Registration of GERMPLASMS

REGISTRATION OF CANDO DURUM WHEAT
(Reg. No. 580)

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‘Cando’ (Triticum turgidum L. var. durum), Cl 17438, is a spring durum wheat developed by the North Dakota Agric. Exp. Sta., North Dakota State Univ., Fargo, in cooperation with the ARS, USDA. Cando was selected from the cross D65152/D6418 made in 1966. D65152 is D61130/‘Leeds’, a durum semidwarf with low spaghetti color, leaf disease susceptibility, and unstable yield. The pedigree of D61130 is ‘Lakota’/5/‘Willet’ sib/‘Norlin 10’/‘Brevoir’/5/‘Langdon’/4/‘Langdon’. Willet sib/Norlin 10/Brevoir is a semidwarf hard red spring wheat (Triticum aestivum L.) line obtained from the Rockefeller Foundation-Mexican Ministry of Agric. wheat breeding program in 1956. D6418 is Brl100/Wells, a normal height, high yielding NDSA durum breeding line. Langdon, Lakota, Wells, and Leeds are North Dakota-USDAl cultivars released in 1955, 1960, 1966, and 1968, respectively. The cross to produce Cando was made to combine short straw with high grain yield, good quality, and leaf disease resistance. Early selection through the F2 generation was made with the pedigreed method in 4 years by utilizing North Dakota and Mexico winter breeding nurseries. Cando was bulked in the F2 generation as an F3-derived line in Mexico in the winter of 1970-71 and first entered in preliminary yield trials in North Dakota in 1971 as selection D7057. It has been tested in the USDA Durum Nursery (URDN) since 1972 and in North Dakota drill strips since 1973. It has also been evaluated in national and worldwide disease evaluation tests.

Cando has averaged 70 cm in plant height, or about 30 cm shorter than Ward, and has resisted lodging under high-moisture and wet-derity conditions for 5 years of testing. The plants are of spring habit, culms are usually white, and peduncle is slightly recurved. The spikes are awned (usually nondeciduous), oblong, dense, and erect. The glumes are glabrous, yellow, midlong to long, and midwide; beaks wide, acuminate, and 3 to 4 mm long. The kernels are amber, hard, midlong, and elliptical; germ misedized; crease midwide, shallow; checks angular to rounded; and the brush very short (essentially none).

Cando is the first semidwarf durum cultivar released by the North Dakota Agric. Exp. Sta. The grain yield of Cando has been about equal to Ward and ranked higher than Rollete and Wells in 10 tests during 1973-75 at locations in the Red River Valley and northcentral North Dakota. Cando is a tall semidwarf (70 cm) with excellent lodging resistance. Disease reactions have been similar to those of Rollete. Cando heads 1½ days later than Ward. The kernel weight of Cando has been intermediate between Wells and Ward, and its test weight has averaged 1.3 kg (2 lb/bushel) less than Ward.

Milling and spaghetti processing characteristics of Cando have been satisfactory in 16 tests during 1973 to 1975. Spaghetti color was slightly higher than Wells and Rollette and slightly lower than Ward.

Cando was named and released by the North Dakota Agric. Exp. Sta. on 18 December 1975. Breeder seed will be maintained by the Seedstocks Project, North Dakota Agric. Exp. Sta., Fargo, ND 58102. The National Small Grain Variety Review Board has approved Cando for certification.

Cando is described further in North Dakota Farm Res. 85 (2), 1976.

REGISTRATION OF DA-1 AND DA-2 ALFALFA GERMPLASMS
(Reg. Nos. GP 53 and GP 54)

T. E. Devine, R. H. Ratcliffe, J. H. Graham, J. E. McMurtrey and J. L. Goodlett

Two populations of alfalfa (Medicago sativa L.), DA-1 and DA-2, with moderate resistance to anthracnose (Colletotrichum trifolii Bain) were developed by the Agric. Research Service, USDA and released to alfalfa breeders on 12 September 1975. These germplasm pools were developed to provide alfalfa breeders with anthracnose resistant germplasm from which they may select alfalfa with resistance to insects and diseases, and a reduced level of dormancy with consequent higher yield potential for areas not requiring intense winter hardiness.

DA-1 (GP53) was developed from ’Moapa’, Beltsville 2-An4W2, and ArcShSW21. Beltsville 2-An4W2 was developed by one cycle of selection for bacterial wilt resistance from Beltsville 2-An4. ArcShSW21 was developed from the cultivar ‘Arc’ by

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