CULTIVAR DESCRIPTION

Snowhite475 hard white spring wheat

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DePauw, R. M., Knox, R. E., Clarke, J. M., Clarke, F. R., Fernandez, M. R., Salmon, D. and McCaig, T. N. 2007. **Snowhite475 hard white spring wheat.** Can. J. Plant Sci. **87**: 895–900. In 2001–2003, cooperative testing Snowhite475 hard white spring wheat (*Triticum aestivum* L.) yielded grain in the range of the checks and was 3.4 and 3.3 d earlier maturing than AC Vista and AC Crystal, respectively. Snowhite475 had heavier test weight than AC Vista and larger seed size than AC Crystal and AC2000. Snowhite475 had higher protein content than the checks except 5701PR. It yielded more flour and had higher Agtron flour colour values than AC Crystal and AC Vista. Snowhite475 had intermediate kernel hardness, combined with yellow alkaline and white salted noodle colour and textural attributes better than AC Crystal, AC2000 and Snowbird.

Key words: *Triticum aestivum* L., cultivar description, grain yield, maturity, milling properties, noodles

DePauw, R. M., Knox, R. E., Clarke, J. M., Clarke, F. R., Fernandez, M. R., Salmon, D. et McCaig, T. N. 2007. **Le blé dur blanc de printemps Snowhite475**. Can. J. Plant Sci. **87**: 895–900. Les essais coopératifs sur le blé dur blanc Snowhite475 (*Triticum aestivum* L.) effectués de 2001 à 2203 ont révélé un rendement grainier similaire à celui des variétés témoins. Snowhite475 parvient à maturité 3,4 et 3,3 jours plus tôt que AC Vista et AC Crystal, respectivement. Le poids spécifique de Snowhite475 dépasse celui de AC Vista et son grain est plus gros que celui de AC Crystal et de AC2000. Le grain de Snowhite475 est plus riche en protéines que celui des variétés témoin, outre 5701PR. Il donne plus de farine et la luminosité de couleur de sa farine selon l'indice Agtron est supérieure à celle de AC Crystal et de AC Vista. Snowhite475 a un grain de dureté intermédiaire et de meilleurs attributs que AC Crystal, AC2000 et Snowbird pour ce qui est de la couleur des nouilles jaunes alcalines et des nouilles blanches salées ainsi que leur texture.

Mots clés: *Triticum aestivum* L., description de cultivar, rendement grainier, précocité, propriétés à la mouture, nouilles

Snowhite475 hard white spring wheat (*Triticum aestivum* L.) was developed at the Semiarid Prairie Agricultural Research Centre (SPARC), Agriculture and Agri-Food Canada (AAFC), Swift Current, SK. It received interim registration No. 318 from the Variety Registration Office, Plant Production Division, Canadian Food Inspection Agency on 2006 Apr. 28.

Pedigree and Breeding Method

Snowhite475 derives from the cross HY398/AC Karma//AC Vista made in 1995 at SPARC, AAFC, Swift Current, SK. All three parents have semidwarf stature, high grain yield and white seed coat colour. HY398 has intermediate resistance to common bunt [*Tilletia laevis* Kuhn in Rabenh. and *T. caries* (DC.) Tul.& C. Tul.], a low level of polyphenol oxidase in the grain, and ovate and elliptically shaped kernels (DePauw et al. 1993). AC Karma has high flour yield, low flour ash, bright flour colour, and medium weak gluten properties (Knox et al. 1995). AC Vista has stronger gluten than AC Karma and a very hard kernel texture (DePauw et al. 1998). Both AC Karma and AC Vista have very good bunt resistance based on the gene Bt10. Six hundred forty-nine top-cross F_1 seeds were planted as individual plants in an out-of-season nursery near Brawley, California, USA. The F_2 seed, suspected of exposure to karnal bunt (*Tilletia indica* Mitra) in California, was grown under quarantine conditions near Lethbridge, AB. The F_2 seedlings were inoculated with a spore mixture of leaf rust (*Puccinia triticina* Eriks.) and stem rust (*P. graminis* Pers.:Pers. f.sp. *tritici* Eriks. & E. Henn.). Plants exhibiting a resistant reaction to both rusts were transplanted and grown out as individual plants in a greenhouse near Swift Current, SK. The F_3 seed was inoculated with prevalent common bunt races L1, L16, T1, T6, T13 and T19 (Hoffmann and Metzger 1976). About 9000 F_3 seeds were planted 13 cm apart within a row and 25 cm between rows in a leaf and stem rust epiphytotic nursery. The leaf rust races used were representative of those found the previous year (McCallum and Seto-Goh 2003). Stem rust races used were: QTHST (C25), RHTSK (C20), RKQSR (C63), RTHJT (C57), TMRTK (C10), and TPMKR (C53) (Roelfs and Martens 1988; Fetch 2003). Three hundred and five F_3 plants were selected on the basis of resistance to diseases and other plant traits, of which 48 were discarded based on high levels of kernel diseases and inappropriate kernel shape for the Canada Prairie Spring wheat

