

CHESTER HARD RED SPRING WHEAT

Chester is a cultivar of hard red spring wheat (*Triticum aestivum* L.) developed at the Agriculture Canada Research Station, Lethbridge, Alberta. It is adapted to the Brown and Dark Brown soil zones of Alberta and Saskatchewan where its resistance to the wheat stem sawfly (*Cephus cinctus* Nort.) will be particularly valuable. The name was chosen to honor the late Mr. H. Chester, who was a Superintendent of the Experimental Station and later an Associate Director of the Research Station at Lethbridge.

Origin

Chester originated from the cross Renown*S-165*Rescue*Kendee*(Mida*Cadet) made at Lethbridge in 1960. The line designated 7743-151 was selected in 1967. It performed well in the Brown and Dark Brown soil zones of the prairies in tests conducted from 1969 to 1974. This cultivar was named Chester and License No. 1632 was issued for it in February 1976 by the Production and Marketing Branch of Agriculture Canada.

Performance

Chester is superior to the older sawfly-resistant cultivars Cypress, Rescue, and Chinook in yield, milling and baking quality, straw strength, and resistance to common root rot and bunt (Table 1). Chester is equal to the recently licensed cultivar Canuck in yield and sawfly resistance (Table 1) and has the added advantages of better baking quality, slightly shorter straw, slightly earlier maturity, resistance to bunt, and better resistance to stem rust.

Description

SPIKE. Fusiform, mid-long; apically awnleted; glumes mid-long, mid-wide to wide, glabrous, white; shoulders mid-wide,

square to slightly elevated; beaks short, mid-wide, obtuse.

KERNEL. Color, light to medium red; shape, mid-size to small, mid-long to short, mid-wide, ovate; germ, mid-size, round to oval; crease, mid-wide to wide, shallow to mid-deep; brush, small, mid-long to long; cheeks, slightly angular to rounded.

STRAW. Pithy under most conditions, mid-long, mid-strong.

MATURITY. Mid-season, similar to Neepawa.

SHATTERING. Resistant.

LODGING. Moderately resistant.

SAWFLY REACTION. Resistant.

DISEASE REACTION. Resistant to common root rot (*Cochliobolus sativus* (Ito and Kurib.) Drechsl. ex Dastur) and bunt (*Tilletia foetida* (Wallr.) Liro and *Tilletia caries* (DC.) Tul.), moderately resistant to stem rust (*Puccinia graminis* Pers. f. sp. *tritici* Eriks. and E. Henn.) and susceptible to leaf rust (*Puccinia recondita* Rob. ex. Desm. f. sp. *tritici*) and loose smut (*Ustilago tritici* (Pers.) Rostr.).

QUALITY. Superior in quality to Marquis except for amylograph viscosity: eligible for the top Canadian grades.

Seed Distribution and Maintenance

The Seed Section of the Agriculture Canada Research Station at Regina, Saskatchewan increased the seed of Chester in 1975 and distributed it to seed growers in 1976. Breeder seed will be maintained by the Agriculture Canada Research Station at Regina, Saskatchewan.

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Table 1. Comparative data for Chester, Canuck, Cypress, Manitou, and Neepawa cultivars in Western Bread Wheat Cooperative Tests†

Cultivar	Yield (q/ha)	Days to mature	Lodging (1-9)§	Test wt (kg/hl)	Wt per 1,000 kernels (g)	Ht (cm)	Root rot (%)	Bunt// (%)	Loose smut (%)	Stem rust¶ (% and reaction)	Sawfly cutting (%)
Chester‡	25.2	98.9	2.1	79.9	33.7	75	21	6	26	25M	11
Canuck	25.2	100.5	2.3	80.7	35.5	81	27	32	6	55MS	11
Cypress	23.3	99.4	2.6	81.7	31.5	79	57	27	33	39M	8
Manitou	24.9	98.5	1.9	79.9	31.0	75	20	23	8	13M	78
Neepawa	26.2	98.4	1.6	80.2	33.0	75	13	24	3	12M	74
Chester‡	24.4	99.9	1.9	77.4	32.8	77	20	-	-	23M	22
Canuck	24.2	101.4	2.2	78.2	35.0	83	28	-	-	63MS	19
Manitou	24.1	99.2	1.9	77.2	29.9	77	21	-	-	8M	72
Neepawa	25.3	98.6	1.7	78.2	32.2	76	17	-	-	8M	67

†Tests on Brown and Dark Brown soils of Alberta and Saskatchewan.

‡Tested under the designations of CT 786 and BW 500.

§1, standing; 9, completely lodged.

//Data for 1972 only.

¶MS = moderately susceptible; M = moderate reaction.