

WINTER WHEAT

Winter wheat varieties are compared in trial plots at Crookston, Lamberton, Morris, Roseau and St. Paul. 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. The varieties tested differ in their winterhardiness, and this characteristic should receive attention when choosing varieties. Cultural practices have a major

effect on winter survival of all winter wheat varieties. Planting into a firm seedbed with at least some stubble remaining to retain snow cover can reduce winterkill.

Only 25,000 acres of winter wheat were harvested in Minnesota in 2004. Average yield was 40 bushels/acre down 2 bushels/acre from 2003. There continues to be interest in Minnesota in planting winter wheat after either canola or soybeans.

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 win-

terkill 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 damage to FHB.

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

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.

CDC Buteo, developed at the Crop Development Centre at the University of

Saskatchewan and released in 2001, was added to the trials in 2004. Like CDC Falcon and CDC Raptor, CDC Buteo, sold by SeCan, is a semi-dwarf hard red winter wheat. It did well in its first year.

Expedition, a 2002 SDSU release, was tested under its experimental designation

in 2003; its data are reported for the first time this year.

Variety descriptions published in previous editions have been discontinued because all of the information they contained is now included in the tables.

Growth characteristics of winter wheat varieties.

Variety	Origin ¹	PVP Status	Heading, Days from Jan. 1	Height, Inches	Winter- hardiness ²	Lodging Rating	Test Weight, Pounds/Bushel		Protein % at 12% Moisture		Rust Resistance ³	
							2004	2-Year	2004	2-Year	Leaf	Stem
Nekota	1994 NE/SDSU	–	171	30.8	M	Medium	57.3	59.5	12.8	12.7	S	–
Expedition	2002 SDSU	PVP (pending)	172	31.4	M	Medium	57.5	59.2	13.0	13.0	S	R
Arapahoe	1988 NE	PVP (94)	173	34.1	M	M. strong	56.7	58.5	13.4	13.2	MR	MR
Millenium	1999 NE	PVP (94)	174	34.9	M	Strong	59.2	60.3	13.2	13.2	MR	R
Seward	1987 NDSU	–	175	40.3	MH	Medium	59.1	60.1	11.9	12.0	S	MR
CDC Buteo	2001 CAN	–	176	36.8	MH	Strong	60.5	–	12.5	–	MS	–
Ransom	1998 NDSU	PVP (94)	176	39.3	MH	Medium	58.9	59.5	12.9	12.9	MR	MR
Windstar	1997 NE	PVP (94)	176	34.4	M	Strong	57.3	59.0	12.7	12.6	MR-MS	MR
CDC Falcon	1998 CAN	PVP (94)	176	31.0	MH	Strong	58.9	60.2	12.5	12.6	MS	R
Roughrider	1975 NDSU	–	176	44.0	VH	Medium	58.8	59.8	13.2	13.5	S	R
Jerry	2001 NDSU	–	177	38.9	MH	M. strong	58.4	59.4	13.2	13.2	MR	R
CDC Raptor	1999 CAN	–	177	34.8	MH	Strong	55.5	57.6	12.3	12.3	MS	–
Mean			175	35.9			58.2	58.8	12.8	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 Winterhardness rating is a relative ranking that includes data from Minnesota, North Dakota, Nebraska and South Dakota. ³ S = Susceptible, MS = Moderately Susceptible, MR = Moderately Resistant., R = Resistant.

Yield (percent of the mean) of winter wheat varieties.

Variety	Crookston		St Paul ¹		Lamberton			Morris			Roseau		State	
	2004		2004	2-Year	2004	2-Year	3-Year	2004	2-Year	3-Year	2004	2004	2-Year	3-Year
Nekota	84	–	–	–	46	71	–	–2	–2	–	86	–2	–2	–
Expedition	97	–	–	–	49	61	–	–2	–2	–	82	–2	–2	–
Arapahoe	116	–	108	–	74	91	97	90	100	101	81	90	100	101
Millenium	104	–	111	–	108	111	112	104	110	109	113	108	111	110
Seward	108	–	99	–	115	111	108	90	78	86	119	108	99	101
CDC Buteo	115	–	–	–	116	–	–	110	–	–	114	114	–	–
Ransom	99	–	96	–	122	116	120	115	97	106	110	112	103	108
Windstar	110	–	130	–	124	118	118	117	124	117	76	107	113	115
CDC Falcon	103	–	–	–	122	129	–	82	96	–	123	108	112	–
Roughrider	87	–	80	–	99	88	84	110	85	87	92	97	85	85
Jerry	116	–	123	–	117	121	119	87	97	108	110	108	110	115
CDC Raptor	96	–	–	–	105	105	–	97	105	–	97	99	103	–
Mean (bu/A)	115.1	–	58.9	–	53.6	55.7	53.8	52.4	52.9	56.1	93.3	78.6	67.9	65.6
LSD	17.2	–	20.3	–	20.8	22.5	15.0	37.5	34.4	24.7	38.8	19.4	17.7	13.2

¹ 2 yr. data is 2002 and 2003. 2004 was abandoned due to winterkill.

² Nekota and Expedition headed 5 to 7 days earlier than other varieties at Morris in 2004, suffered severe damage from leaf rust and broken straw. Yield was less than 15% of the mean and those data are not included in these tables.