

Small Grain Variety Performance 2005 Growing Season

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Cereal Crops

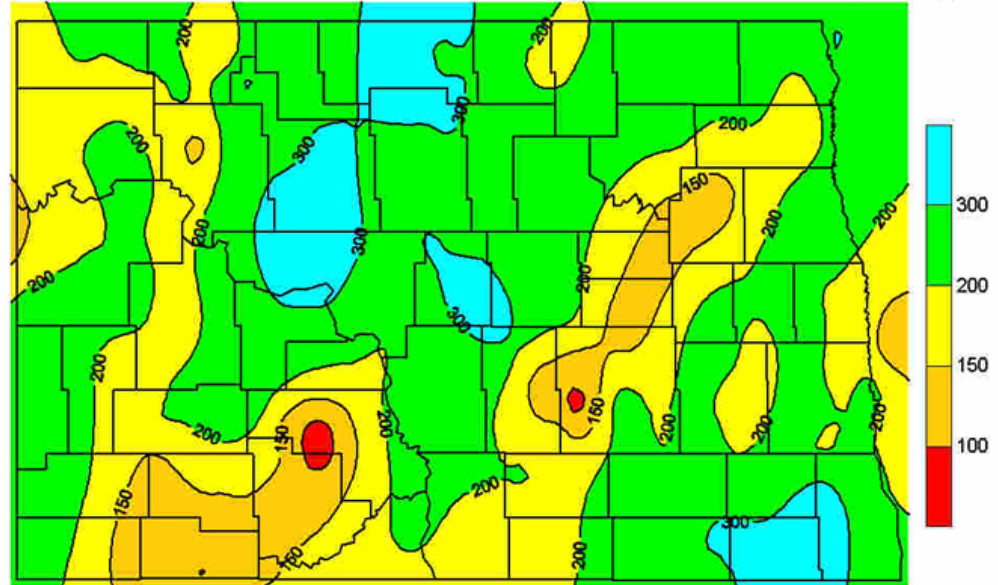


• The environment

- Early planting
- Cool spring, good yield potential development
- Excessive moisture in June/early July
- Leaf diseases and scab were problematic – early planted

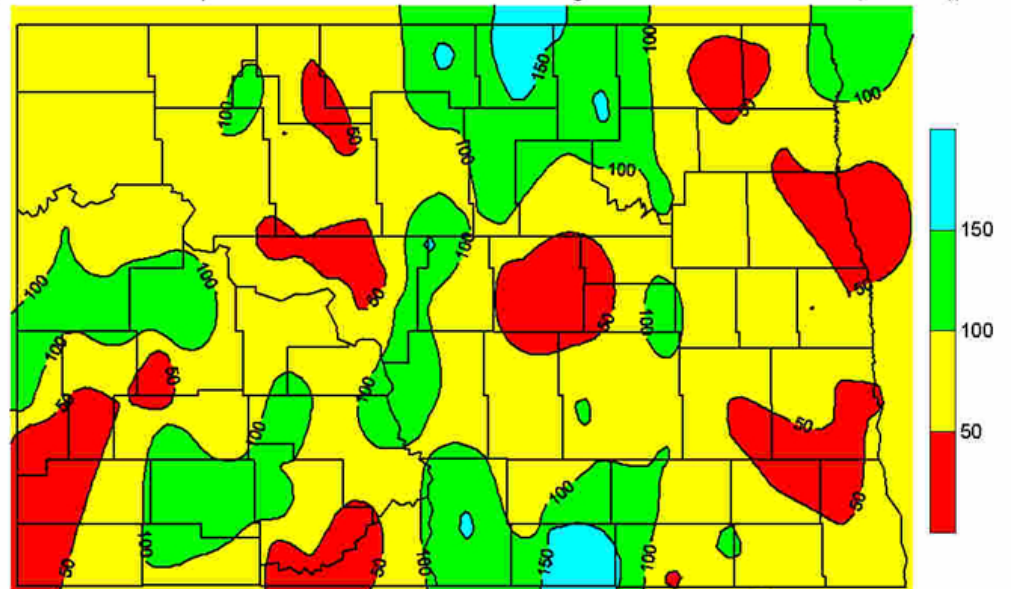


North Dakota June 2005 Precipitation Percent of Normal
(Data from NWS Cooperative Network and North Dakota Agricultural Weather Network (NDAWN))



