Tyee is a white-glume, white-straw, awnletted-compact-spike, one-gene semidwarf winter wheat with medium maturity. Kernels are white, short, soft, ovate; germ small; crease mid-wide, shallow; cheeks rounded; brush mid-sized, mid-long to short.

Tyee was tested as WA 6155 in Washington trials during 1973 to 1978 and in the Western Regional White Winter Wheat Nursery during 1975 to 1977. It is slightly more lodging resistant and averages five cm shorter in height than 'Paha.' Tyee is adapted to 35 to 50 cm rainfall areas of the Pacific Northwest where it has demonstrated high yield potential. In regional and Washington state tests of 1975 to 1977, Tyee exceeded the overall average yield of 'Moro' (55 site/years), 'Paha' (35 site/years) and 'Nugaines' (65 site/years) by 22, 10 and 1%, respectively. Field observations and crown-freeze tests indicate that Tyee has more coldhardiness than does Paha. It has seedling vigor similar to that of Nugaines. Tyee has test weight comparable to Moro but averages about 2 kg/ha lower than Paha.

Tyee has given a resistant seedling reaction to 16 races of the stripe rust fungus and has shown a high level of field resistance in 17 site/years of tests. It apparently has the B1 and B4 genes for resistance to the common bunt fungus (Tilletia caries (DC.) Tul.) (J. A. Hoffmann, personal communication). Tyee is moderately susceptible to strawbreaker foot rot (caused by Pseudocercospora herpotrichoides (Fonl.) Del.), similar to 'Barbee.' Like Paha, it is susceptible to flag smut (caused by Urocystis agropyri (Preuss) Schroet.), leaf rust (caused by Puccina recondita Rob. ex Desm. f. sp. tritici), and powdery mildew (caused by Erysiphe graminis DC. f. sp. tritici E. Marchal).

Tyee has acceptable milling and baking club wheat quality that is very similar to 'Faro' according to the Western Wheat Quality Laboratory, AR-SEA-USDA of Pullman, Washington.

Breeder and foundation seed of Tyee will be maintained by the Washington State Crop Improvement Assoc. under supervision of the Agronomy and Soils Dep., Washington State Univ., Pullman, Washington 99164.

REGISTRATION OF WINGS WHEAT
(Reg. No. 639)

J. R. Welsh, G. Ellis, R. Normann, G. Hinze, and H. Mann

'Wings,' CI 17880, a hard red winter wheat (Triticum aestivum L. em Thell.) was developed and named by Colorado State Univ. in 1977 for both irrigated and dryland production in the southern and central Great Plains area. The cultivar is from the cross II 21183/C0652363/'Lancer'/KS62136 made in 1968. II 21183 is a semidwarf spring wheat from the International Maize and Wheat Improvement Center (CIMMYT) and has the pedigree of 'Tacuari.' C0652363 is a hard red winter wheat by Colorado State Univ. breeding program. 'Warrior'/'Kenya 58'/‘Newhatch'/'2*' (‘Mediterranean'/'Hope')/4/'Parker.' The F1 was crossed with hard red winter wheat selection 'Lancer'/KS62136. KS62136 is derived from 16'/3'/'Nebraska 60'/'Mediterranean/’Hope’/4.’

Wings originated from an individual F4 plant head selection in the F5. No further reselection or selection resulting in Wings was identified as C0725052 to the cultivars 'Lindon' and 'Vona.' It was initially entered in state wide Colorado yield trials in 1974 and 1975. In the Regional Performance Nursery in 1974 and 1975, Wings was equal to Lindon but only about 12%. In eight Colorado irrigated trials Wings was equal to Scout 66 but about 4% and Centurk by 2%. The test weight was a little better than Scout 66.

Wings is medium in maturity, heading 1 to 9 days later than Scout 66. It is semidwarf in stature equal in height to 15 cm shorter than Centurk over a wide range of environments. The stem is white, midstrong, and hollow. The Husarium, lax, middensity, inclined, smooth, and short. Glumes are white, midlong, narrow, and medium rounded shoulders. The beak is midwide and midstrong. Awns are white and average 70 mm long. The kernels are white, hard, and ovate with a middized germ; crease mid-wide; brush mid-sized and short. Wings has seedling resistance to races 56, 15, 15B2, 151, 11-32-113 and 17 of the stem rust (Puccina graminis Pers. f. sp. tritici). but is susceptible to prevalent races of the leaf rust organism (P. recondita Rob. ex Desm. f. sp. tritici). Wings has test weight characteristics and baking properties in comparison with current winter wheat cultivars. Wings has a lower weight than Scout 66. It was awarded plant variety protection with the certified seed option on 11 Aug. 1977. Ownership and exclusive marketing rights have been transferred to North American Plant Breeders, Co., who will be responsible for the sale of the seed.

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