

2008 Red River Valley On-Farm Yield Trials Spring Wheat

Following are the results of the 2008 Red River Valley On-Farm Yield Trials. These regional trials were located throughout northwestern Minnesota.

About the Trials:

The 2008 Red River Valley On-Farm Yield Trials were grown in 5 locations throughout the region. The locations, cooperators, and planting dates are summarized in Table 1. All trials were harvested and included in data analysis. Growing conditions were in general very favorable for small grains. Consequently yields were very high, with Fergus Falls and Oklee averaging over 99 and 103 bu/A across entries, respectively.

About the Entries:

The entries of the 2008 Red River On-Farm Yield Trials, including the breeder and the year of release, are listed in Table 2. WestBred's Breaker was the only new entry in the trials. Some common entries, including Oxen, Granite, Ulen, and Trooper, were no longer tested.

Interpretation of the Data:

One-, two-, and three-year averages for grain yield are reported. Within the table, the varieties are listed alphabetically. No single location data is presented to avoid misinterpretation of data. Single environment data has to be interpreted with caution. Performance data across multiple environments, either single location/multiple year, or multiple location/single year, and/or a combination of years and locations is more reliable. Performance data of individual locations is only available upon request. No data may be reproduced without written consent of the author.

In each table, the highest performer for each trait is printed in bold. The grain yield in each table is expressed as a percentage of the trial mean with the overall mean in bu/A listed below. Presenting the data this way allows for better comparisons over years. Secondly, variety selection is based on the relative ranking of the cultivars, rather than the absolute yield. Comparisons between varieties should only be made within each column and not between columns or between tables. In addition to the overall mean for the trial, the Tukey's Least Significant Difference (LSD) is printed at the bottom of each column. The LSD is calculated using an alpha level of 10%. This indicates that, if and when the observed difference between two varieties is larger than the LSD unit, with 90% confidence the observed difference is a real difference rather than experimental error.

Table 1 Location of the 2008 Red River Valley On-Farm Yield Trials.

<i>Location</i>	<i>Cooperator</i>	<i>Planting Date</i>	<i>Harvest Date</i>
Fergus Falls	John Walkup	April 23	August 13
Perley	Brian Hest	May 8	August 28
Oklee	Ray Swenson	May 7	August 25
Strathcona	Jim Kukowski	May 7	August 20
Humboldt	Gerald Olsonawski	May 1	August 20

Table 2 Hard Red Spring Wheat entries in the Red River On-Farm Yield Trials (2006-2008).

<i>Breeder</i>	<i>Cultivar</i>	<i>Year Released</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
AgriPro Wheat	Knudson	2001	x	x	x
	Freyr	2005	x	x	x
	Kelby	2006	x	x	x
	Kuntz	2007		x	x
NDSU	Alsen	2000	x	x	x
	Steele-ND	2004	x	x	x
	Glenn	2005	x	x	x
	Howard	2006	x		x
	Faller	2007		x	x
SDSU	Briggs	2002	x	x	x
	Granger	2004	x	x	x
	Traverse	2006	x	x	x
Thunderbird Seeds	Cromwell	2007		x	x
Trigen Seed Services	Hat Trick	2007	x	x	x
Univ. of Minnesota	Oklee	2003	x	x	x
	Ada	2006	x	x	x
	RB07	2007	x	x	x
	Tom	2008	x	x	x
WestBred	Bigg Red	2004	x	x	x
	Rush	2006	x	x	x
	Blade	2007		x	x
	Samson	2007		x	x
	Vantage	2007		x	x
	Breaker	2008			x

Table 3: Grain yield expressed as a percentage of the trial mean across all locations in single year (2008) and multi-year (2006-2008) comparisons and agronomic characteristics of cultivars entered in the Red River Valley On-Farm Yield Trials.

Cultivar	Across All Locations						
	Grain Yield			3-Year data			
	1 year ----- (% of mean)-----	2 year	3 year	Plant Height (inches)	Lodging ¹ (1-9)	Test Weight (lb/bu)	Protein (%)
Ada	99.1	99.4	99.8	30.1	2.9	61.7	14.0
Alsen	96.2	94.5	95.3	30.3	1.9	60.6	14.4
Bigg Red	96.2	91.3	95.1	33.3	3.0	61.8	13.4
Blade ²	98.6	102.0	-	31.9	-	62.9	13.7
Breaker ³	100.6	-	-	32.3	1.5	62.2	13.7
Briggs	98.1	100.3	104.4	32.0	3.4	61.1	14.1
Cromwell ²	98.5	101.8	-	32.1	2.1	61.8	13.9
Faller ²	106.3	111.5	-	32.7	2.8	60.2	13.6
Freyr	98.7	102.2	101.1	32.8	2.3	59.9	13.9
Glenn	94.8	97.4	98.8	33.2	2.0	61.8	14.7
Granger	102.8	101.7	105.3	33.6	2.7	60.9	14.0
Hat Trick	99.9	102.2	101.3	32.0	2.0	61.1	14.2
Howard	98.2	97.1	99.7	31.1	2.8	61.4	14.4
Kelby	95.7	94.4	96.8	27.9	1.8	61.1	14.5
Knudson	104.3	107.8	106.8	30.4	2.4	61.2	13.7
Kuntz ²	101.8	106.0	-	30.0	1.9	61.1	13.4
Marshall	81.6	72.5	76.1	28.5	2.6	57.1	13.7
Oklee	100.1	99.2	100.1	31.5	2.6	61.7	14.4
RB07	102.2	104.0	105.4	30.6	2.5	61.0	14.2
Rush	93.0	93.9	92.8	30.4	1.5	62.2	14.8
Samson ²	104.1	107.8	-	29.7	2.7	60.4	13.6
Steele-ND	98.9	103.6	103.8	32.3	2.5	60.5	14.5
Tom	103.9	101.7	101.8	31.2	2.5	60.9	14.2
Traverse	104.1	110.2	112.3	33.0	2.4	59.2	13.3
Vantage ²	91.2	91.9	-	31.2	1.5	62.2	14.9
LSD (10%)	17.1	13.6	11.7	1.6	0.8	1.5	0.6
Mean (bu/A)	90.8	80.6	74.7	32.0	2.4	61.4	13.9

¹ 1=erect and 9 =flat

² 2 year data

³ 1 year data

10/30/08