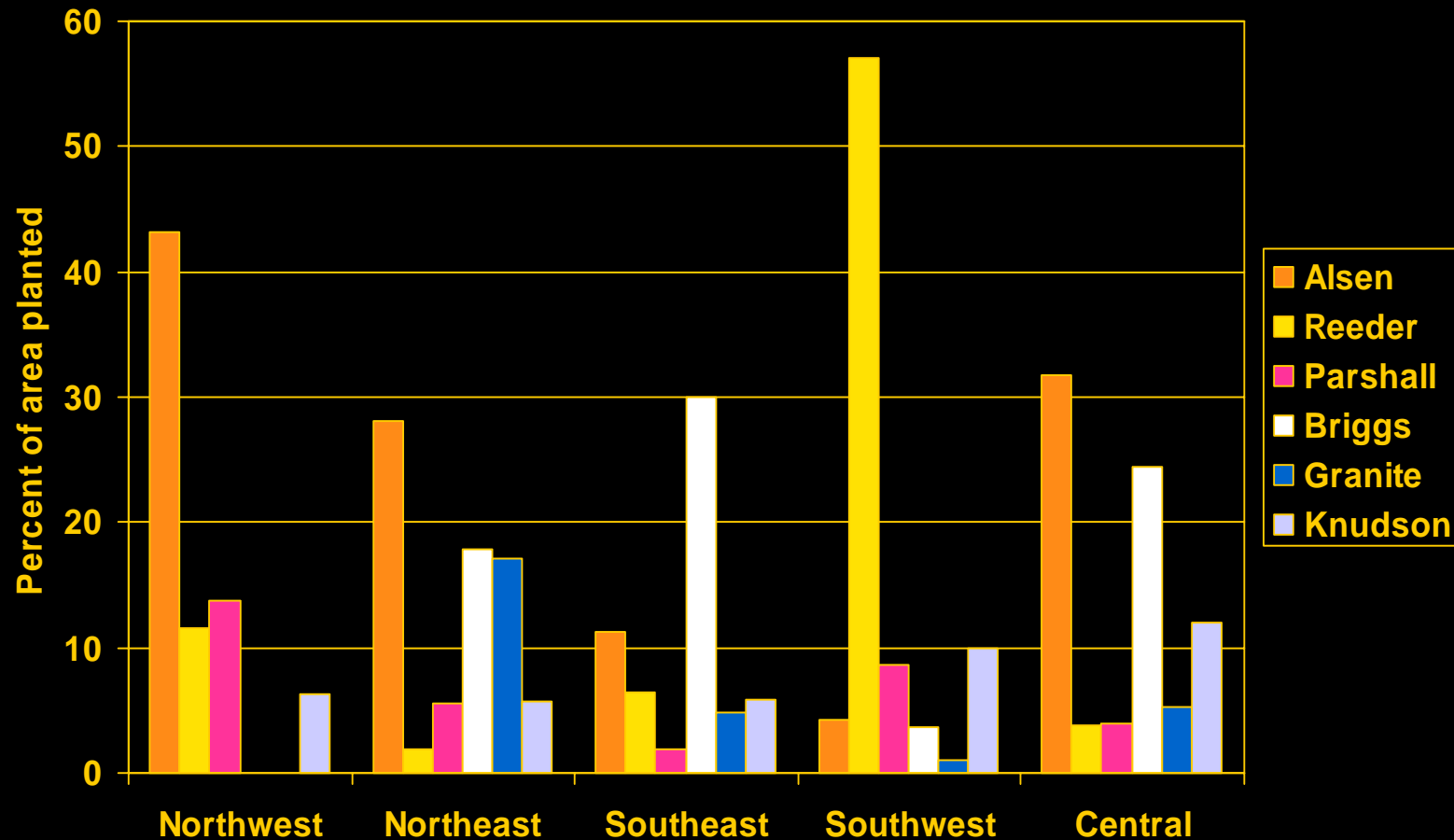
ND State Climate Office

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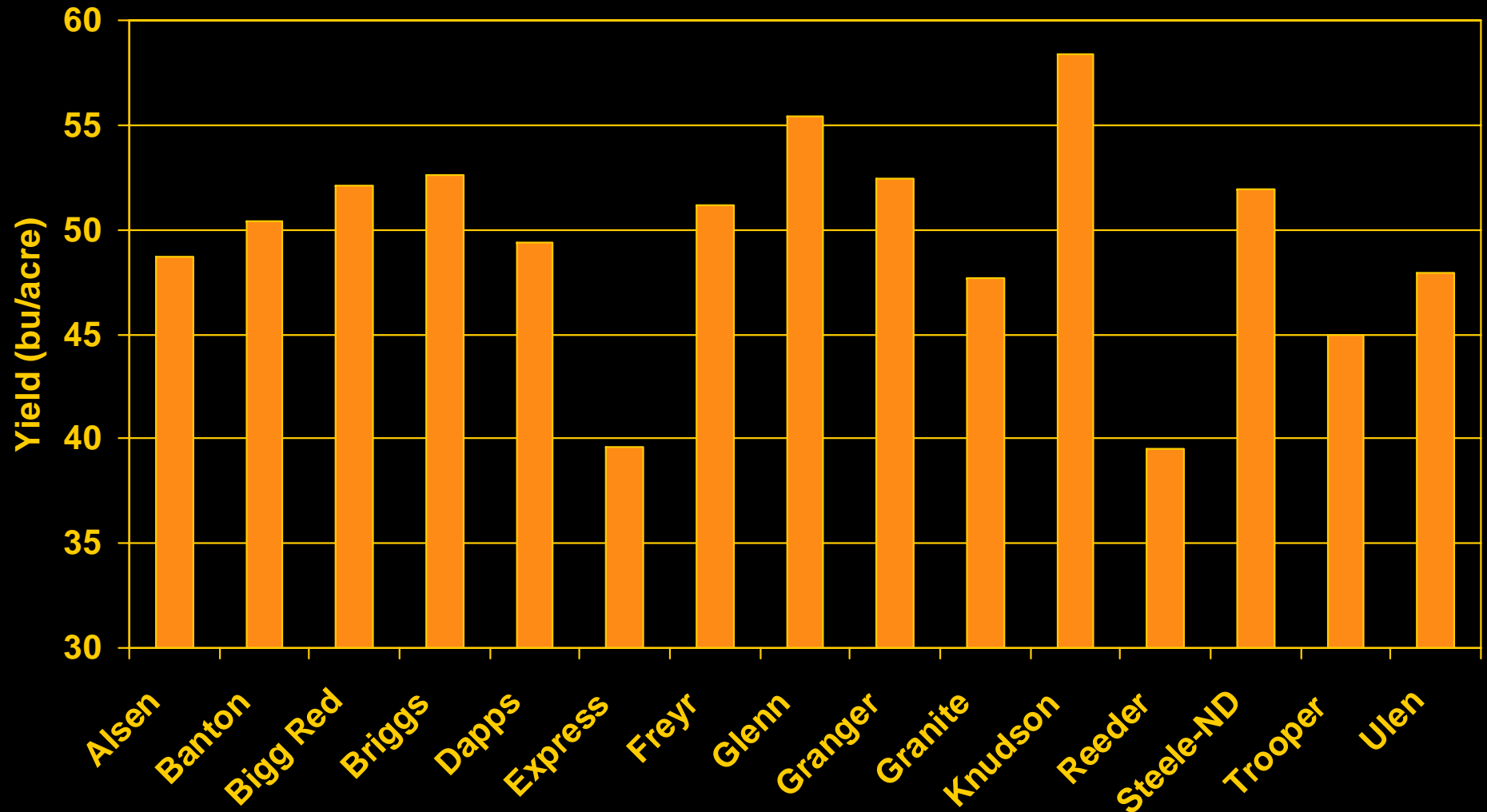
HRSW Varietal use by region, 2005



