

2006 Red River Valley On-Farm Yield Trials Spring Wheat

Following are the results of the 2006 Red River Valley On-Farm Yield Trials. These regional trials were located throughout northwestern Minnesota.

About the Trials:

The 2006 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. Conditions were dry for most of the season. Oklee suffered the most severe drought stress and as a consequence was harvested in mid July. The drought also caused a very uneven stand and variable growth in Perley. All trials were harvested, but the results of the Perley locations were not included in the data analysis. Very little, if any, lodging was observed this summer as evidenced by the lodging scores in Table 3

About the Entries:

The entries of the 2006 Red River On-Farm Yield Trials, including the breeder and the year of release, are listed in Table 2.

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 Least Significant Difference (LSD) is printed at the bottom of each column. The LSD is calculated using an alpha level of 5%. This indicates that, if and when the observed difference between two varieties is larger than the LSD unit, with 95% confidence the observed difference is a real difference rather than experimental error.

Table 1 Location of the 2006 Red River Valley On-Farm Yield Trials.

<i>Location</i>	<i>Cooperator</i>	<i>Planting Date</i>	<i>Harvest Date</i>
Foxhome	Dave Hasbargen	April 24	August 2
Perley	Brian Hest	April 25	August 4
Oklee	Ray Swenson	April 18	July 19
Strathcona	Jim Kukowski	April 27	August 7
Humboldt	Gerald Olsonowski	May 12	August 10

Table 2 Hard Red Spring Wheat entries in the Red River On-Farm Yield Trials (2004-2006).

<i>Breeder</i>	<i>Cultivar</i>	<i>Year Released</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>
AgriPro Wheat	Knudson	2001	x	x	x
	Freyr	2005		x	x
	Kelby	2006			x
NorthStar Genetics	Polaris	2005		x	x
	Bakker	2006			x
	Fire Ball	2006			x
NDSU	Reeder	1999	x	x	x
	Alsen	2000	x	x	x
	Steele-ND	2004	x	x	x
	Glenn	2005		x	x
	Howard	2006			x
SDSU	Oxen	1996	x	x	x
	Walworth	2000	x	x	x
	Briggs	2002	x	x	x
	Granger	2004	x	x	x
	Traverse	2006			x
Trigen Seed Services	Banton	2004		x	x
Univ. of Minnesota	Oklee	2003	x	x	x
	Ulen	2005	x	x	x
	Ada	2006		x	x
WestBred	Granite	2001	x	x	x
	Trooper	2005		x	x
	Rush	2006			x

Table 3: Grain yield expressed as a percentage of the trial mean across all locations 2006 and multi-year (2004-2006) comparisons and agronomic characteristics of cultivars entered in the Red River Valley On-Farm Yield Trials.

<i>Cultivar</i>	<i>Across All Locations</i>						
	<i>Grain Yield</i>			<i>1-Year data</i>			
	<i>1 year</i>	<i>2 year</i>	<i>3 year</i>	<i>Plant Height</i>	<i>Lodging¹</i>	<i>Test Weight</i>	<i>Protein</i>
-----	(% of mean)	-----	(inches)	(1-9)	(lb/bu)	(%)	
Ada	97.2	97.6	-	28.0	8.4	60.8	14.8
Alsen	96.6	94.5	95.8	30.3	8.5	59.5	14.9
Bakker	91.8	-	-	30.3	9.0	54.6	15.5
Banton	110.0	100.4	-	31.1	9.0	61.1	14.9
Bigg Red	96.1	-	-	33.0	8.1	59.6	14.4
Briggs	110.9	104.7	101.5	31.5	7.5	60.4	14.7
Fire Ball	91.9	-	-	28.0	8.6	57.6	16.1
Freyr	98.1	101.5	99.6	32.3	8.1	59.2	14.3
Glenn	103.5	102.7	-	32.3	8.6	60.3	15.2
Granger	107.6	105.2	106.2	33.0	8.0	60.2	14.7
Granite	94.2	87.1	92.4	29.1	9.0	57.2	16.1
Howard	106.0	-	-	31.5	8.0	58.6	14.6
Kelby	100.9	-	-	26.4	8.5	60.4	15.0
Knudson	107.8	106.8	105.0	28.1	8.4	60.2	14.2
Marshall ²	83.8	-	-	26.0	8.8	55.3	15.2
Oklee	102.7	101.9	99.0	29.0	8.3	60.0	14.9
Oxen	94.9	93.4	95.6	29.8	8.4	59.4	15.0
Polaris	87.3	93.5	100.0	31.1	9.0	53.5	14.8
Reeder	97.3	93.0	95.0	31.8	8.4	57.4	14.9
Rush	90.3	-	-	28.9	9.0	60.9	15.3
Steele-ND	109.4	105.0	100.8	32.0	8.4	59.2	14.9
Traverse	109.6	-	-	32.5	8.6	57.8	14.1
Trooper	98.5	98.3	100.5	25.4	9.0	57.5	14.5
Ulen	106.0	104.2	101.9	31.1	8.6	59.4	14.7
Walworth	102.6	103.3	99.7	30.3	8.3	59.1	14.7
C.V.	13.6	13.5	11.4	7.8	8.7	3.8	4.3
LSD (5%)	13.5	10.1	6.5	2.3	0.7	2.2	0.6
Mean	64.9	64.8	74.7	29.9	8.5	59.0	14.9

¹ 1=flat and 9 =erect

² Historical check