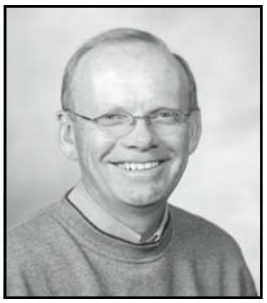
AGRONOMY NEWS

Grasslands For Tomorrow

Volume 4, Issue 5 October—November 2004



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New Research Drill for NDSU Winter Wheat Program

Ducks Unlimited (DU), North Dakota State University (NDSU), R & K Implement of Linton, ND and Great Plains Manufacturing (GP) teamed up to provide NDSU's winter wheat evaluation program, administered by Dr. Joel Ransom and Scott Meyer, with a new no-till Great Plains plot drill.

Kenny Wikenheiser and Richard Feist, R & K Implement-Linton, were instrumental in working with Great Plains Manufacturing in securing a GP - 3P605NT six-foot no-till drill at a greatly reduced price for DU to provide to Dr. Ransom. Bryce Floer, former GP Territory Manager, was instrumental in working with GP leadership.

Dr. Ransom will be adding a cone seeding attachment to the drill to make possible small plot seeding. NDSU now has a plot drill and combine dedicated to winter wheat research thanks to the coordination and support of the Great Plains Regional Office of DU.

DU would like to express sincere appreciation to R & K Implement and Great Plains Manufacturing for their support and generous contribution to winter wheat research work in North Dakota.

Pictured above: Richard Feist and Blake Vander Vorst

Agronomy News
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Winter Cereal Sponsors

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South Dakota Game, Fish and Parks

North Dakota Game & Fish Department

Natural Resources Conservation Service

Day, Marshall, James River, Ransom and Wild Rice Conservation Districts

North Dakota Dept. of Health 319 Program

NDSU and SDSU Cooperative Extension Service

Ransom/Sargent County Winter Wheat Fungicide Trial - 2004

Fungicide plots were located on the Randy Mairs farm, south of Lisbon. Three varieties were included in the fungicide trial: CDC Falcon, Wesley, and Millennium. An untreated check was compared to six separate fungicide treatments (Table 1). Three replicates per treatment and variety were established. Disease notes were at early soft dough stage, June 30, 2004, and late dough, July 19, 2004. Plantings and fungicide applications were done by Scott Meyer, NDSU Research Assistant; field disease notes were taken by Marcia McMullen, NDSU Ext.

Table 1. Comparison of fungicide treatments on leaf disease control, yield, and test weight, across three winter wheat cultivars.

Treatment product/rate	Time of Applic. Feekes[a] Growth Stage	Date of Applica-tion	% Septoria on flag leaf[b] over 3 cultivars		% Leaf rust on flag leaf[c] 7/19	Yield and test wt. averaged over 3 cultivars	
			6/30	7/19	Wesley	Yield Bu/a	Twt Lbs/bu
Untreated			8.0	60.0	25	101.1	59.4
Quilt 7 fl oz; Tilt 4 fl oz	2; 10.51	May 14; June 10	2.0	19.4	5	111.6	60.2
Quilt 14 fl oz	9	May 27	1.9	32.8	8.3	115.4	59.7
Stratego 5 fl oz; Folicur 4 fl oz	2; 10.51	May 14; June 10	1.0	25.7	4	109.3	60.2
Folicur 4 fl oz	10.51	June 10	1.9	27.0	2	112.8	60.2
Headline 3 fl oz; Headline 6 fl oz	2; 10.51	May 14; June 10	1.0	18.9	2.3	112.8	60.8
Headline 6 fl oz	10.51	June 10	2.0	15.4	2.6	109.6	60.5
		LSD 0.05	1.1	13.7	11.1	6.7	0.8

[a] Feekes 2 = 4-5 leaf stage; Feekes 9 = early flag leaf; Feekes 10.51 = early flowering

[b] Leaf spot primarily Septoria. Leaf disease ratings low on June 30th, at early soft dough; had been relatively dry and cool up to this date; heavy rains occurred after June 30 and increased disease pressure. Leaf ratings on July 19th; late dough; leaf spot disease progressed considerably.

[c] On June 30, only Wesley showed some **leaf rust** on untreated, at 4.3% leaf severity; all fungicide treatments reduced leaf rust to 0 on this date. Leaf rust was still minimal on Falcon and Millennium on July 19th.