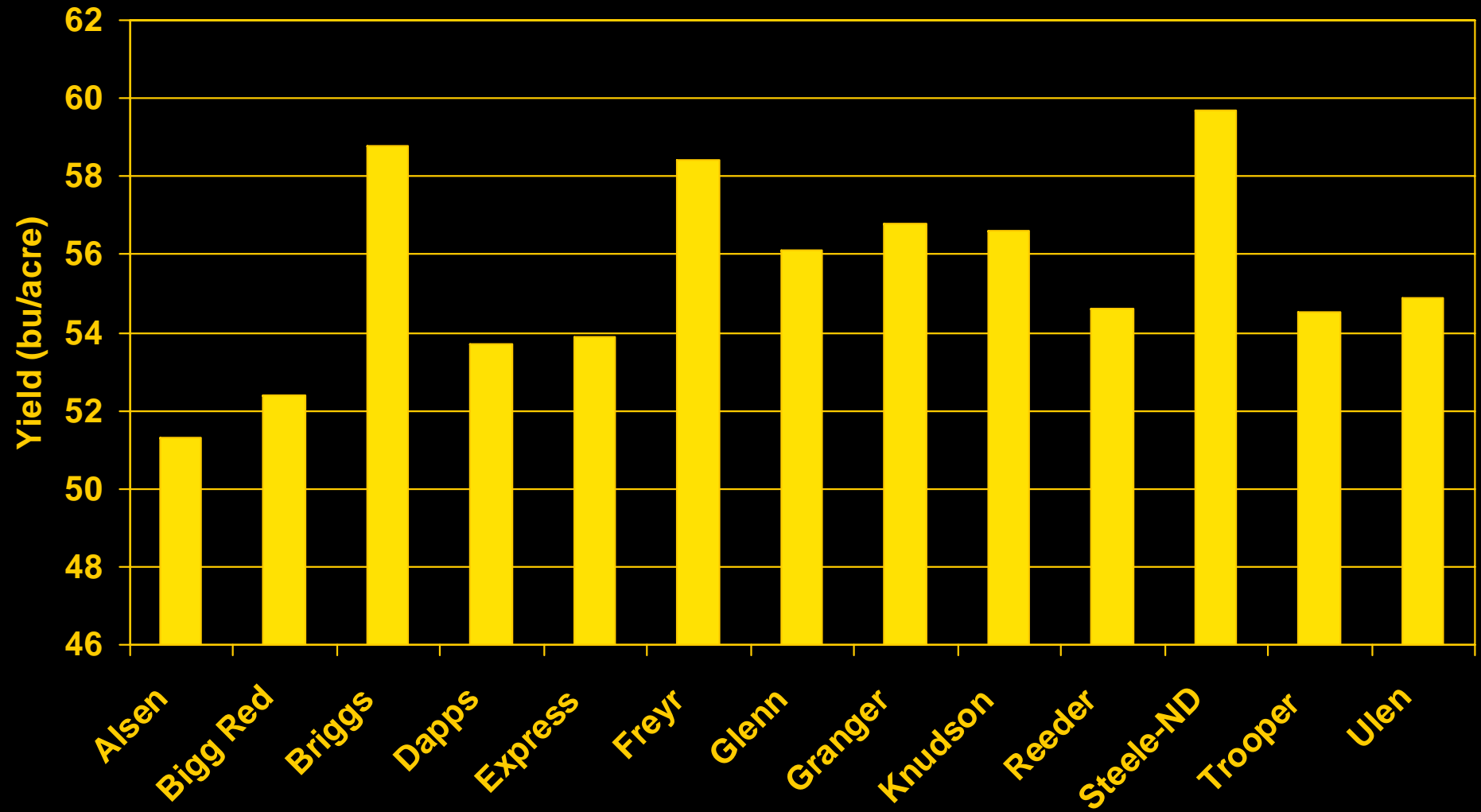
New Releases

Name	Pluses	Minuses
Glenn (NDSU)	Scab tolerance, yield, disease package, test weight	
Ulen (U of M)	Yield (south & central MN)	No scab tolerance

