

2003 Red River Valley On-Farm Yield Trials

Spring Barley

Following are the results of the 2003 Red River Valley On-Farm Yield Trials. These regional trials were located throughout northwestern Minnesota

About the Trials:

The 2003 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. This year's yields were the highest ever recorded in the history of the Red River On-Farm Yield Trials. Compared to 2002, grain yields nearly doubled from last year. Yields at all locations were very high and grain quality was excellent. The yield trial in Perley sustained some hail damage, but the plots were harvested and the yield data was included in the analysis.

About the Entries:

The entries of the 2003 Red River On-Farm Yield Trials, including the breeder and the year of release, are listed in Table 2. The entries were the same as in 2002. Harvest at Strathcona was delayed by a few days and Conlon showed severe straw breakage. Lodging was not a problem except for Robust and Lacey in Hallock.

Interpretation of the Data:

This year one-year, two and three-year averages are reported. Within the table, the varieties are listed in the order of their maturity. 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; single location/multiple years, or multiple locations/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 is printed at the bottom of each column. The LSD is calculated using an alpha level of 5%. This indicates, if and when the observed difference between two varieties is larger than LSD unit that with 95% confidence the observed difference is a real difference rather than experimental error.

Table 1: Locations of the 2002 Red River Valley On-Farm Yield Trials.

	Location	Cooperator	Planting Date	Harvest Date
1	Fergus Falls	Gary Jennen	April 15	July 28
3	Perley	Brian Hest	April 15	July 28
4	Oklee	Ray Swenson	April 16	August 4
7	Strathcona	Jim Kukowski	April 24	July 30
8	Humboldt	Gerald Olsonowski	April 21	July 30

Table 2: Spring barley entries on the Red River Valley On-Farm Yield Trials (2001-2003).

Breeder	Cultivar	Type	Year Released	2001	2002	2003
Anheuser Busch	Legacy*	6-row	2000	x	x	x
NDSU	Conlon*	2-row	1995	x	x	x
	Foster*	6-row	1995	x	x	x
	Drummond*	6-row	2000	x	x	x
U of MN	Robust*	6-row	1983	x	x	x
	Lacey*	6-row	2000	x	x	x

* AMBA approved malting barley cultivars.

Table 3: Relative yield expressed as a percentage of the trial mean across locations for 2003 and multi-year (2001-2003) comparisons and agronomic characteristics of cultivars entered in the Red River Valley On-Farm Yield Trials.

Cultivar	Across All Locations							
	1-Year	2-Years	3-Years	3-Year Data				
Variety				Plant Height	Lodging	Plump	Test Weight	Protein
	% of mean			(inches)		(%)	(lbs/bu)	(%)
Conlon*	91.2	93.6	94.3	26.6	6.6	92.9	46.9	13.3
Foster*	101.4	102.5	104.1	28.0	4.0	89.9	42.7	12.9
Drummond*	97.1	95.1	97.5	26.8	4.0	86.3	43.6	13.4
Robust*	93.2	94.4	96.3	29.3	4.5	85.2	44.1	13.7
Lacey*	103.3	104.3	104.5	27.0	4.3	86.3	44.9	13.5
Legacy*	105.4	101.4	103.2	28.3	3.7	85.2	43.1	13.3
CV	5.5	8.5	10.1	9.2	22.9	4.7	3.4	4.0
LSD (5%)	6.5	6.5	6.2	1.4	0.7	3.3	0.7	0.3
Mean (bu/A)	134.2	93.1	87.0	27.6	4.5	87.7	44.3	13.3

* AMBA approved malting barley cultivars.