2005 Red River Valley On-Farm Yield Trials
Spring Wheat

Following are the results of the 2005 Red River Valley On-Farm Yield Trials. These regional trials were located throughout northwestern Minnesota.

About the Trials:

The 2005 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. Unfortunately, the two northern locations were abandoned as result of flooding and prolonged wet conditions.

About the Entries:

The entries of the 2005 Red River On-Farm Yield Trials, including the breeder and the year of release, are listed in Table 2. Testing of 'Verde' was discontinued. New releases that were added to the test included Banton, Buck Pronto, Express, Glenn, Saturn, and Ulen.

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 2005 Red River Valley On-Farm Yield Trials.

Location	*Cooperator*	*Planting Date*	*Harvest Date*
Fergus Falls	Tom Jennen	April 20	July 28
Perley	Brian Hest	April 18	July 28
Oklee	Ray Swenson	April 22	July 29
Strathcona	Jim Kukowski	April 26	-
Humboldt	Gerald Olsonowski	April 21	-

Table 2 Hard Red Spring Wheat entries in the Red River On-Farm Yield Trials (2003-2005).

Breeder	*Cultivar*	*Year Released*	*2003*	*2004*	*2005*
AgriPro Wheat	Norpro	2000	x	x	x
	Hanna	2001	x	x	x
	Knudson	2001	x	x	x
	Freyr	2005		x	x
NorthStar Genetics	Mercury	1998	x	x	x
	Polaris	2005		x	x
	Saturn	2005			x
NDSU	Parshall	1999	x	x	x
	Reeder	1999	x	x	x
	Alsen	2000	x	x	x
	Dapps	2003		x	x
	Steele-ND	2004		x	x
	Glenn	2005			x
SDSU	Oxen	1996	x	x	x
	Walworth	2000	x	x	x
	Briggs	2002	x	x	x
	Granger	2004		x	x
Trigen Seed Services	Banton	2004			x
Univ. of Minnesota	Oklee	2003	x	x	x
	Ulen	2005	x	x	x
WestBred	Granite	2001	x	x	x
	Express	1997			x
	Trooper	2005			x

Table 3: Grain yield expressed as a percentage of the trial mean across all locations 2005 and multi-year (2002-2005) 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	*2 year*	*3 year*	*Plant Height*	*Lodging*[*]	*Test Weight*	*Protein*
	---------- *(% of mean)*---------- -			*(inches)*	*(1-9)*	*(lb/bu)*	*(%)*
Alsen	98.6	97.3	98.3	34.4	2.6	61.6	14.5
Banton	94.1	-	-	-	-	-	-
Briggs	103.5	99.6	-	35.3	3.8	62.4	14.3
Dapps	96.5	91.0	-	39.0	3.0	60.9	**15.8**
Express	97.6	-	-	-	-	-	-
Freyr	**113.8**	102.1	-	-	-	-	-
Glenn	108.9	-	-	-	-	-	-
Granger	109.6	107.7	-	-	-	-	-
Granite	83.2	93.4	95.5	32.6	**1.1**	62.6	15.2
Hanna	96.6	95.1	97.0	39.5	2.9	62.2	14.6
Knudson	113.3	105.8	**106.5**	33.2	3.1	61.8	13.6
Mercury	111.4	104.3	104.6	**30.7**	3.0	60.5	13.5
Norpro	92.9	97.2	100.3	32.5	2.8	59.3	13.8
Oklee	108.2	99.4	103.0	33.6	3.1	**63.2**	14.6
Oxen	98.2	97.7	104.0	32.9	2.9	60.3	13.9
Parshall	88.8	87.6	91.8	38.9	2.8	62.0	14.6
Polaris	109.4	**107.2**	-	-	-	-	-
Reeder	93.5	95.9	99.3	34.9	2.5	60.7	14.4
Saturn	105.6	-	-	-	-	-	-
Steele-ND	106.2	99.2	-	-	-	-	-
Trooper	105.2	103.3	-	-	-	-	-
Ulen	109.2	102.1	105.0	35.2	4.0	61.3	14.5
Walworth	111.8	100.5	102.5	36.4	4.8	60.6	14.3
C.V.	8.0	7.5	8.0	4.6	35.0	1.7	3.0
LSD (5%)	15.5	7.3	6.0	1.2	1.0	0.8	0.3
Mean	60.3	78.1	79.0	34.9	3.0	61.4	14.4

[*] 1=erect and 9 = flat

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