throughout the growing season, from spring through late fall. It maintains good color during periods of summer stress as well as under shady conditions. This cultivar has demonstrated good resistance to leaf mildew incited by Erysiphe graminis D.C., crown rot disease incited by Helminthosporium graminicola D. Drechsler., stripe smut incited by Ustilago tritici D. Niessl., Fusarium blight incited by Fusarium oxysporum f. sp. cerealis (Cke) Snyder and Hansen, and rust incited by Puccinia striiformis West.

Bristol is well suited for lawns, parks, athletic fields and golf courses in regions where Kentucky bluegrass is well adapted. It performs well in blends with other Kentucky bluegrasses and in mixtures with the type perennial ryegrasses (Lolium perenne L.) and fine fescues (Festuca rubra L.)

Breeder seed of Bristol is produced in spaced-plant nurseries by the O.M. Scott and Sons Company. Seed production is limited to two generations of increase from breeder seed.

United States Patent 3782 has been issued.