Average Septoria leaf spot rating on flag leaf in untreated plots per cultivar

Cultivar	On June 30:	On July 19:
Falcon	8.8%	34.7%
Wesley	8.8%	27.1%
Millennium	6.3%	25.2%

Diseases observed: The predominate leaf disease was Septoria spp. Leaf rust never extensively developed and was only measurable on Wesley. Only untreated plots of Wesley showed

some head scab on June 30; at less than 1% field severity. On July 19th, grain heads too mature to distinguish head scab among treatments, but appeared to be still minimal.

Differences among treatments: All fungicide treatments were significantly better than the untreated check for disease control and yield (Table 1). However, differences among fungicide treatments for yield were not statistically significant at the 95% confidence level. All fungicide treatments, except for Quilt applied once at Feekes 9, significantly increased test weight.

Differences for yield and test weight among treatments within each individual cultivar were NOT statistically significant, primarily because of plot variability and the few (three) number of replicates per cultivar. When analyzed over all cultivars, there were 9 replicates per treatment and the above statistical differences were observed.

Differences among cultivars: Among the three winter wheat cultivars, Millennium had the highest yield in the untreated plots (Table 2). When leaf spot disease was controlled with fungicides, CDC Falcon had a slightly higher yield than Millennium. Millennium also had the highest test weight of the three cultivars, both in untreated and treated. The largest test weight increase achieved with fungicide treatment was with Wesley.

Table 2. Individual cultivar yields and test weights: untreated vs. average of all fungicide treatments

Cultivar	Untreated Yield (bu/a)	All Fungicide Trt. Yield Avg. (bu/a)	Average Bu. Yield Increase With Fungicides	Untreated Test Weight (lbs/bu)	All Fungicide Trt. Test Weight Avg.	Average Lb. Twt. Increase With Fungicides
CDC Falcon	99.4	113.4	14.0	59.0	59.8	0.8
Wesley	99.3	109.7	10.4	58.5	60.0	1.5
Millennium	104.7	112.7	8	60.7	60.9	0.2

Thanks to Randy Mairs, Ducks Unlimited, Ransom and Sargent Counties and BASF, Bayer CropScience, and Syngenta for support for this trial.

CALENDAR OF EVENTS:

DATE	EVENT	LOCATION
December 7-8, 2004	AG Horizon Conference (Ramkota)	Pierre, SD
December 8-9, 2004	Prairie Grain Conference (Ramada/ Alerus)	Grand Forks, ND
January 10-11, 2005	ND Grain Growers Association/U.S. Durum Growers Annual Meeting (Ramkota)	Bismarck, ND
January 26, 2005	Wide World of Weeds Workshop (Ramada Plaza Suites)	Fargo, ND
February 1-2, 2005	Manitoba/North Dakota Zero Till Farmers Association Annual Meeting (Victoria Inn)	Brandon, Manitoba Canada
February 14-15, 2005	SD No Till Association Biennial Meeting (Ramkota)	Pierre, SD
February 22, 2005	Area IV SCDS/ARS-NGPRL Research Results (Seven Seas)	Mandan, ND

CRP Enrollment Opportunity

Landowners and operators may enroll land into the Conservation Reserve Program's wetland restoration practice (CP23a). **Eligible land may be enrolled immediately without going through a ranking process.** Also, there currently is no restriction on the total acreage one producer may enroll in practice CP23a.

Eligible land includes cropland that has been cropped four of the six years from 1996 through 2001. The offered acreage must include wetlands that have been cropped and adjacent upland acreage. Wetlands do not have to be drained to be eligible. Up to four acres of adjacent upland acreage can be enrolled for every acre of wetland.

All wetlands on enrolled acres must be restored to their natural state. Cost share payments are available for 50 percent of the cost to establish grass and legume cover and restore wetlands. Incentive payments equal to 25 percent of the wetland restoration costs are also available. Additional incentives are available in North Dakota from Ducks Unlimited, ND Game & Fish Department and ND Natural Resources Trust. In South Dakota, Ducks Unlimited, SD Game, Fish & Parks and the US Fish & Wildlife Service provide additional incentives.

Reminder

All "Agronomy News" issues can be found at Ducks Unlimited website:

http://prairie.ducks.org

and click on "Agronomy News."

Email is another option for you to receive the newsletter. It will arrive 7-10 days sooner than by mail. Email Janell at jrath@ducks.org and let her know if you would like to receive it by email. You can receive it by email, mail, or both.

University of Minnesota Winter Wheat Variety Performance Trials

Conducted By

James Anderson and Jochum Wiersma

The results of the state yield trials are summarized on page 5. There continues to be interest in Minnesota in planting winter wheat after either canola or soybeans. The success of winter wheat is largely dependent on its ability to survive the 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. The trapped snow provides additional protection that increases the odds that the young seedlings will survive.

