CULTIVAR DESCRIPTION

Wildcat red spring wheat

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Clarke, P. J., DePauw, R. M. and Thomas, J. B. 1994. **Wildcat red spring wheat.** Can. J. Plant Sci. **74**: 133–134. Wildcat (*Triticum aestivum* L.) is an early maturing, extra strong gluten cultivar adapted to the Peace River and Parkland regions of western Canada. Wildcat is shorter and more lodging resistant than Glenlea, it is moderately resistant to leaf and stem rust, resistant to loose smut but susceptible to common bunt.

Key words: *Triticum aestivum*, wheat (spring), early maturity, cultivar description

Clarke, P. J., DePauw, R. M. et Thomas, J. B. 1994. **Blé roux de printemps Wildcat.** Can. J. Plant Sci. **74**: 133–134. Le blé Wildcat (*Triticum aestivum* L.) est un cultivar très précoce, doté d'un gluten très ferme, adapté aux régions de la Rivière de la Paix et de la Prairie-parc de l'ouest canadien. Sa paille est plus courte et plus résistante à la verse que celle de Glenlea. Il possède une résistance modérée aux rouilles des feuilles et de la tige et une bonne résistance au charbon nu. En revanche, il est sensible à la carie commune.

Mots clés: *Triticum aestivum*, blé (printemps), précocité, description de cultivar

Wildcat red spring wheat (*Triticum aestivum* L.) was developed at the Agriculture Canada Research Station, Beaverlodge, Alberta. The Seed Division, Food Production and Inspection Branch, Agriculture Canada issued Registration no. 2761 for it on 10 February 1987.

Pedigree and Breeding Method

Wildcat was derived from a cross made in 1975 between NB113 and Glenlea. NB113 is a line developed from the cross Tobari 66/3/CI8154/2*Frocor//WRT/3*Manitou (WRT = unknown wheat-rye translocation) made at the National Plant Breeding Station, Njoro, Kenya. Glenlea is a cultivar with very strong gluten developed by the University of Manitoba (Evans et al. 1972). A modified pedigree method and early generation testing procedures were used to evaluate the progeny.

An F_2 head was selected in 1976 on the basis of attractiveness, early maturity, and shattering resistance. A reselection was made among F_4 heads for head type, and among F_6 heads for straw length. The F_3 and F_5 plants were grown as hill plots and the F_7 generation as head rows in winter nurseries at Brawley, California. In each of the F_4, F_6 and F_8 generations, segregants were evaluated in replicated yield trials for grain yield, maturity, straw strength, shattering resistance and kernel type. An F_6-derived F_8 line was bulked in 1979 and designated 79-309-847. Breeder seed was derived from a bulk of several hundred single-head progenies selected in 1984.

In 1979 and 1980 Wildcat was evaluated in single-row, two-replicate, two-location yield trials and four-row, four-replicate, four-location yield trials, respectively.

Performance and Adaptation

Wildcat was tested between 1982 and 1984 as PT329 in the Parkland Wheat Cooperative Tests (Table 1). Wildcat yielded 4% less and matured 4.1 d earlier than the Canada Western Extra Strong Red Spring Wheat cultivar, Glenlea. Wildcat yielded 10% more than the Canada Western Red Spring (CWRS) control cultivar, Neepawa (Campbell 1970), with similar maturity. Wildcat has shorter straw than Glenlea and Neepawa, with significantly lower lodging scores than either. Wildcat has large kernels similar to Glenlea, and lower test weight than both Glenlea and Neepawa. Milling performance and end-use quality characteristics of Wildcat are similar to Glenlea. Wildcat has a higher protein level than Glenlea.

Other Characteristics

GROWTH HABIT. Spring.

COLEOPTILE COLOR. Green.

SHATTERING TOLERANCE. Good.

CULM. Approximately 6 cm shorter than Neepawa and 12 cm shorter than Glenlea, hollow.

Spike Characteristics

SHAPE. Strap or oblong, medium density, medium length, awned.

ATTITUDE. Erect.

Table 1. Agronomic performance of Wildcat spring wheat and check cultivars in the Parkland wheat Cooperative Tests 1982-1984[z]

	Yield (t ha^{-1})	Ripe (d)	Head (d)	Height (cm)	Lodg (1-9)[y]	Test wt. (kg hL^{-1})	Kernel wt. (mg)
Neepawa	3.50	103.4	58.2	90.8	2.9	75.0	32.0
Glenlea	4.01	107.4	61.0	96.1	3.1	74.3	40.8
Wildcat (PT329)	3.87	103.3	55.6	84.3	2.0	73.6	37.8
LSD 0.05	0.14	1.6	2.2	3.1	0.7	0.4	2.3
No. of station years	28	19	14	31	8	31	31

[z]Data from western locations where the site coefficient of variation was less than or equal to 15% for yield. Locations included were Fort Vermilion, Beaverlodge, Ellerslie, Kelsey, Olds, Vermilion, Lacombe, Acme, (Alberta); Kernen, Loon Lake, Melfort, North Battleford, (Saskatchewan); Dauphin, (Manitoba), although not all sites were planted each year. Cultivar means at each site were used for statistical analysis, without partitioning for year effects, thus each station year of data was treated as one replicated.
[y]1 = no lodging; 9 = completely lodged.

GLUMES. Narrow, long, white, glabrous; shoulders narrow, rounded; beaks acute with slight basal folds.

Kernel Characteristics

COLOR. Medium red.

TEXTURE. Hard.

SHAPE. Narrow to medium width, ovate to elliptical.

GERM. Small, oval.

CREASE. Medium width, shallow.

CHEEKS. Rounded.

BRUSH. Small with short hairs.

GRADE ELIGIBILITY. Canada Western Extra Stong Red Spring Wheat.

Disease Reaction

Moderately resistant to prevalent races of stem rust (caused by *Puccinia graminis* Pers. f. sp. *tritici* Eriks. & E. Henn); moderately resistant to prevalent races of leaf rust (caused by *P. recondita* Rob. ex. Desm. f. sp. *tritici*); resistant to prevalent races of loose smut (caused by *Ustilago tritici* (Pers.) Rostr); moderately resistant to moderately susceptible to common root rot (caused primarily by *Bipolaris sorokiniana* (Sacc. in Sorok.) Shoem. and *Fusarium* spp.); susceptible to prevalent races of bunt (caused by *Tilletia foetida (Wallr.) Liro and T. caries* Tul.).

Maintenance and Distribution of Pedigree Seed

Breeder seed is maintained by the Seed Section, Agriculture Canada Experimental Farm, Indian Head, Saskatchewan, Canada S0G 2K0. Distribution and multiplication of pedigreed seed stocks is handled by SeCan Association, 200-57 Auriga Drive, Nepean, Ontario, Canada K2E 8B2.

Evans, L. E., Shebeski, L. H., McGinnis, R. C., Briggs, K. G. and Zuzens, D. 1972. Glenlea Red Spring Wheat. Can. J. Plant Sci. **52**: 1081-1082.

Campbell, A. B. 1970. Neepawa Hard Red Spring Wheat. Can. J. Plant Sci. **50**: 752-753.