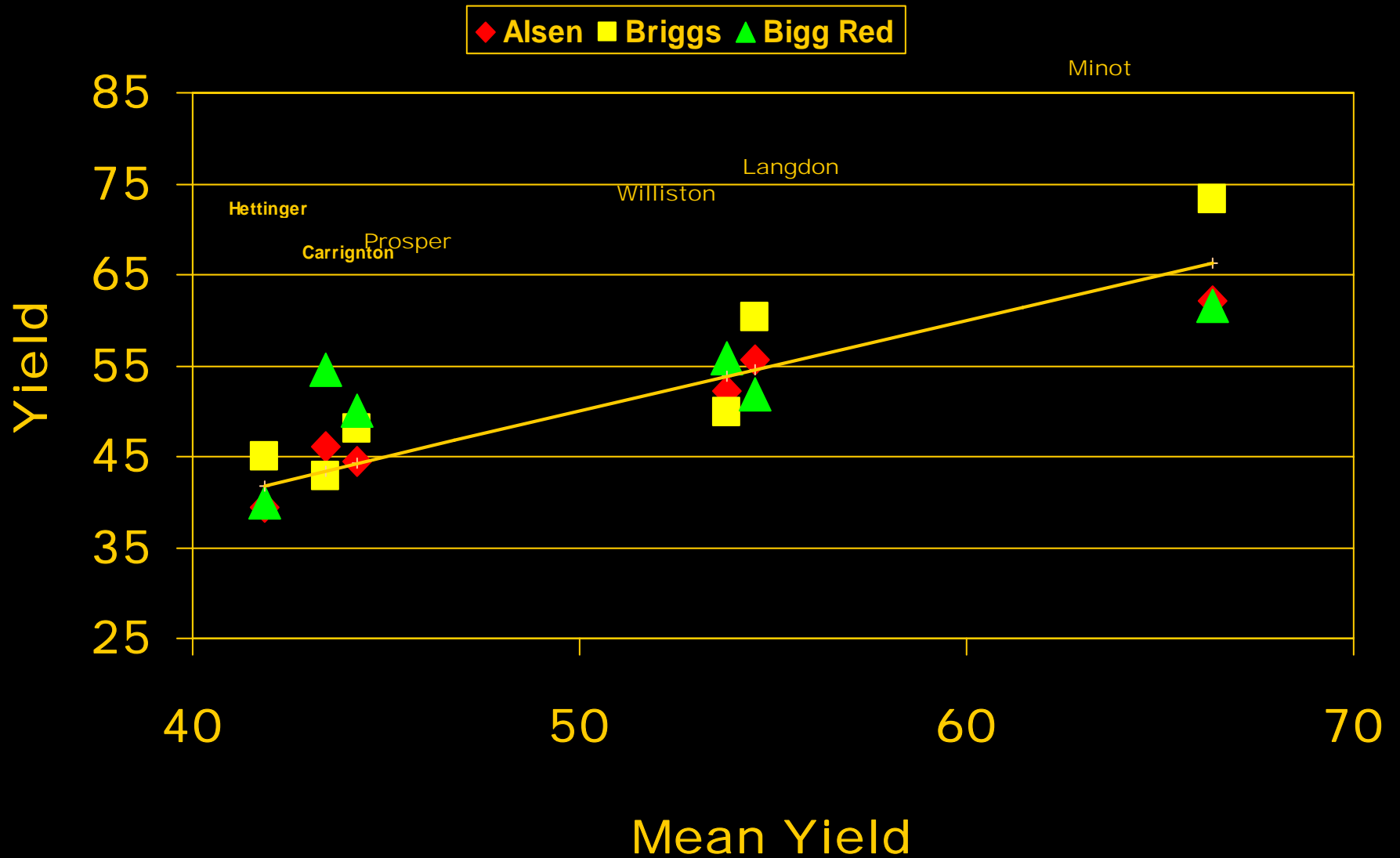
Comparative yield of HRSW varieties in eastern ND, 2005



