conditions and to its hard seed content. Also, grain and protein yields, total N uptake, and water use efficiency were greater for spring wheat following George black medic than following the Australian medics.

Seed production of George shall be on a limited generation basis; breeder, foundation and certified. Foundation seed will be limited to that harvested the year of seeding and harvested from the stands regenerating from residual buried seed the 3 succeeding years. Certified seed will be limited to that harvested the year of seeding and harvested from the stands regenerating from residual buried seed the three succeeding years. The Montana Agric. Exp. Stn. will maintain breeder seed.

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REGISTRATION OF 'LANCER' OATS

LANCER oats (Avena sativa L.) (Reg. no. 308) (CI no. 9256) is a spring oat developed by the South Dakota Agric. Exp. Stn. It was tested as SD 9095 and released in January 1979.

'Lancer' came from a 1963 cross of 'Neal'/'Clintland 64'. The first selection was a single F₂ plant, and it was tested as an F₃-derived line until a single F₉ panicle was selected. The F₉ selection, designated 9095, was used in state and regional testing.

Lancer was tested statewide in 1976–1983 and in the Uniform Midseason Performance Nursery in 1976–1978. Based on performance in these tests, Lancer is a stiff-strawed, midseason variety that heads at the same time as 'Holden' but slightly later than 'Spear' and 'Chief'. It is about 2 cm shorter than Spear or Chief. Seed yields are comparable to these three varieties in South Dakota tests while straw strength is better than that of any of these varieties.

The kernels of Lancer are white and fluoresce under ultraviolet light. Most fluoresce a light color, but some fluoresce yellow. Under certain conditions, the palea exhibits black shading. In South Dakota tests, Lancer has averaged 2 to 2.5 kg/hL higher test weight than Spear. Groat protein percentage is high, averaging 3% above Spear in South Dakota tests. Lancer's milling yield has been very good. Groat protein percentage is high, averaging 0.4, 1.2, and 2% above Chief, 'Noble', and 'Burnnett', respectively, for the 1976–1978 statewide trials in South Dakota. Groat oil is intermediate to that of 'Lodi' and 'Clintland 64'.

Under field conditions, Lancer had moderate resistance to stem rust, but there were occasional outbreaks of tan spot and covered smut. Lancer is not protected under the Plant Variety Protection Act. Breeder seed is maintained by the South Dakota Agric. Exp. Stn., Plant and Soil Sci. Dep., Montana State Univ., Brookings, SD 57007.

D. L. Reeves

References and Notes


REGISTRATION OF RANGER PERENNIAL RYEGRASS

RANGER perennial ryegrass (Lolium perenne L.) (Reg. no. 698) was developed and released by D.J. van der Have, Kapelle, Netherlands, using germplasm obtained from New Jersey Agric. Exp. Stn. It is being marketed by Van der Have Oregon Inc., Albany, OR. The first certified seed was produced in Oregon in 1984.

'Ranger' (experimental designation Syn R) is an advanced generation synthetic cultivar developed from the progenies of seven clones. The selection was developed in a recurrent selection program for resistance to crown rust (caused by Puccinia coronata f. sp. Avenae var. lolii Brown) and the winter net blotch disease (caused by Drechslera dictyoides f. sp. perenne).

The parental germplasm of Ranger was developed by making crosses among 'Diplomat', 'Pennfine', 'Omega', 'Turing', synthetic developed by the New Jersey Agric. Exp. Stn., 'Manhattan', K-79 (a 80-clone synthetic germplasm collected in Central Park, New York, NY), and L4H (a selection from a school playground in Adelphia, NJ). Over 200 clones were evaluated in nursery on the basis of uniform mowing qualities, freedom from disease, and potential. Polycross progenies of these clones were screened in turf trials and evaluated for attraction, reproduction of agronomic potential. Polycross progenies of these clones were screened in turf trials and evaluated for attraction, reproduction of agronomic potential. Polycross progenies of these clones were screened in turf trials and evaluated for attraction, reproduction of agronomic potential.