Research in Northwest Minnesota has demonstrated that winter wheat can successfully be established immediately following soybeans when planted around October first. The winterhardiness of the variety was a larger factor in reducing winterkill than the tillage system (no-till versus conventional) and the ability to trap snow. Thus, for northern Minnesota a winter hardiness rating of moderately high is a minimum. For southern Minnesota a moderate rating is adequate in most years.

Winter wheat cultivars head earlier than spring wheat cultivars. All winter wheat cultivars should be considered susceptible to very susceptible to FHB. However, winter wheat has a better chance to escape damage to FHB, compared to spring wheat, because of its earlier heading. Most varieties are also susceptible to very susceptible to the leaf diseases other than the rusts. The use of fungicides to control these diseases and/or suppress FHB may be warranted.

In 2004, 'CDC Buteo' was added to the trials. 'Expedition', a 2002 release from SDSU was tested under its experimental designation in 2003 and its data is reported for the first time this year. CDC Buteo was developed at the Crop Development Centre at the University of Saskatchewan and released in 2001.

Like CDC Falcon and CDC Raptor, CDC Buteo is a semi-dwarf hard red winter wheat variety. CDC Buteo is sold by SeCan. Overall, Jerry's has done well in both single and multiple year comparisons and CDC Buteo did well in its first year.

2004 Relative grain yield (reported in **percentage** of mean yield) of Hard Red Winter Wheat

Variety	Crookston	Lamberton		Morris		Roseau	State	
	1 yr.	1 yr.	2 yr.	1 yr.	2 yr.	1 yr.	1 yr.	2 yr.
Nekota	84	46	71	_[2]	_[2]	86	_[2]	_[2]
Expedition	97	49	61	_[2]	_[2]	82	_[2]	_[2]
Arapahoe	116	74	91	90	100	81	90	100
Millennium	104	108	111	104	110	113	108	111
Sewards	108	115	111	90	78	119	108	99
CDC Buteo	115	116	-	110	-	114	114	-
Ransom	99	122	116	115	97	110	112	103
Windstar	110	124	118	117	124	76	107	113
CDC Falcon	103	122	129	82	96	123	108	112
Roughrider	87	99	88	110	85	92	97	85
Jerry	116	117	121	87	97	110	108	110
CDC Raptor	96	105	105	97	105	97	99	103
Mean (bu/A)	115.1	53.6	55.7	52.4	52.9	93.3	78.6	67.9
LSD (0.05)	17.2	20.8	-	37.5	-	38.8	19.4	-

[2] Nekota and Expedition headed 5-7 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 this data is not included in these

Agronomic characteristics of Hard Red Winter Wheat Varieties in Minnesota in multiple year comparisons (2002-2003).

Variety	Days to Heading[1] (days)	Plant Height (inches)	Winter Hardiness[2]	Straw Strength	Test Weight (lbs/bu)		Protein (%)	
					1 yr	2 yr	1 yr	2 yr
Nekota	171	30.8	M	medium	57.3	59.5	12.8	12.7
Expedition	172	31.4	M	medium	57.5	59.2	13.0	13.0
Arapahoe	173	34.1	M	m. strong	56.7	58.5	13.4	13.2
Millennium	174	34.9	M	strong	59.2	60.3	13.2	13.2
Seward	175	40.3	MH	medium	59.1	60.1	11.9	12.0
CDC Buteo	176	36.8	MH	strong	60.5	-	12.5	-
Ransom	176	39.3	MH	medium	58.9	59.5	12.9	12.9
Windstar	176	34.4	M	strong	57.3	59.0	12.7	12.6
CDC Falcon	176	31.0	MH	strong	58.9	60.2	12.5	12.6
Roughrider	176	44.0	VH	medium	58.8	59.8	13.2	13.5
Jerry	177	38.9	MH	m. strong	58.4	59.4	13.2	13.2
CDC Raptor	177	34.8	MH	strong	55.5	57.6	12.3	12.3
Mean	175	35.9	-	-	58.2	58.8	12.8	12.8

[1] Days after January 1

[2] Winter hardiness rating is a relative ranking that includes data from ND, NE and SD: VH=very high, H=high, MH=moderately high, M=moderate.

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Dakota Grain Grower Association Board Members and Executives

The North Dakota Grain Growers Association (NDGGA) and South Dakota Wheat Inc. are the grower organizations representing wheat growers in the two states. The pictures of their executives are included along with a list of their board members and officers. The SD Wheat Inc. annual meeting is December 7 and 8, 2004 in Pierre, SD and the NDGGA annual meeting will be January 10 and 11, 2005 in Bismarck, ND.

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