Registration of ‘Buchanan’ Wheat

‘BUCHANAN’ hard red winter wheat (Triticum aestivum L.) (Reg. No. CV-787, PI532994) was developed by the College of Agriculture and Home Economics of Washington State University with the cooperation of USDA-ARS. It was jointly released to growers by USDA-ARS and the Washington and Oregon Agricultural Experiment Stations in 1990. Buchanan was selected as a plant row increase from a single plant in 1982 from an unknown field cross.

Buchanan has winter growth habit, mid to late-season maturity, and short standard height stature. It has semi-weak white straw with an awned, fusiform, middense-to-lax, inclined spike. The glumes are glabrous, white, oblique to rounded, with mid-wide, acuminate beaks, 2 to 7 mm long. The awns are white and 3 to 8 cm long. The kernels of Buchanan are red, midsized, hard, ovate to elliptical in shape with a small to mid-sized germ, and midlong, mid-size brush. The crease is midwide and middeep. The cheeks are rounded.

Buchanan was tested as N8402101 in Washington trials from 1984 to 1989 and as WA007523 in the Western Regional Hard Red Winter Wheat Performance Nursery from 1987 to 1990. The yield performance of Buchanan has been similar to ‘Hatton’ in the dryland summer-fallow areas of eastern Washington, which receive less than 25 cm of annual precipitation. Test weight is comparable to that of ‘Neeley’, ‘Manning’, and ‘Andrews’, but about 2 kg hl⁻¹ lighter than that of Hatton.

The winterhardiness of Buchanan is equal to that of Weston and Andrews, but less than that of Hatton. It has a longer coleoptile than Weston or ‘Moro’ and emerges better than Weston and ‘Blizzard’. In the fall of 1986 in the Horse Heaven Hills of Benton County, the seeds were covered with 11 cm of loose soil and a rain occurred between seeding and emergence. The estimated stands were 94, 78, 60, 44, and 30% for Buchanan, Blizzard, Weston, Hatton, and Batum, respectively. In the fall of 1988 on the Dryland Research Unit at Lind in Adams county, the seeds were covered with 15 cm of loose soil during planting. Three days later 2 cm of rain fell. The moisture from the rain reached the stored soil moisture. The estimated stands were 72, 44, 33, 23, and 14% for Buchanan, Blizzard, Weston, Hatton, and Batum, respectively. Results from both trials are an average of six replications. Buchanan is moderately resistant, in the mature plant stage, to local races of stripe rust caused by Puccinia striformis Westend. It is moderately susceptible to common bunt caused by Tilletia caries (DC.) Tul. & C. Tul., leaf rust caused by Puccinia recondita Robege. ex Desmaz. and snowmold caused by Typhula spp. Buchanan is susceptible to strawbreaker foot rot caused by Pseudocercospora herpotrichoides (Fron) Deighton, dryland foot rot caused by Fusarium culmorum Wm. G. Sm. Sacc., and dwarf bunt caused by Tilletia controversa Kühn. in Rabenh.

In tests by the USDA-ARS Western Wheat Quality Laboratory at Pullman, WA, Buchanan has been equal to Hatton in flour yield and dough mix time, but tends to be slightly lower in loaf volume and crumb grain and texture. Buchanan, Blizzard, Weston, Hatton, and Batum, respectively. Results from both trials are an average of six replications. Buchanan has been equal to Hatton in Rabenh. Tilletia controversa Ktthn.

The estimated stands were 72, 44, 33, 23, and 14% for Buchanan. The moisture from the rain reached the stored soil moisture. The estimated stands were 94, 78, 60, 44, and 30% for Buchanan, Blizzard, Weston, Hatton, and Batum, respectively.

Registration of ‘Fairview’ Wheat

‘FAIRMONT’ (Reg. no. CV-785, PI 557554) is a hard red winter (HRW) wheat (Triticum aestivum L.) released for the production areas of western Colorado developed by the USDA-Agricultural Research Service in cooperation with the Colorado and Idaho Agricultural Experiment Stations and released in August 1991.

Fairview was developed by the USDA-ARS Western Wheat Performance Nursery from 1987 to 1990. The parentage of A71183WS-7-2/71255WS-11-3 was IDO042/3///Cheyenne//Uthah175a-53/4/'Ranger'. Fairview was selected in 1982 as F₁ from the cross A71183WS-7-2/71255WS-11-3 was IDO042/3///Cheyenne//Uthah175a-53/4/'Ranger'. Fairview was selected in 1982 as F₁ from the cross 'Moran'/3///III-58-1-1///Westend. It is moderately resistant, in the mature plant stage, to local races of stripe rust caused by Puccinia striiformis Westend) which attacks 'Fielder' at Aberdeen, WA. Reaction to inoculation with races of known and unknown field races at Manning, WA. Fairview has had moderate resistance to Tilletia caries (DC.) Tul. & C. Tul. (common bunt) and a similar mixing tolerance to dough mixing than Manning and a similar mixing tolerance to dough mixing than Manning.

Fairview is an awned, medium height cultivar which has been most similar to ‘Manning’. The spikes are erect to inclined and it is 3 cm shorter than Manning in maturity and 1 d later than Manning in maturity. Fairview has an 8% higher grain yield when grown under dryland management in southwestern Colorado trials. Fairview has found to be resistant to known isolates of stripe rust (Puccinia striiformis Westend) which attacks 'Fielder' at Aberdeen, WA. Reaction to inoculation with races of known and unknown field races at Manning, WA. Fairview has had moderate resistance to Tilletia caries (DC.) Tul. & C. Tul. (common bunt) and a similar mixing tolerance to dough mixing than Manning and a similar mixing tolerance to dough mixing than Manning.

Fairview was selected in 1982 as F₁ from the cross A71183WS-7-2/71255WS-11-3 was IDO042/3///Cheyenne//Uthah175a-53/4/'Ranger'. Fairview was selected in 1982 as F₁ from the cross 'Moran'/3///III-58-1-1///Westend. It is moderately resistant, in the mature plant stage, to local races of stripe rust caused by Puccinia striiformis Westend) which attacks 'Fielder' at Aberdeen, WA. Reaction to inoculation with races of known and unknown field races at Manning, WA. Fairview has had moderate resistance to Tilletia caries (DC.) Tul. & C. Tul. (common bunt) and a similar mixing tolerance to dough mixing than Manning and a similar mixing tolerance to dough mixing than Manning.

References and Notes

1. Crop and Soil Sciences Dep., Dryland Research Station, University of Idaho, Aberdeen Research and Extension Center, Washington State Univ., Pullman, Washington, which receive less than 25 cm of annual precipitation. Test weight has been 12 kg m⁻³ lower than Manning in 4 yr grown under dryland management in southwestern Colorado trials. Fairview has found to be resistant to known isolates of stripe rust (Puccinia striiformis Westend) which attacks 'Fielder' at Aberdeen, WA. Reaction to inoculation with races of known and unknown field races at Manning, WA. Fairview has had moderate resistance to Tilletia caries (DC.) Tul. & C. Tul. (common bunt) and a similar mixing tolerance to dough mixing than Manning and a similar mixing tolerance to dough mixing than Manning.

Breeder and foundation seed of Fairview was developed by the USDA-Agricultural Research Service in cooperation with the Colorado and Idaho Agricultural Experiment Stations in 1990. Buchanan was tested as N8402101 in Washington trials from 1984 to 1989 and as WA007523 in the Western Regional Hard Red Winter Wheat Performance Nursery from 1987 to 1990. Buchanan has been equal to Hatton in Rabenh. Tilletia controversa Ktthn.