market class. The 257 F_4 progeny were grown as head rows to inbreed and multiply seed in an out-of-season nursery near Lincoln, New Zealand. In the F_5 generation, 131 lines were grown in a two replicate trial near Swift Current, SK, and un-replicated trials near Indian Head, SK, and Lethbridge, AB. Time to maturity, straw strength, plant height, and grain yield were measured. Reactions to leaf and stem rust were assessed in an epiphytotic nursery near Glenlea, MB, using the races as indicated above. A subsample of seed from the yield trial composites was used to measure grain quality and kernel characteristics. A single 3 m row of each F_5 line was also grown near Lacombe, AB. Thirty-six F_6 families, each at 10 selections per family, and a subset of eight families with five additional selections from the Lacombe nursery were grown in an out-of-season nursery near Irwell, New Zealand. In the F_7 generation, 186 lines were evaluated in trials similar to the F_5 generation near Indian Head, Swift Current, and Lethbridge. Another 18 lines were grown out in a replicated trial near Swift Current, and a single replication at Regina, SK, Lethbridge and Lacombe. Response to leaf and stem rust and end-use suitability was evaluated in the same manner as for the F_5. An experimental line, 9525-FM15, which met all of the selection criteria at each generation of selection was identified. The designations are as follows: "9525" is the cross name, "FM" is an alpha character assigned sequentially to the 257 F_3-derived F_4 lines, "15" is a sequential selection number assigned to the F_5-derived F_6 line within the family "FM".

The experimental line 9525-FM15 was evaluated in the 2000 High Yield Wheat "A" test at four locations, and as HY475 in the High Yield Wheat Cooperative registration test from 2001 to 2003 at 15 sites each year. The check cultivars in the High Yield Wheat Cooperative test for the 3-yr period were AC Vista, AC Crystal (Fernandez et al. 1998), and AC2000 (DePauw et al. 2002). AC Barrie was also a check cultivar in 2001 (McCaig et al. 1996). 5701PR was a check cultivar in 2002 and 2003, and Snowbird was a check cultivar in 2003 (Humphreys et al. 2007). The variables measured and the protocols followed in the High Yield Wheat Cooperative test have been described by Graf and Fox (2000). The PROC MIXED procedure of SAS (SAS Institute, Inc. 1999) was used to analyze the data each year and to perform combined analyses over years, using a model with environments and replications considered random and genotypes considered fixed.

During the High Yield Wheat Cooperative testing period, leaf and stem rust seedling infection types were assessed by

Table 1. Mean grain yield of Snowhite475 compared with the check cultivars, based on data from the High Yield Wheat Cooperative test from 2001–2003

	Zone 1[z]			Zone 2			Zone 3			Zone 1	Zone 2	Zone 3	Mean
Cultivar	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001–2003			
AC Barrie[y]	3231[x]			2911			3987						
AC Crystal	3185	3345	4810	3261	3421	2310	4749	3436	5361	3784	2916	4464	3592
AC Vista	3599	4170	5356	3376	3645	2546	4585	3017	5548	4370	3243	4345	3892
AC2000	3367	4084	4904	3357	3424	2307	4916	3859	5685	4122	2960	4797	3805
5701PR[w]		3951	4834		3183	2004		3123	5542				
Snowbird[v]			4593			2187			4815				
Snowhite475	3785	3886	4982	3081	3538	2369	4217	3137	5109	4213	2904	4137	3647
LSD[u]	436	653	411	315	556	213	501	561	434	528	347	474	275
No. tests	5	5	5	6	6	6	3	4	4	15	18	11	44