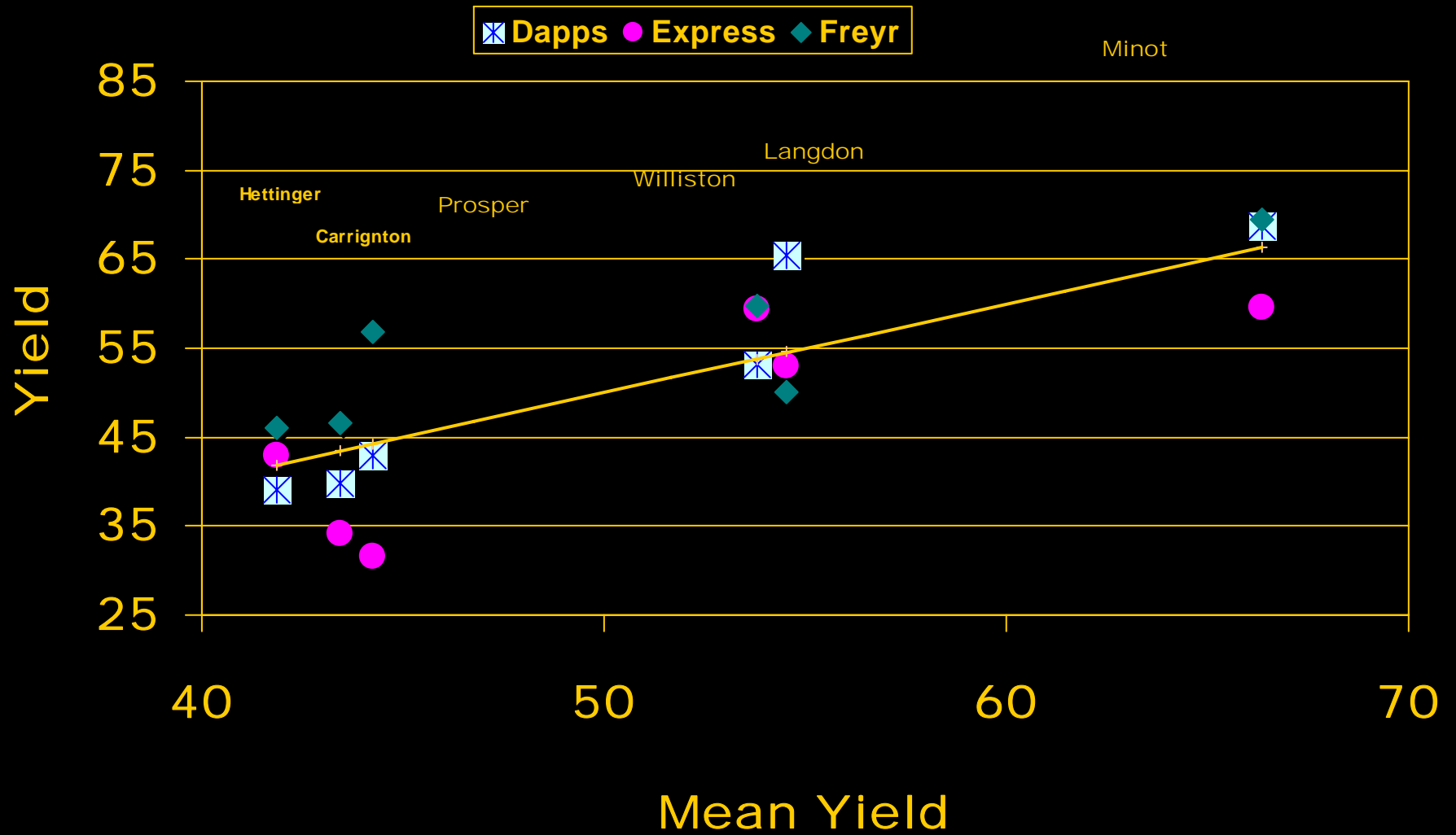
Comparative yield of HRSW varieties in western ND, 2005



