

**PROJECT TITLE:** Northern Regional Winter Wheat Performance Nursery

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**OBJECTIVES:**

To evaluate winter wheat lines developed throughout the Great Plains and Pacific Northwest for adaptability, agronomic performance, yield, and quality in the Northern Plains and Central Montana.

**RESULTS:**

The USDA Northern Regional Performance Winter Wheat Nursery yields were near or above average. This nursery was seeded on the western portion of the nursery area in field NW 8. This portion of the field has deeper soil due to wind driven soil drift in the past. Average yields for the entries ranged from a high of 52.3bu/a for NI98418, a hard red variety, down to 36.2 bu/a for NW99L7083 (Table 1). The NI98418 line yielded in the lower third of the nursery in 2000. NE96737 and SD921073 ranked fourth and seventh, respectively, for yield in both 2001 and 2002. The Moccasin check, Neeley, yielded 43.6 bu/a and ranked in the lower third of the nursery for both years.

Test weights averaged 59.2 lbs/bu with three entries, NW99L7083, NW99L7068, and G970252, falling below 57 lbs/bu. Lodging was not a factor in 2002. Plant heights were moderate for both the tall types and the short types. Grain protein content ranged from 17.1% for Roughrider, a check entry, down to 13.9% for NW99L7068 and 13.8% for SD97457.

**SUMMARY:**

This nursery was planted on no-till chemical fallow. Due to the mild winter weather, winterkill was not a factor. However, the standing stubble surely reduced soil moisture loss to the atmosphere and enhanced yields.

**FUTURE PLANS:**

The Northern Regional Winter Wheat Performance Nursery will continue to be evaluated at the Central Agricultural Research Center.

Table 1 2002 Hard Red Winter Wheat Northern Regional Performance Nursery  
Exp. 3307 Central Agricultural Research Center, Moccasin, Montana.

ID	Class	Pedigree	Grain Yield	Test WT	Head Date	Plant Height	Grain Protein
			bu/a	lbs/bu	days	in	%
NI98418	HRW	NE89526/YUMA	52.3	59.2	172	31	16.9
SD97W609	HWW	Abilene/Karl	49.4	60.9	172	27	15.9
NE99445	HRW	RAWHIDE/TOMAHAWK//KARL 92	49.2	58.5	173	32	16.0
NE96737	HRW	N95L421 N87V106/NE88582	48.8	60.6	173	34	16.0
NW98S078	HWW	NE90518/Arlin	48.6	57.3	173	32	16.4
NE99533	HRW	TX90V7912/ABILENE	48.5	60.3	170	28	16.6
SD92107-3	HRW	Brule//Bennett/Chisholm/3/Arapahoe	48.2	59.7	173	31	16.2
NE99495	HRW	ALLIANCE/KARL 92	48.1	59.5	170	30	15.5
NW97S277	HWW	Pronghorn/Arlin	48.0	59.1	172	31	16.4
G970252W	HWW	RAEDER/CG70654//KARL 92	47.6	55.8	174	31	16.3
NE98503	HRW	NE89523/NE90461	47.4	59.3	172	31	16.4
NE99469	HRW	NE87V106/NE88588//KARL 92	47.3	59.2	171	31	15.5
NW99L7068	HWW	KS84HW1968*RioBlanco/HBY762A//Halt	47.3	56.9	169	30	13.9
SD97049	HRW	ND8889/Karl	47.3	60.1	169	28	16.9
NW99L7042	HWW	KM 602-90/NE89657//Arlin	46.8	57.5	173	28	15.8
SD97457	HRW	Tomahawk/Bennett	46.3	60.1	172	30	13.8
SD97250	HRW	ND90109/NE87613	46.2	60.3	173	30	14.5
Nekota	HRW	Nekota	44.4	60.7	169	29	16.1
Neeley	HRW	Neeley (Moccasin Check)	43.6	58.2	177	32	16.1
NW99L7171	HWW	VH09553-753/N91L019//AP-WI89-163	43.2	60.1	174	33	15.9
Nuplains	HWW	Nuplains	42.5	61.0	173	26	16.3
SD92107-5	HRW	Brule//Bennett/Chisholm/3/Arapahoe	41.3	59.2	174	29	16.0
Kharkof	HRW	Kharkof	37.8	61.3	175	36	14.4
NE98471	HRW	NE90461/NIOBRARA	37.1	57.5	169	29	14.1
Roughrider	HRW	Roughrider	36.8	60.3	176	32	17.1
NW99L7083	HWW	KS84HW1968*RioBlanco/HBY762A//Halt	36.2	55.6	169	28	16.2
OVERALL MEAN			45.39	59.16	172.20	30.28	15.81
F-RATIO TRTS			2.865		19.720	3.979	
P-VALUE TRTS			0.001		0.000	0.000	
CV (S/MEAN) %			9.83		0.48	6.48	
LSD(0.05 by t)			7.32		1.35	3.22	

Planting Date: Sept 24, 2001

Harvest Date: July 31, 2002

Soil Moisture: 17"

Soil Temperature: 66.2 F

Fertilizer: 50 lbs 20-20-20-10 w/seed; top dressed 60 lbs N in February 2002

Weed Control: Bronate

Growing Season Precipitation (Sept-July): 11.14 inches

Growing Season Precipitation (Sept-July) 94 yr avg: 13.78 inches

Previous Crop: No-till fallow