

2009 Red River Valley On-Farm Yield Trials Spring Wheat

Following are the results of the 2009 Red River Valley On-Farm Yield Trials. These regional trials were located throughout northwestern Minnesota.

About the Trials:

The 2009 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. The northern two locations were lost due to excess precipitation immediately following emergence resulting in very poor stands. Growing conditions were in general very favorable for small grains, despite the delayed planting. Consequently yields were very high, with Perley and Oklee averaging over 92 and 88 bu/A across entries, respectively.

About the Entries:

The entries of the 2009 Red River On-Farm Yield Trials, including the breeder and the year of release, are listed in Table 2. New entries included Albany, Barlow, Brennan, Brogan, Brick, Jenna, and Sabin. Many of these entries have been tested for two or more years as they were entered under number in the trials prior to their official release. Testing of Alsen was discontinued.

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 Fisher'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 2009 Red River Valley On-Farm Yield Trials.

<i>Location</i>	<i>Cooperator</i>	<i>Planting Date</i>	<i>Harvest Date</i>
Fergus Falls	Dave Hasbargen	May 16	August 24
Perley	Brian Hest	May 19	August 27
Oklee	Ray Swenson	May 6	August 13
Strathcona	Jim Kukowski	May 19	
Humboldt	Gerald Olsonawski	May 20	

Table 2 Hard Red Spring Wheat entries in the Red River On-Farm Yield Trials (2007-2009).

<i>Breeder</i>	<i>Cultivar</i>	<i>Year Released</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>
AgriPro Wheat	Knudson	2001	x	x	x
	Freyr	2005	x	x	x
	Kelby	2006	x	x	x
	Kuntz	2007	x	x	x
	Brennan	2009		x	x
	Jenna	2009		x	x
NDSU	Steele-ND	2004	x	x	x
	Glenn	2005	x	x	x
	Howard	2006		x	x
	Faller	2007	x	x	x
	Barlow	2009		x	x
SDSU	Briggs	2002	x	x	x
	Granger	2004	x	x	x
	Traverse	2006	x	x	x
	Brick	2009		x	x
Thunderbird Seeds	Cromwell	2007	x	x	x
Trigen Seed Services	Hat Trick	2007	x	x	x
	Albany	2009		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
	Sabin	2009	x	x	x
WestBred	Bigg Red	2004	x	x	x
	Rush	2006	x	x	x
	Blade	2007	x	x	x
	Samson	2007	x	x	x
	Vantage	2007	x	x	x
	Breaker	2008		x	x
	Brogan	2009			x

Table 3: Grain yield expressed as a percentage of the trial mean across all locations in single year (2009) and multi-year (2007-2009) comparisons and agronomic characteristics of cultivars entered in the Red River Valley On-Farm Yield Trials.

Cultivar	Across All Locations						
	Grain Yield			2-Year data			
	1 year ----- (% of mean)-----	2 year	3 year	Plant Height (inches)	Lodging ¹ (1-9)	Test Weight (lb/bu)	Protein (%)
Ada	96.1	97.7	98.2	31.5	2.2	61.5	13.3
Albany	111.5	111.6	-	32.2	1.7	61.2	12.2
Barlow	96.3	100.1	-	34.0	1.4	60.8	13.6
Bigg Red	98.9	97.1	93.4	34.7	2.0	62.4	13.1
Blade	101.8	99.7	101.4	33.2	1.3	61.9	13.0
Breaker	96.6	98.6	-	32.3	1.3	61.7	13.1
Brennan	96.3	98.7	-	31.2	1.4	61.0	13.2
Brick	99.6	103.2	-	34.2	2.0	62.1	13.4
Briggs	93.7	96.1	97.9	32.4	2.3	60.8	13.2
Brogan ²	101.4	-	-	31.2	1.0	61.6	11.9
Cromwell	98.2	98.2	100.3	32.5	1.3	61.1	13.3
Faller	114.7	109.6	111.5	33.4	1.5	60.1	13.1
Freyr	100.5	99.3	101.3	34.2	1.3	60.9	13.0
Glenn	89.4	92.7	95.1	35.2	1.3	62.3	13.7
Granger	102.9	102.6	101.6	35.4	1.8	61.4	13.1
Hat Trick	102.6	100.8	101.9	33.1	1.4	61.4	13.1
Howard	104.8	100.8	99.0	32.9	2.0	61.7	13.3
Jenna	101.1	106.2	-	29.8	1.3	60.9	13.5
Kelby	89.9	93.2	93.0	29.2	1.4	61.4	13.7
Knudson	104.9	104.2	106.2	32.0	1.4	61.1	13.1
Kuntz	95.0	99.1	102.4	30.6	1.1	60.9	12.8
Marshall	91.3	85.4	78.6	30.8	1.9	58.7	12.9
Oklee	89.8	96.2	96.4	32.6	1.7	62.2	13.4
RB07	106.8	103.8	104.7	32.0	1.6	61.5	13.3
Sabin	104.5	104.3	103.8	32.6	1.6	61.2	13.6
Samson	99.5	102.0	104.7	29.9	1.4	60.4	13.0
Steele-ND	99.7	99.0	102.0	33.2	1.5	60.7	13.4
Tom	96.2	100.4	99.6	33.0	1.7	61.1	13.3
Traverse	114.5	108.1	110.7	34.8	1.7	60.4	12.7
Vantage	98.7	93.8	93.6	32.4	1.0	61.5	14.1
LSD (10%)	7.0	6.5	6.8	1.5	0.6	1.0	0.8
Mean (bu/A)	88.7	90.1	86.4	32.4	1.5	61.3	13.2

¹ 1=erect and 9 =flat

² 1 year data

11/17/09