

Banjo spring triticale

Scarath, R., Brûlé-Babel, A. and Larter, E. 1992. **Banjo spring triticale**. *Can. J. Plant Sci.* **72**: 841-842. Banjo is a spring triticale (\times *Triticosecale*) with high yield, good grain quality and good resistance to leaf rust, stem rust, common bunt and root rot diseases. Banjo is widely adapted to the western Canadian cereal-growing area.

Key words: Triticale (spring), \times *Triticosecale*, cultivar description

Scarath, R., Brûlé-Babel, A. et Larter, E. 1992. **Triticale de printemps Banjo**. *Can. J. Plant Sci.* **72**: 841-842. Banjo est un cultivar de triticale de printemps (\times *Triticosecale*) possédant un rendement élevé, un grain de bonne qualité et une bonne résistance aux rouilles des feuilles et de la tige ainsi qu'à la carie et aux piétins. Il est largement adapté à la zone de céréaliculture de l'ouest canadien.

Mots clés: Triticale (printemps), \times *Triticosecale*, descriptions de cultivar

Banjo is a high-yielding spring triticale (\times *Triticosecale*) with good grain quality suitable for the food or feed market. Banjo was developed at the Department of Plant Science, University of Manitoba, Winnipeg, Manitoba. It was issued registration no. 3424 on 16 Apr. 1991 by the Variety Registration Office, Seed Division, Food Production and Inspection Branch, Agriculture Canada, Ottawa, Ontario.

Pedigree and Breeding Methods

The cultivar Banjo (UM8230-170D) is a selection from a cross between the lines Merino's' and Juanillo, made at the International Maize and Wheat Improvement Centre (CIMMYT) in Mexico. The F₃ lines from the cross, designated as Merino's'/Juanillo B2736, were sent to the Department of Plant Science, University of Manitoba, Winnipeg, MB in 1982 as part of the CIMMYT 13th International Triticale Selection Nursery (13th ITSN). The F₃ lines were grown in the 1982 Winnipeg nursery and selected for disease resistance and grain characteristics. The selected row 170 was entered in yield trials in 1983. Five single-plant selections from this row were sent as headrows to the 1983/1984 winter nursery in Brawley, California,

designated as 170A-E. The headrow UM8230-170D was selected for grain characteristics and for yield in the 1984 Elite Yield Trials. Breeder seed was produced from the single headrow in the 1983/1984 winter nursery.

Performance and Adaptation

In 41 SY of data in the Western Co-operative trials over 4 yr, Banjo outyielded the triticale cultivars Frank, Wapiti and Carman by 2, 6 and 19%, respectively, and the CPS wheat HY320/HY368 by 21% (Table 1). Banjo was equal in maturity to the triticale varieties Frank, Wapiti and Carman and 6 d later in maturity than HY320/HY368 (Table 2). Its resistance to lodging was slightly better than triticale varieties Frank, Wapiti and Carman.

Other Characteristics

SPIKES. Mid-dense, semi-nodding attitude; high number of spikelets per spike; intermediate number of seeds per spikelet; pubescent, curved culm neck; awns medium length, appressed to spike; yellow glumes, medium length, with square shoulders and narrow acuminate beaks.

KERNELS. Very large, amber, hard texture; very long and narrow; elliptical with angular cheeks; brush hairs medium long, medium

Table 1. Grain yield of Banjo and check cultivars, Triticale Co-operative Trials (1986-1989)

Cultivar or line	Yield '00 kg ha ⁻¹				Mean
	Zone 1 ^z	Zone 2 ^y	Zone 3 ^x	Zone 4 ^w	
HY320/HY368	43.0	32.4	48.5	61.7	42.8
Carman	49.8	29.6	47.0	64.2	43.4
Wapiti	56.0	33.9	49.5	73.8	48.8
Frank	58.1	35.7	49.4	77.8	50.7
Banjo	63.1	51.8	51.0	75.6	51.9
SE ^u	0.77	0.28	0.83	0.80	0.35
Tests	10	17	7	7	41

^zTests grown at Glenlea, Portage la Prairie and Winnipeg, Manitoba.

^yTests grown at Goodale, Indian Head, Regina, Stewart Valley and Swift Current, Saskatchewan.

^xTests grown at Lacombe and Lethbridge, Alberta.

^wTests grown at Bow Island and Brooks, Alberta.

^uSE derived from cultivar-by-test interaction mean square.

Table 2. Agronomic characteristics of Banjo and check cultivars, Triticale Co-operative Trials (1986-1989)

Cultivar	Maturity (d)	Height (cm)	Lodging ^z (1-9)	Test weight kg hL ⁻¹	1000- kernel weight
HY320/HY368	104	70	2.1	76.2	36.6
Carman	110	94	2.1	64.1	42.9
Wapiti	109	92	2.4	67.0	42.5
Frank	110	88	2.0	68.4	37.9
Banjo	110	98	1.7	68.6	44.6
SE ^y	0.18	0.31	0.07	0.09	0.15
Tests	38	41	20	41	41

^z1 = no lodging, 9 = completely lodged.

^ySE derived from cultivar-by-test interaction mean square.

brush area; crease medium width and depth; large, oval germ.

STRAW. Medium anthocyanin coloration at maturity, partly solid; thick culm neck; intermediate number of tillers.

TEST WEIGHT AND 1000-KERNEL WEIGHT. In test weight Banjo is equal to or higher than the triticale check cultivars in the Co-operative Trials and has the highest 1000-kernel weight (Table 1).

DISEASE REACTION. Banjo has good resistance to leaf rust (*Puccinia triticina*), stem rust (*Puccinia graminis tritici*), common bunt (*Tilletia caries* and *T. foetida*) and root rot (*Helminthosporium sativum* and *Fusarium* spp.).

QUALITY. Grinding time, flour yield, mixing development time and falling number of Banjo are equal to or better than those of the check

cultivar Carman. The protein content of Banjo is lower than that of the check cultivar Carman.

Maintenance and Distribution of Pedigreed Seed

Breeder seed will be maintained by the Department of Plant Science, University of Manitoba, Winnipeg, Manitoba. The multiplication and distribution of other classes of pedigreed seed will be handled by Value Added Seeds, Box 1135, Grenfell, Saskatchewan.

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