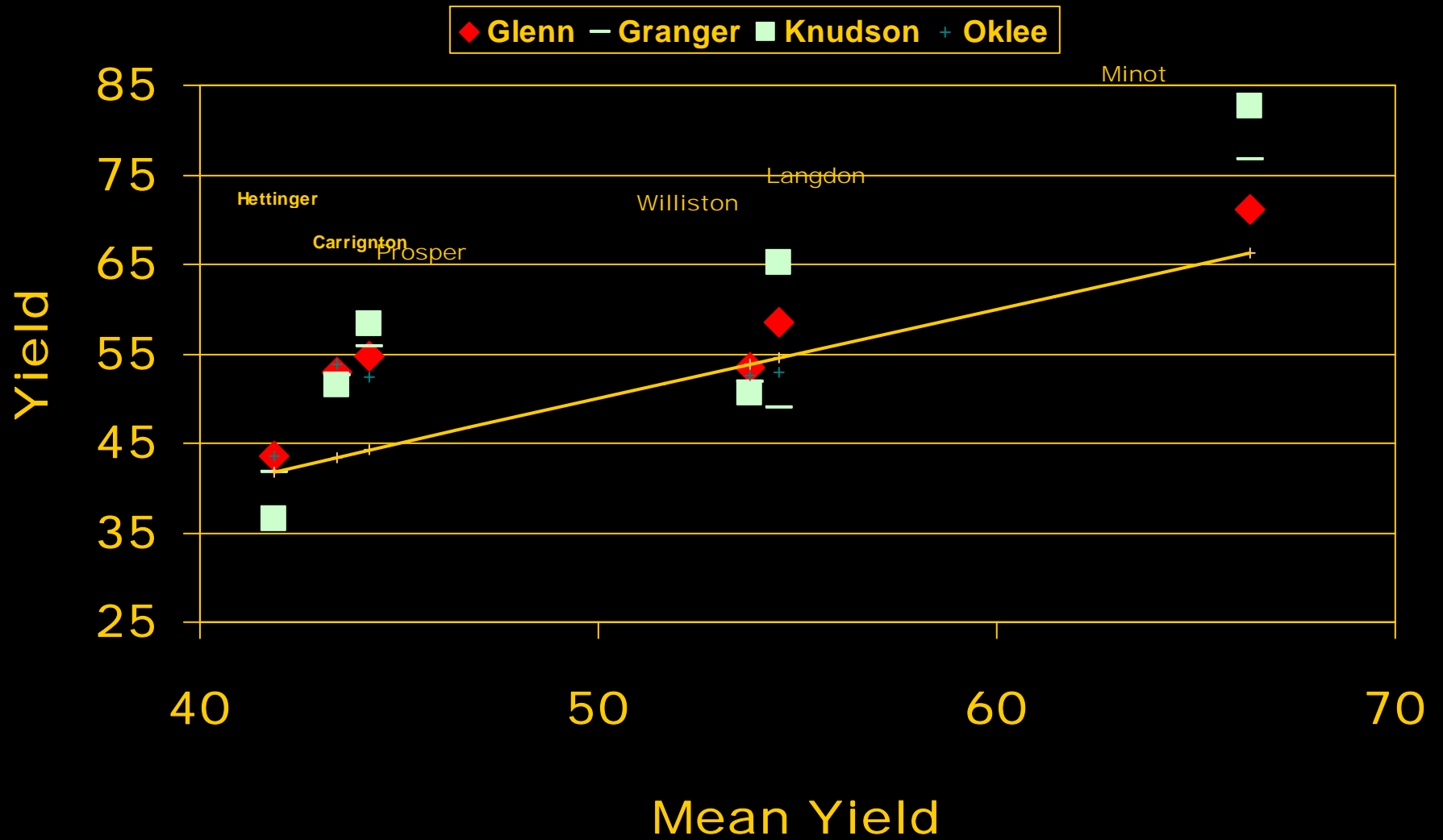
Stability of yield HRSW varieties, 2006.