[z]Zone 1, near Brandon, Glenlea, Rosebank, Souris, MB., and Indian Head, SK; Zone 2, near Irricana, AB, Kernen, Regina, Scott, Stewart Valley, Swift Current, SK; Zone 3, near Beaverlodge, Lacombe, AB., and Lake Lenore and Melfort, SK.
[y]AC Barrie grown as a check in 2001 only.
[x]All means are weighted by the number of tests within a zone.
[w]5701PR grown as a check in 2002 and 2003.
[v]Snowbird grown as a check in 2003 only.
[u]Least significant difference, $P \leq 0.05$, includes variation from the genotype by environment interaction.

Table 2 Means for agronomic performance traits of Snowhite475 compared with the check cultivars, based on data from the High Yield Wheat Cooperative test (2001–2003)

	Maturity (d)		Height (cm)		Lodging[z] (1 to 9)		Test weight (kg hL^{-1})		Seed size (mg)	
Cultivar	2002–2003	2001–2003	2002–2003	2001–2003	2002–2003	2001–2003	2002–2003	2001–2003	2002–2003	2001–2003
AC Crystal	98.5	98.8	72.1	73.2	2.1	2.8	77.8	78.4	37.5	38.0
AC Vista	95.7	96.7	73.8	75.0	2.4	3.0	76.3	76.8	39.9	39.9
AC2000	97.9	98.9	72.4	73.7	1.6	2.3	77.2	77.9	35.8	36.6
5701PR	95.8		70.9		1.8		76.4		38.2	
Snowhite475	94.6	95.5	72.1	73.5	2.1	2.5	77.9	78.5	39.6	40.0
LSD	1.3	1.0	2.1	1.7	0.4	0.4	0.9	0.6	1.5	1.1
No. tests	26	40	29	41	7	10	31	44	31	44

[z]Straw strength rated on a scale of 1 indicating that all plants in plot are erect to 9 indicating that all plants in a plot are lying horizontal.
[y]Least significant difference, $P \leq 0.05$, includes variation from the genotype by environment interaction.

Table 3. Disease reactions of Snowhite475 and check cultivars, based on data from High Yield Wheat Cooperative test (2001–2003)

	Leaf rust[z]			Stem rust[z]		
Cultivar	2001	2002	2003	2001	2002	2003
AC Crystal	35MRMS	60MS	40 RMS	2RMR	20MR	10 RMR
AC Vista	45MRMS	80S	33 RMS	3RMR	5RMR	3 R
AC2000	45MRMS	70S	48 MSS	3RMR	20MRMS	10 RMR
5701PR		TR R	0 R		1R	tr R
Snowbird[y]			13 RMR			1R
Snowhite475	45MRMS	60MS	37 MRMS	10MRR	15MR	5 RMR

	Common bunt[z]			Loose smut[z]		
	2001	2002[x]	2003	2001	2002	2003
AC Crystal	1 R	0 R	0 VR		13 MR	71MS
AC Vista	2 R	0 R	0 VR		2 R	78 S
AC2000	0 R	0 R	0 VR	0 R	38 I	41 I
5701PR		0 R	2 R		0 R	40 I
Snowbird			8 I			13 R
Snowhite475	1 R	0 R	1 VR		40 I	9 R

	Fusarium head blight									
	2001		2002				2003			
	Glenlea		Glenlea		Carman		Glenlea		Carman	Ottawa
	Index[w]	Reac[v]	Index	Reac	Index	Reac	Index	Reac	Index	Index
AC Crystal	64	S	45	I	39	S	65	S	72	68
AC Vista	38	MS	77	S	40	S	52	S	41	75
AC2000	48	S	50	I	15	I	53	S	40	52
5701PR			69	S	56	S	57	S	46	60
Snowbird							31	MS	19	30
Snowhite475	28	I	86	S	16	I	62	S	71	19

