Registration of ‘Tyndal’ Triticale

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Tyndal’ (Reg. No. CV-30, PI 643975) is a spring triticale (X triticeaeae Wittmack), released in 2006 by the Field Crop Development Centre (FCDC), Alberta Agriculture and Food, Lacombe, Alberta, Canada (Canadian Reg. No. 6158). Tyndal is derived from the cross Nimir-1/Hare-265//Erizo-9/3/88L012 produced at FCDC in 1994. The germplasm line Nimir-1/Hare-265//Erizo-9 was a CIMMYT spring triticale introduction and 88L012 was a reduced awn expression (awnleted) triticale population developed at FCDC. The awnleted characteristic in 88L012 came from a triticale × spring wheat (RL4137 = RL 2520/6* Thatcher/Kenya Farmer) cross backcrossed several times to spring triticale (7631-ED4B/RL4137//7431A-68E4/3/Otter ‘S’/4/83L046), including a sister line (83L046 = Wapiti/3/M2A/Bgl//Panda ‘R’ 203) to Pronghorn (Salmon et al., 1997)

The F2 population was grown in the field in 1995 and subjected to selection for degree of awn reduction. The F3 to F5 generations were handled in a modified bulk, using plant type, early maturity, and degree of awn reduction as the primary selection criteria. The F6 to F9 generations were subsequently evaluated for agronomic type as headrows at Lacombe. Tyndal was evaluated as selection number 94L043017 in preliminary trials from 1998 to 2001 and in the Canadian Western Spring Triticale Coop registration trial as T182 from 2002 to 2004.

Based on 27 station years over a 3-yr period Tyndal yielded 4459 kg ha⁻¹ compared to the check variety Pronghorn which yielded 4339 kg ha⁻¹. Over the same period of testing Tyndal had a thousand kernel weight 42.2 g and a test weight of 72.7 kg hL⁻¹ compared to Pronghorn at 42.3 g and 69.9 kg hL⁻¹, respectively. Tyndal averaged 92 cm in height and matured at 106 d. Silage trials conducted at FCDC from 2001 through 2004 indicated that Tyndal produced 11.7 t ha⁻¹ which was 4% higher yielding than the cultivar Pronghorn.

Tyndal is awnleted, medium tall, and hulless with a nile plant habit. The leaves are blue green in color, medium in length, wide, slightly waxy, and glaborous. The spike is erect, blue green in color, medium in width, and wide, slightly waxy, and glaborous. The glume has a rounded shoulder with an acute beak.

The kernel is light red in color, medium in length, medium wide, medium long, and elliptical. The kernel brush is medium to large in size with medium long hairs. The kernel cheeks are rounded to slightly angular, with a medium length, wide and shallow to medium deep crease. The kernel is round to oval in shape and large in size.

Tyndal is resistant to the prevalent races of stem rust (caused by Puccinia graminis Pers.:Pers. F. sp. tritici Roberge ex Eriks. & E. Henn.), leaf rust (caused by Puccinia triticina Eriks. & E. Henn.), and is moderately susceptible to Fusarium Head Blight (caused by Fusarium graminearum).

Tyndal is best suited for seed production in the light black and brown soils of the Canadian Prairie Provinces. The high biomass yield and the short awnlettes may be suitable for greenfeed production in addition to the Canadian Prairie Provinces.


Breeder seed of Tyndal will be maintained at the Field Crop Development Centre, Alberta Agriculture and Food, 5030 50th St., Lacombe, AB, Canada, T4L 1W8. Requests for breeder seed should be directed to the corresponding author for the first five years. After five years, seeds will be available from the National Small Grains Germplasm Collection of the Small Grains Germplasm Collection of the Department of Agriculture Canada, Agriculture and Agri-Food Canada, Ottawa, Ontario, K1A 0E6, Canada.