

Grand Forks County 2003 HRSW Variety Trials

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2003 Trial Information: The 2003 trial was planted on May 1st into good moisture. There was still frost in the ground, causing the south west end of the plot to become wet. Subsequent rains caused slow emergence and lower plant stands on the west half of the plot. The west half of the plot had Folicur applied at the 4oz rate when all the wheat varieties had headed and many varieties were flowering. Disease pressure was moderate to moderately heavy with Bacterial Blight, Septoria, Leaf Rust and Scab. Due to poor stands and harvest problems the data was from the first wheat replication was not used. All three replications were used for the barley data. There was light to moderate lodging. All yields were adjusted to 13% moisture.

2002 Trial Information: The 2002 trial was planted on May 17th into good moisture. To help evaluate the varieties tolerance to disease pressure, no fungicides were applied. There was substantial leaf disease pressure. There was moderate to heavy lodging. All yields were adjusted to 13% moisture.

2001 Trial Information: The 2001 trial was planted on May 4th into good moisture. Fungicides were applied. Severe lodging problems made harvesting very difficult. The plot was harvested August 20th and 21st.

WHEAT: The 2003 plot was split in half and the western half of the plot was treated with 4 oz. of Folicur. Due to emergence problems and harvest problem the first replication of the plot was not included on the final results. The western half of the plot was very wet and emergence was delayed and stands were reduced. The results of the fungicided plots are in **bold**.

Table 1. Results from Grand Forks County variety by fungicide trial, 2003.

Name	Moisture		Test Weight		Protein		Yield	
	Untreated	<i>Fungicide</i>	Untreated	<i>Fungicide</i>	Untreated	<i>Fungicide</i>	Untreated	<i>Fungicide</i>
Mercury	13.3	13.2	60.8	60.8	13.2	13.3	70.2	66.2
*Orion	15.1	18.1	55.5	52.0	14.3	13.8	60.3	57.3
*Polaris	14.6	15.4	57.6	59.2	12.4	12.6	70.9	67.6
*Oklee	13.9	13.9	60.6	62.0	13.8	13.2	65.0	64.5
HJ98	12.9	13.4	60.5	61.4	12.3	12.5	74.2	70.6
Hanna	13.8	14.8	61.0	61.0	13.5	12.8	71.5	62.2
Knudson	13.4	14.3	60.7	60.8	13.3	12.9	73.6	64.2
Norpro	13.1	13.1	59.8	62.0	13.5	11.7	71.6	63.5
Granite	12.8	13.1	61.8	63.7	13.6	13.4	66.8	64.8
Trooper	12.6	12.8	62.0	62.8	13.1	11.7	76.1	73.8
Dapps	12.8	12.9	61.5	61.7	13.8	12.7	69.8	67.0
Grandin	12.8	12.8	61.5	62.0	14.3	13.4	66.3	64.0
2375	12.8	12.9	61.7	62.1	13.1	12.6	74.8	73.4
Parshall	12.8	12.8	62.7	62.2	13.9	12.8	68.9	67.3
Alsen	12.8	14.8	61.9	60.4	13.9	13.9	63.5	62.4
Reeder	12.7	12.8	61.3	61.4	13.9	13.7	67.2	67.8
Walworth	13.0	13.4	60.7	61.2	13.1	13.0	71.6	72.6
Briggs	12.8	12.7	61.7	62.4	13.6	12.6	72.0	74.7
Oxen	12.6	13.1	61.0	60.5	13.2	13.6	71.0	74.9
Russ	12.7	12.7	62.0	62.0	12.6	11.9	75.0	76.7
Ingot	13.2	13.2	63.0	63.1	13.5	13.3	68.8	73.5
Laser	14.4	12.9	57.0	59.0	13.0	13.9	58.7	70.2
Amizon	12.8	12.6	61.0	62.0	13.0	12.1	68.3	79.4
Lolo	12.5	12.4	62.0	63.3	12.2	10.3	73.2	83.4
Totals Ave.	13.18	13.50	60.8	61.2	13.33	12.82	69.55	69.25

***Note:** The varieties Orion, Polaris and Oklee were in a wet spot on the second replication causing delayed emergence and maturity while increasing moisture content and reducing test weights.

Table 2. Characteristics of HRSW Varieties included in the Grand Forks Variety Trial 2003.

Variety	Straw	Maturity	Origin	Rel.
Grandin	Strong	Early	ND	1989
Mercury	Strong	M. Early	North Star	1999
2375	M. Strong	Early	ND	1990
Parshall	Strong	Early	ND	1999
Reeder	Strong	Med.	ND	1999
Oxen	V. Strong	Early	SD	1996
Russ	M. Strong	Early	SD	1995
Ingot	Medium	Early	SD	1998
HJ98	Strong	M. Early	MN	1998
Norpro	M. Strong	M. Early	Agripro	1999
Alsen	Strong	Early	ND	2000
Granite	V. Strong	Medium	WPB	2002
Briggs	Strong	Early	SD	2002
Walworth	Medium	M. Early	SD	2001
Laser	Strong	M. Early	Canadian	1998
Hanna	Medium	M. Early	Agripro	2002
Knudson	M. Strong	M. Early	Agripro	2001
Dapps	Strong	M. Early	ND	2003
Trooper	Strong	M. Early	Gold Country	
Orion	V. Strong	Medium	North Star	
Polaris	V. Strong	Medium	North Star	2003
Oklee	Medium	Early	MN	2003
Amazon	Medium	Medium	Canadian	1999
<i>Lolo</i> (<i>White Wheat</i>)	M. Strong	Medium	Idaho	2000

Table 3. Yield, test weight and protein of HRSW varieties included in the Grand Forks County Variety trial 2001-2003.