	Leaf Spots[u]					
	2001			2002		
Identity	Regina[t]	*P. nodorum*	*M. graminicola*	Indian Head[s]	Swift Current[r]	*C. sativus*[q]
AC Crystal	7.3	10.9	10.3	9.8	8.3	–
AC Vista	7.0	10.0	11.0	9.5	8.0	41.7
AC2000	7.5	10.0	10.3	9.8	8.8	45.8
5701PR	–	–	–	9.5	7.5	20.2
Snowbird	–	–	–	–	–	–
Snowhite475	7.8	10.0	10.0	11.0	8.0	36.1

[z]Percent infection and type of reaction: Tr, trace; VR, very resistant; R, resistant; MR, moderately resistant; I, intermediate resistant; MS, moderately susceptible; S, susceptible.
[y]Snowbird included as a check in 2003 only.
[x]Due to low infection levels bunt ratings in 2002 may not be indicative of reaction.
[w]FHB disease index = (%infected spikelets × % infected spikes)/100.
[v]Response category: I, intermediate resistant; MS, moderately susceptible; S, susceptible.
[u]McFadden scale; 5 = R; 6 = MR; 7 = I; 8–9 = MS; 10–11 = S.
[t]Percent isolation of the main leaf spotting pathogens: *Septoria avenae* f. sp. *triticea* 45%, *Pyrenophora tritici-repentis* 28%, *M. graminicola* 17%, *P. nodorum* 5%, *Cochliobolus sativus* 4%.
[s]Percent isolation of the main leaf spotting pathogens: *P. tritici-repentis* 62%, *P. nodorum* 19%, *M. graminicola* 3%, *C. sativus* 16%.
[r]Percent isolation of the main leaf spotting pathogens: *P. tritici-repentis* 38%, *P. nodorum 57%*, *M. graminicola* 5%, *C. sativus* 5%.
[q]*C. sativus* composite rating: percent of disease lesion coverage on flag and middle canopy leaves. The single value derives from a weighted score of 60%*(flag leaf coverage) plus 40%*(mid canopy coverage).

pathologists at the Cereal Research Centre, AAFC, Winnipeg, MB. Stem rust races used each year were: QTHST (C25), RHTSK (C20), RKQSR (C63), RTHJT (C57), TMRTK (C10), and TPMKR (C53) (Roelfs and Martens 1988; Fetch 2003). Leaf rust races used each year were: MBDS (12-3), MBRJ (128-1), MGBJ (74-2), and TJBJ (77-2) (McCallum and Seto-Goh 2003). Field evaluations of leaf and stem rust reactions, using leaf rust races representative of those found the previous year and the same stem rust races as for the seedling tests, were measured in an epiphytotic nursery near Glenlea, MB. Reaction to fusarium head blight [caused by *Fusarium graminearum* Schwabe (teleomorph *Gibberella zeae* (Schwein. Petch)] was assessed in artificially inoculated field tests conducted near Glenlea and Carman, MB (Yang et al. 2005). To determine the response to loose smut [*Ustilago tritici* (Pers.) Rostr.], a mixture of the prevalent races T2, T9, T10 and T39 (Nielsen 1987) was injected into florets at anthesis of plants grown in the field and seed from the inoculated plants was grown in a greenhouse to determine disease reaction. To determine the response to common bunt, a mixture of the prevalent races L1, L16, T1, T6, T13 and T19 was used to inoculate the seed

Table 4. Means of end-use suitability[z] traits of Snowhite475 and check-cultivars, based on High Yield Wheat Wheat Co-operative test (2001–2003)

	Wheat protein (%)		Flour protein (%)		Flour yield (%)		Flour colour Agtron	
Cultivar	2002–2003	2001–2003	2002–2003	2001–2003	2002–2003	2001–2003	2002–2003	2001–2003
AC Crystal	13.1	13.0	12.4	12.2	74.8	75.1	74.8	76.3
AC Vista	13.3	13.3	12.2	12.2	73.8	74.3	76.4	76.6
AC2000	13.1	13.0	12.3	12.2	75.2	75.8	81.5	82.8
5701PR[Y]	13.7	NA	13.0	NA	75.8	NA	80.0	NA
Snowhite475	13.6	13.6	12.8	12.8	75.0	75.2	82.5	82.8
Std. Dev.[x]	0.05	0.05	0.05	0.05	0.34	.034	0.9	0.9