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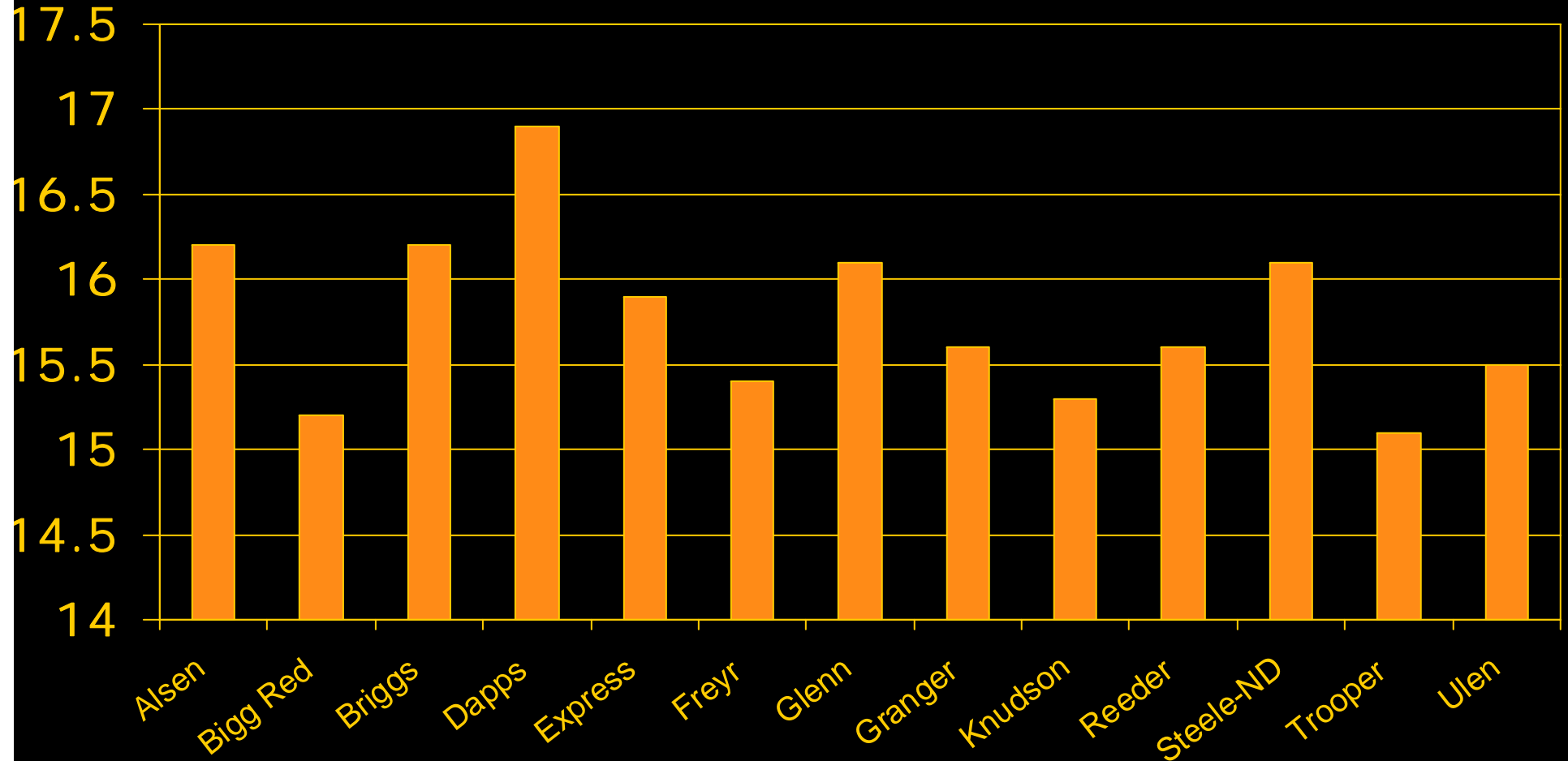
Stability of yield HRSW varieties, 2006.