Variety	Yield				Test Weight				Protein			
	2003	2002	2001	3yr Ave.	2003	2002	2001	3yr Ave.	2003	2002	2001	3yr Ave.
Grandin	65.2	23.0	52.4	46.9	61.8	56.0	56.7	58.2	13.9	15.6	15.6	15.0
Mercury	68.2	27.3	58.1	51.2	60.8	53.0	57.1	57.0	13.3	15.2	14.3	14.3
2375	74.1	21.9	48.2	48.1	61.9	58.0	57.5	59.1	12.9	15.4	15.3	14.5
Parshall	68.1	27.8	47.6	47.8	62.5	59.0	58.2	59.9	13.4	15.7	15.2	14.8
Reeder	67.5	26.1	51.4	48.3	61.4	56.0	59.0	58.8	13.8	15.4	15.5	14.9
Oxen	73.0	23.5	52.9	49.8	60.8	54.0	56.2	57.0	13.4	15.6	15.2	14.7
Russ	75.9	23.1	48.5	49.2	62.0	54.0	55.3	57.1	12.3	15.7	14.9	14.3
Ingot	71.2	24.6	53.0	49.6	63.1	57.0	58.9	59.7	13.7	16.0	15.4	14.9
HJ98	72.4	19.8	47.8	45.7	61.0	53.0	54.4	56.1	12.4	15.9	14.6	14.3
Norpro	67.6	21.0	56.4	48.3	60.9	54.0	55.9	56.9	12.6	15.6	14.3	14.2
Alsen	63.0	26.7	49.3	46.3	61.2	59.0	58.1	59.4	13.9	16.1	15.0	15.0
Granite	65.8	26.4	65.9	52.7	13.5	56.0	59.8	59.5	13.5	15.7	15.5	13.5
Briggs	73.4	27.0			62.1	58.0			13.1	16.3		
Walworth	72.1	22.1			62.1	54.0			13.1	15.7		
Laser	64.5	22.0			62.1	51.0			13.1	16.2		
Hanna	66.9	20.2			61.0	55.5			13.2	15.6		
Knudson	68.9	25.6			60.8	56.0			13.1	14.9		
Dapps	68.4				62.4				13.3			
Trooper	75.0				62.4				12.4			
Orion	58.8				53.8				14.1			
Polaris	69.3				58.4				12.5			
Oklee	64.8				61.3				13.5			
Amazon	73.9				61.5				12.6			
<i>Lolo (White Wheat)</i>	78.3				62.7				11.3			

Table 4. Disease Notes on Varieties from Grand Forks County Plot, 2003 - Dr. McMullen s, disease ratings based on examination of 4-6 leaves and heads per variety; no other replication. Fungicide applied on half of plot; Folicur 4 fl oz/acre at flowering.

Variety	Bact. Strk	% Septoria		% Leaf rust		% Scab Field Sev.		BYDV
		- Fung.	+ Fung.	- Fung.	+ Fung.	- Fung.	+ Fung.	
Alsen	0	20	5	0	0	0.6	0	0
Amazon	+	10	5	15	0	1.4	0.6	+
Briggs	+++	3	0	0	0	0	0	++
Dapps	0	15	10	0	0	0	0	0
Grandin	0	50	15	10	0	9.0	5.6	0
Granite	++	10	5	3	0	0	0	0
Hanna	0	20	10	15	0	0.6	0	0
HJ98	0	50	15	0	0	1.4	1.4	0
Ingot	+++	25	0	20	0	8.4	0.6	+
Knudson	+	15	3	0	0	1.4	0	0
Laser	+++	50	0	15	0	2.8	0	0
Lolo	+	35	10	5	0	8.4	1.2	0
Mercury	+++	15	0	5	0	2.8	0	+
Norpro	+	15	5	0	0	4.2	0	+
Oklee	0	15	10	NA	NA	2.8	1.2	+
Orion	+++	20	3	0	0	14.4	1.8	0
Oxen	+++	15	10	5	0	0	0	++
Parshall	0	25	3	10	0	11.2	0	+
Polaris	+	50	0	0	0	24	0	0
Reeder	++	15	0	0	0	10	0	++
Russ	+++	20	10	5	0	1.4	0.6	0
Walworth	0	30	10	0	0	1.2	0.6	++
2375	0	20	5	NA	NA	0.6	0	+
Trooper	+++	5	0	0	0	0	0	+
Mean		22.8	5.6	4.5	0	4.3	0.6	

+ indicates presence at different severity levels; NA indicates leaves too mature or dry to evaluate rust