	Flour ash (%)		Amylograph viscosity (BU)		Hagberg falling no. (s)		Starch damage (megazm)	
	2002–2003	2001–2003	2002–2003	2001–2003	2002–2003	2001–2003	2002–2003	2001–2003
AC Crystal	0.42	0.43	660	712	363	378	6.5	6.5
AC Vista	0.43	0.43	600	652	405	412	9.1	9.2
AC2000	0.43	0.44	520	603	340	367	7.4	7.3
5701PR	0.39	NA	568	NA	325	NA	7.0	NA
Snowhite475	0.42	0.43	503	603	343	368	7.9	8.0
Std. Dev.	0.005	0.005	5	5	15	15	0.08	0.08

	Farinograph					
	Absorption (%)		DDT[w] (min.)		Stability (min.)	
	2002–2003	2001–2003	2002–2003	2001–2003	2002–2003	2001–2003
AC Crystal	62.7	62.5	6.6	6.7	8.8	8.7
AC Vista	70.3	70.5	5.5	5.5	6.3	6.2
AC2000	66.0	65.8	5.1	5.1	7.5	7.3
5701PR	63.9	NA	NA	NA	25.5	NA
Snowhite475	67.8	67.9	5.9	6.0	8.3	8.0
Std. Dev.	0.17	0.17	0.4	0.4	1.4	1.4

	Canadian short process (150 ppm ascorbic acid)					
	Loaf volume (cc)		Mixing time (min.)		Absorption (%)	
	2002–2003	2001–2003	2002–2003	2001–2003	2002–2003	2001–2003
AC Crystal	878	868	2.9	2.9	64.5	64.3
AC Vista	778	783	2.4	2.5	66.0	66.0
AC2000	813	813	2.4	2.3	64.0	64.0
5701PR	1005	NA	3.1	NA	65.5	NA
Snowhite475	825	828	2.0	2.1	65.0	65.0
Std. Dev.	45	45	0.3	0.3	0	0

[z]American Association of Cereal Chemists methods were followed by the Grain Research Laboratory, Canadian Grain Commission for determining the various end-use suitability traits on a composite of 6 to 10 locations each year.
[y]5701PR was included as a check for end-use suitability in 2002 and 2003 only.
[x]Std. Dev. Is the standard deviation based on repeated testing of Allis mill check samples, and standard bake flour sample with replicate tests carried out over an extended period of time each season, provided by GRL, CGC.
[w]DDT is the Farinograph dough development time.

planted in mid-April of each year near Lethbridge. Response to leaf spots [caused by *Pyrenophora tritici-repentis* (Died.) Drechs., *Phaeosphaeria nodorum* (E. Muller) Hedjaroude, *Mycosphaerella graminicola* (Fuckel) J. Schrot. in Cohn (anamorph *Septoria tritici* Roberge in Desmaz.), and *Cochliobolus sativus* (Ito & Kuribayashi) Drechs. ex Dastur] was determined by scoring infection type and leaf area infected on naturally inoculated plots grown near Swift Current, SK, following procedures described by Fernandez et al. (1996).

End-use suitability was determined on a composite sample made up of unequal quantities from those sites that met the top grades for the market class, based on the check cultivars. The quantity of grain from each site was adjusted such that the composite had a protein concentration deemed to be representative of the spring wheat crop. All end-use suitability analyses were performed at the Grain Research Laboratory, Canadian Grain Commission following protocols of the American Association of Cereal Chemists. Polyphenol oxidase activity was measured using catechol as a substrate (Hatcher and Kruger 1993). Texture measurements on cooked noodles were measured using a TA-ST2i instrument (Oh et al. 1983; Kruger et al. 1994). Determination of kernel attributes and eligibility to meet grades of the wheat market class was done by the Inspection Division, Canadian Grain Commission.

