



Hard Red Winter Wheat

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Varietal Trials Results, January 2007



Winter wheat varieties were compared in trial plots at Crookston, Lamberton, Roseau and St. Paul. A trial also was planted at Morris, but it suffered severe winterkill.

Wheat varieties are grown in replicated plots at each location. These

plots are handled so that the factors affecting yield and other characteristics are as nearly the same for all varieties at each location as is possible. These winter wheat trials are not designed for crop (species) comparisons, because the various crops are grown on different fields or with different management. The data should be used only to compare varieties within a table. Varieties are listed in order of heading.

Variety Selection Criteria

The success of a winter wheat variety depends largely on its ability to survive Minnesota winters. Research on the Canadian plains has shown that planting winter wheat in standing canola stubble using no-till methods can decrease winterkill considerably. Trapped snow provides additional protection that increases the odds that the

young seedlings will survive. While all winter wheat varieties should be considered susceptible to very susceptible to FHB, they head earlier than spring wheat varieties and have a better chance of escaping FHB damage.

Most winter wheat varieties are also susceptible to very susceptible to the leaf diseases other than the rusts. Use of fungicides to control these diseases and/or suppress FHB may be warranted.

Darrell, a 2006 South Dakota State University release, was added to the trial in 2005; its data are summarized in the accompanying tables. All varieties listed are standard hard red winter wheats with the exception of Wendy, which has white grain, and Infinity CL, which may be used as a component of the BASF Clearfield® Production System with Beyond® herbicide.

Table 1. Growth characteristics of winter wheat varieties, 2005-2006.

Variety	Origin ¹	PVP Status ²	Heading,			Lodging	Test Weight,		Protein % at		Rust	
			Days From	Height,	Winter		Hardness ⁴	Rating	Lb/Bu	12% Moisture	Resistance ⁵	Leaf
			Jan. 1 ³	Inches ³	Hardiness ⁴		2006	2-Year	2006	2-Year		
Wendy ⁶	2004 SDSU	PVP (94)	154	28	M	M Strg	61.7	60.2	12.9	12.9	MS	-
Arapahoe	1988 NE	PVP (94)	154	34	M	M Strg	60.0	60.0	13.0	12.9	MR	MR
Jagalene	2002 AgriPro	PVP (94)	155	29	M	Strong	59.9	55.5	13.1	13.0	S	MR
Infinity CL	2005 NE	PVP (94)	156	32	M	Strong	61.6	60.0	12.6	12.5	MR	-
Millenium	1999 NE	PVP (94)	156	34	M	Strong	61.3	60.8	13.1	13.0	MR	R
Roughrider	1975 NDSU	None	156	42	VH	Med.	62.3	60.9	13.3	13.2	S	R
Darrell	2006 SDSU	PVP (pending)	156	33	M	M Strg	60.6	57.1	13.2	13.0	MS	-
CDC Falcon	1998 CAN	PVP (94)	157	30	MH	Strong	61.3	59.2	12.7	12.7	MS	R
Jerry	2001 NDSU	None	157	38	MH	M Strg	61.4	60.4	13.4	13.2	MR	R
CDC Buteo	2001 CAN	None	157	37	MH	Strong	62.9	61.7	13.1	12.6	MS	-
Ransom	1998 NDSU	PVP (94)	158	36	MH	Med.	61.4	60.1	12.7	12.7	MR	MR
Seward	1987 NDSU	None	159	39	MH	Med.	60.0	60.0	12.1	12.1	S	MR
Mean			156	35			61.1	59.9	13.1	12.8		

¹ Abbreviations: CAN = Crop Development Centre, Saskatoon, Canada; NDSU = North Dakota State University; NE = Nebraska Agricultural Experiment Station; SDSU = South Dakota Agricultural Experiment Station.

² PVP = plant variety protection. When the letters are followed by (94), seed of that variety may not be sold by a grower to anyone without express permission of the variety's developer/owner. If the PVP designation is followed by (pending) consider that the variety has PVP (94) protection.

³ 2005 data.

⁴ Winterhardiness rating is a relative ranking that includes data from Minnesota, North Dakota, Nebraska and South Dakota: VH = very high, H = high, MH = moderately high, M = moderate.

⁵ R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible.

⁶ White wheat.

Table 2. Yield (percent of the mean) of winter wheat varieties, 2004-2006.

Variety	Crookston			Lamberton			Roseau			St Paul	State		
	2006	2-Year	3-Year	2006	2-Year	3-Year	2006	2-Year	3-Year	2006	2006	2-Year	3-Year
Wendy	84	95	-	78	61	-	107	105	-	114	98	94	-
Arapahoe	104	119	118	89	123	107	97	105	111	106	101	114	106
Jagalene	68	78	-	61	60	-	91	88	-	85	78	77	-
Infinity CL	84	108	-	121	141	-	97	105	-	94	101	115	-
Millenium	89	106	105	114	129	122	111	112	116	86	102	116	113
Roughrider	97	91	90	92	85	90	89	84	85	95	95	89	92
Darrell	91	99	-	98	85	-	110	108	-	112	105	92	-
CDC Falcon	105	108	106	91	105	110	112	113	117	119	109	111	110
Jerry	88	107	110	133	147	137	102	104	109	114	112	120	116
CDC Buteo	104	99	104	132	104	108	101	99	101	85	108	98	104
Ransom	99	102	101	109	122	122	101	99	102	109	107	109	110
Seward	103	103	105	85	92	99	100	100	103	97	99	100	103
Mean (Bu/Acre)	103.8	81.9	95.9	55.3	43.9	50.2	119.1	90.5	93.7	92.1	92.6	71.0	73.7
LSD	22.2	24.9	15.4	32.2	41.2	31.8	17.3	10.4	13.2	25.2	5.7	13.1	10.2

**Hard Red Winter Wheat
Planting Rate and Date**

Bushel Weight (Pounds).....60
 Seeds/Pound.....14,500
 Pounds Rate/Acre.....75+
 Seeds/Square Foot..... 25
 Planting Date.....Aug. 20 – Sept. 20