

REGISTRATION OF 'BATUM' WHEAT

'BATUM' (Reg. no. CV-76, PI 495013) is a hard red winter wheat (*Triticum aestivum* L.) developed cooperatively by the College of Agriculture, Washington State University, and the USDA-ARS. It was jointly released to growers by USDA-ARS and the Washington and Oregon Agricultural Experiment Stations in 1985.

Batum was selected in the F_3 generation from the cross CI13438/'Redmond'//CI13694/5/PI178383/CI13431//CI13441/3/'Itana'/4/'Bezostaja-1'//CI13438/'Burt'. The population from the cross was maintained as a bulk for 4 yr (F_2 - F_3) with natural selection for local climatic conditions of low rainfall. Subsequent to original selection, the cultivar was maintained without further selection or purification.

Batum is winter habit, midseason to late, and semidwarf (*Rht*₁). It has a strong white stem with an awned, inclined spike oblong to fusiform, middense to lax. The glumes are

glabrous, white, midlong and midwide. The shoulders are narrow, oblique to rounded; beaks are midwide, acuminate, and 1 to 3 mm long; awns are white, 2 to 7 cm long. The kernels of Batum are red, midlong, hard, ovate to elliptical in shape with a small germ, and midwide and middeep crease. The cheeks are rounded with a midsize, midlong brush. When grown under irrigation, kernels may be shorter, with a more open crease and less rounded cheeks with a midsize to small brush.

Batum was tested as WA006816 in Washington trials during 1979 to 1985, and in the Western Regional Hard Red Winter Wheat Nursery during 1981 to 1985. During this time, in 22 location-years in the wheat-summer fallow area having <28 cm of average rainfall, Batum outyielded 'Hatton' by 10% and 'Wanser' by 27%. In higher-production locations, Batum has outyielded Hatton by 21% in 17 location-years and Wanser by 37% in 20 location-years.

Winterhardness of Batum is less than Hatton or Wanser. Being a semidwarf with a relatively short coleoptile, Batum emerges similar to the soft white winter wheat semidwarf 'Nugaines'. The ability to emerge is weaker under stress conditions than for the taller hard red winter wheat cultivars. Batum shows effective mature plant resistance to the local races of stripe rust caused by *Puccinia striiformis* Westend. and common bunt fungus caused by *Tilletia caries* (DC.) Tul. & C. Tul. It has some tolerance to mildew caused by *Erysiphe graminis* (DC.) f. sp. *tritici* Em. Marchal and flag smut caused by *Urocystis agropyri* (G. Preuss) J. Schröt. Batum is susceptible to dwarf bunt caused by *Tilletia controversa* Kühn in Rabenh., snowmold caused by *Typhula* spp., stem rust caused by *Puccinia graminis* Pers.: Pers., strawbreaker foot rot caused by *Pseudocercospora herpotrichoides* (Fron) Deighton, dryland foot rot caused by *Fusarium culmorum* (Wm. G. Sm.) Sacc., and fungus stripe caused by *Cephalosporium gramineum* Nis. & Ha.

In tests by the USDA-ARS Western Wheat Quality Laboratory at Pullman, WA, Batum is slightly higher than Hatton or Wanser for flour yield and loaf volume. Its optimal bread mix time is shorter than for Hatton or Wanser.

Breeder and foundation seed of Batum will be maintained by the Washington State Crop Improvement Association under the supervision of the Agronomy and Soils Department, Washington State University, Pullman, WA 99164.

Five white seeds per pound are allowed in foundation, registered, and certified classes of seed.

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References and Notes

1. Agronomy and Soils Dep., Washington State Univ., Dry Land Res. Unit, Land, WA 99341. Scientific Paper no. 9001-06. Project no. 1667. College of Agric. Res. Ctr., Washington State Univ., Pullman, WA 99164. Registration by CSSA. Accepted 31 Jan. 1991. *Corresponding author.