Performance:

Based on 44 replicated trials over 3 yr (2001–2003), grain yield of Snowhite475 was within the range of the checks (Table 1). In 2001, it yielded significantly ($P \leq 0.05$) more grain than AC Barrie and AC Crystal in Zone 1.

Table 5. Attributes of kanusi and white salted noodles made from flour of Snowhite475 and check-cultivars, based on High Yield Wheat Wheat Co-operative test (2003)

	Raw yellow alkaline noodle colour[z]						Cooked noodle colour		
Cultivar	L*2h	a*2h	b*2h	L*24h	a*24h	b*24h	*L**	*a**	*b**
AC Crystal	77.4	–0.73	25.5	70.4	–0.15	26.0	69.8	–1.49	27.5
AC Vista	81.1	–1.01	27.1	74.7	–0.62	27.1	70.4	–1.59	30.6
AC 2000	80.1	–0.44	29.7	73.9	0.19	29.8	71.5	–1.89	30.7
5701PR	78.3	–0.68	28.0	71.5	–0.04	27.8	71.3	–1.65	29.1
Snowbird	78.9	–0.18	27.7	72.2	0.30	27.9	71.5	–1.98	25.8
Snowhite475	80.8	–0.62	29.9	74.1	–0.29	29.0	72.0	–1.92	27.3
Std. Dev.									
	Raw white salted noodle colour						Cooked noodle colour		
	L*2h	a*2h	b*2h	L*24h	a*24h	b*24h	*L**	*a**	*b**
AC Crystal	80.6	2.49	22.6	73.7	2.97	23.0	75.7	0.79	18.5
AC Vista	82.6	2.20	21.9	75.5	2.73	23.6	77.9	0.50	19.8
AC 2000	81.0	2.47	23.7	75.8	3.00	25.4	77.9	0.62	20.8
5701PR	81.3	2.39	23.5	73.4	2.36	23.2	77.8	0.57	19.9
Snowbird	80.7	2.42	21.8	74.0	2.87	23.4	78.5	0.44	18.5
Snowhite475	82.2	2.34	24.3	75.8	2.83	24.8	78.6	0.46	20.4
Std. Dev.									
			Yellow alkaline noodle texture[y]				White salted noodle texture			
	Flour protein	PPO[x]	specks 24h	firmness (MCS)	chewiness (RTC)	recovery	specks 24h	firmness (MCS)	chewiness (RTC)	recovery
AC Crystal	12.1	14.9	112	30.5	28.1	32.5	95	23.8	21.3	25.4
AC Vista	11.8	33.8	16	26.0	25.3	30.1	12	22.9	20.7	24.8
AC 2000	11.8	7.0	25	29.2	26.8	32.9	17	23.1	21.9	27.5
5701PR	12.4	14.9	48	29.3	25.1	31.6	72	28.2	20.4	27.3
Snowbird	13.6	0.0	22	33.0	27.8	34.8	11	26.5	21.8	28.4
Snowhite475	12.4	3.6	58	29.0	26.8	32.7	27	25.4	22.9	28.1
Std. Dev.										

[z]Colour measurements were conducted using a Hunterlab Spectrocolourimeter and reported in reflectance CIE colour scale (CIE 1986).
[y]Texture measurements using an TA-XT2i.
[x]Polyphenol oxidase.

Snowhite475 yielded significantly less than AC2000 in Zone 3 in all 3 yr, due to the responsiveness of AC2000 to the high grain yield conditions in Zone 3. Averaged over 3 yr, Snowhite475 matured significantly earlier than AC Crystal, AC Vista and AC2000 (Table 2). Snowhite475 was similar in plant height and straw strength to the checks but it had a significantly lower lodging score than AC Vista (2001–2003). Snowhite475 had significantly heavier test weight than AC2000 and AC Vista, and larger seed size than AC Crystal and AC2000.

Other Characteristics

SPIKES: Oblong to tapering, mid-dense, mid-long to long, inclined to erect, awned; glumes mid-wide to wide, mid-long to long, glabrous, white; glume shoulder primarily elevated to square with some strongly elevated, narrow to mid-wide; glume beak mid-long to short.

KERNEL: Color white; mid-large to large, long to mid-long; mid-wide, ovate to elliptical, cheeks rounded to angular; brush hairs mid-long; crease mid-wide, mid-deep; germ mid-size to small, ovate.

