

## COLUMBUS HARD RED SPRING WHEAT

Columbus is a late maturing cultivar developed by the backcross method from Neepawa. It is resistant to harvest-time sprouting and has a low level of alpha-amylase.

Columbus est un cultivar de blé vitreux roux de printemps à maturation tardive créé par rétrocroisement à partir de Neepawa. Il résiste à la germination prématurée et possède une faible teneur en  $\alpha$ -amylase.

*Triticum aestivum* L. 'Columbus' was developed at the Agriculture Canada Research Station in Winnipeg. It was accessioned as RL 4352 in 1976, tested as BW 37 from 1977 to 1979, and licensed (No. 2009) in March 1980. Its outstanding attribute is its resistance to harvest-time sprouting, which is reflected in its low level of alpha-amylase even when harvested under adverse weather conditions. It is adapted to areas of the prairies where early maturity is not a prime consideration.

### Origin

Columbus was produced by the backcross method from the cross Neepawa\*6/RL 4137, with selection for resistance to sprouting. The first cross was made in 1969 and the last in 1971.

RL 4137 is a red-seeded cultivar with outstanding resistance to sprouting and weathering. It was also developed at Winnipeg, from the cross Frontana/3/McMurachy/Exchange//2\*Redman/4/Thatcher\*6/Kenya Farmer. RL 4137 was accessioned in 1960, and tested as CT 261

from 1961 to 1964 and later as BW 34 from 1976 to 1977. It is accessioned in the U.S.A. as CI 13777.

Data on the agronomic performance of Columbus are given in Tables 1 and 2.

### Description

**SPIKE.** Oblong, mid-dense, erect, short, medium green, slight waxy bloom, white at maturity. Glumes short, mid-wide, glabrous, white; shoulders mid-wide, oblique; beaks narrow, acute; basal folds slight. Apical awnlets.

**KERNEL.** Medium red, hard, mid-size to small, mid-long, mid-wide to wide, oval to ovate; brush area mid-size to small, with short to mid-long hairs; germ mid-size, round to oval, crease mid-wide, mid-deep; cheeks rounded to slightly angular.

**DISEASE REACTION.** Resistant to bunt and leaf rust; moderately resistant to stem rust and loose smut; moderately susceptible to common root rot.

Table 1. Three-year averages from the Report on the Central Bread Wheat Co-operative Tests 1979

Trait	No. of tests	Neepawa	Sinton	Benito	Columbus	Unit
Yield	28	3210	3210	3140	3310	kg/ha
Maturity	24	97.3	99.1	96.9	100.4	days
Lodging	16	1.9	1.7	2.5	1.7	13-9 scale
Height	26	86	88	85	92	cm
Test mass	28	79.7	79.8	79.6	80.8	kg/hL
Seed mass	18	34.0	35.6	32.1	36.4	mg/seed

Table 2. Two-year averages from the Report on the Western Bread Wheat Co-operative Test 1979

Trait	No. of tests	Neepawa	Sinton	Chester	Columbus	Unit
Yield	16	2900	2670	2740	3040	kg/ha
Maturity	7	99	101	100	102	days
Height	13	78	77	78	82	cm
Test mass	12	79	79	79	79	kg/hL
Seed mass	12	31	33	32	33	mg/seed

SAWFLY REACTION. Susceptible.

QUALITY. Superior to Marquis.

Breeder Seed from 128 Breeder Lines will be maintained by the Seed Section of Agriculture Canada Research Station at Regina.

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