SHATTERING: Resistant to seed shelling due to wind.

DISEASE REACTION: Resistant to prevalent races of common bunt; moderately resistant to stem rust and loose smut, moderately susceptible to prevalent races of leaf rust and diseases causing leaf spots, and susceptible to fusarium head blight (Table 3).

END-USE SUITABILITY: Snowhite475 had higher protein content than the checks except 5701PR (Table 4). It yielded more flour and had higher Agtron flour colour values than AC Crystal and AC Vista. The starch damage and farinograph absorption of Snowhite475 was intermediate to AC Crystal and AC Vista. The gluten strength of Snowhite475 as measured by the farinograph was intermediate to AC Vista and AC2000 and 5701PR. Snowhite475 exhibited low polyphenol oxidase levels (Table 5). The raw yellow alkaline noodles made from Snowhite475, at initial time and 24 h after noodle preparation, had larger *L** and *b** values than AC Crystal, 5701PR, and Snowbird. The cooked yellow alkaline noodles made from Snowhite475 had higher *L** values than those for AC Crystal. Similarly, the raw white salted noodles made from Snowhite475, at initial time and 24 h after noodle preparation, had higher *L** and *b** values than those made from Snowbird, AC Crystal and 5701PR. The three textural attributes measured on the cooked white salted noodles were all higher than the checks.

Maintenance and Distribution of Pedigreed Seed

Snowhite475 consists of a composite of 102 Breeder Lines selected from F_5-derived F_9 random single plants grown out

in 144 3-m-long rows in isolation near Swift Current in 2002 and again as 15-m rows near Indian Head in 2003. Breeder Seed will be maintained by the Seed Increase Unit, Research Farm, Indian Head, Saskatchewan, Canada S0G 2K0. Application for Plant Breeders' Rights has been filed. The cultivar will be added to the OECD list of Cultivars. Snowhite475 has been released for distribution and multiplication to FarmPure Seeds, 418B McDonald Street, Regina, Saskatchewan, Canada S4N 6E1

This description of Snowhite475 is dedicated to the memory of Dr. R. S. Sadasivaiah who participated in obtaining research grants from the Alberta Agricultural Research Institute and for his role in the phenomics of this cultivar. Financial support from the Producer Check-off on wheat collected by the Canadian Wheat Board and administered by the Western Grains Research Foundation, SeCan Association and the Alberta Agricultural Research Institute is gratefully acknowledged. Appreciation is expressed to the following: B. Beres, D. Brown, S. Dueck, D. Green, S. Kibite, A. Olson, and C. Vera all with AAFC, C. Pozniak, University of Saskatchewan, K. McCallum, AgriPro, Rosebank, MB, and J. Anderson, Agricore United, Calgary, AB, for agronomic performance testing; N. Edwards, D. Hatcher and E. Lysenko, Grain Research Laboratory, Canadian Grain Commission, Winnipeg, MB, and J. S. Noll and D. Niziol, Cereal Research Centre, AAFC, Winnipeg, for end-use suitability analysis; N. Woodbeck, Inspection Division, Canadian Grain Commission for kernel attribute analysis; A. Brule-Babel, University of Manitoba, and J. Gilbert for assessing reaction to fusarium head blight and leaf spots; J.G. Menzies for determining reaction to loose smut; and T. Fetch and B. McCallum for assessing reaction to stem and leaf rust, all from the Cereal Research Centre, AAFC, Winnipeg; D.A Gaudet and T. Despins, Lethbridge Research Centre, AAFC, Lethbridge, AB, for assessing reaction to common bunt; D.T. Gehl, Research Farm, AAFC, Indian Head, SK, for production of Breeder Seed; and G. McClare, D. Dahlman, H.L. Campbell and M. Poppy, all from the SPARC, AAFC, Swift Current, SK, R.A. Ferguson, Research Farm, AAFC, Regina, SK, and O. Thompson, Research Farm, AAFC, Indian Head, SK, for their expert technical assistance in conducting and analyzing field trials, and to the staff at those locations listed in Table 1 which grew the High Yield Wheat Cooperative test.

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