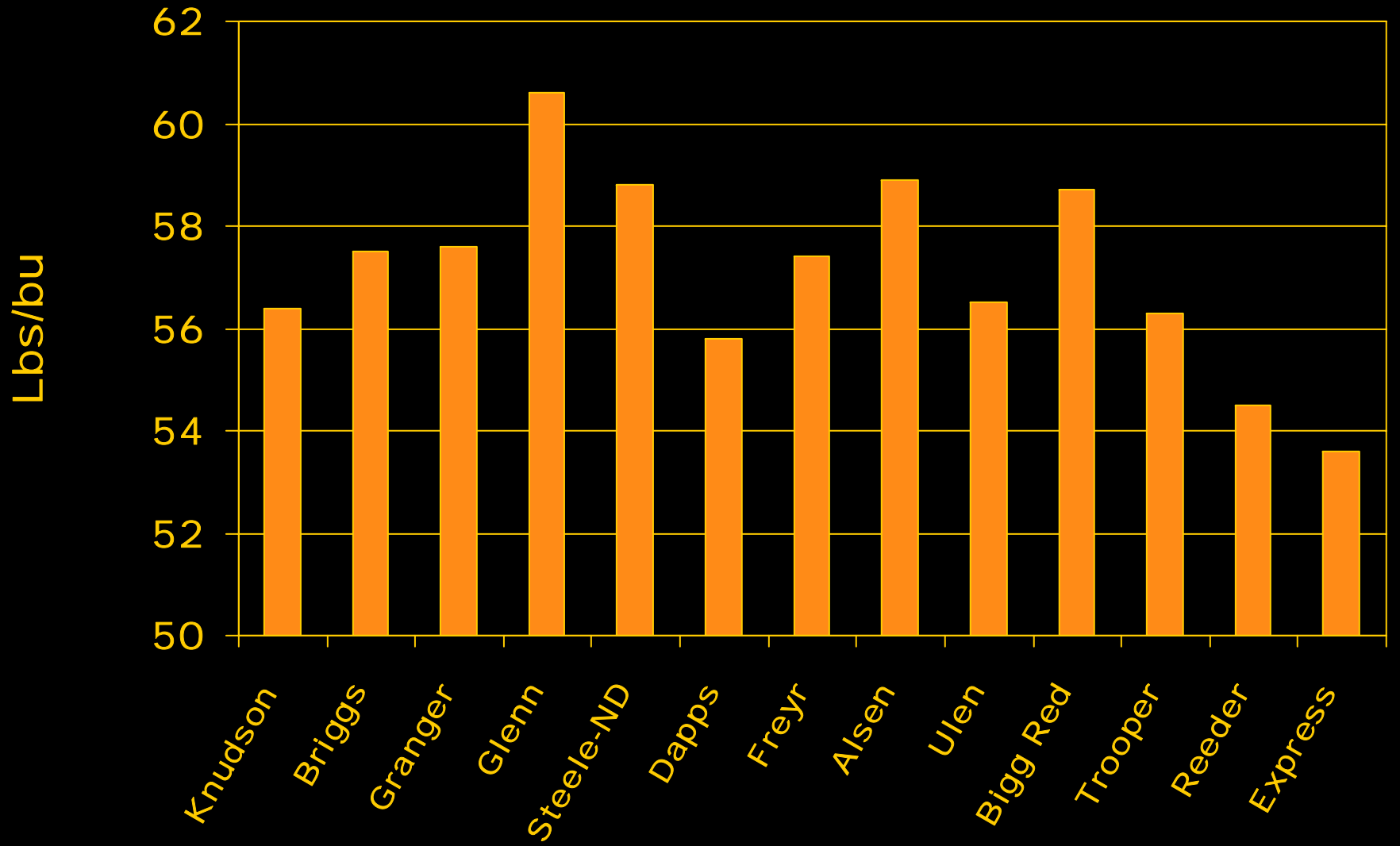
Stability of yield HRSW varieties, 2006.



Grain Protein 2005



Test weight at Prosper-ND, 2005



Concerns

Name	Minuses
Granite	Bacterial stripe, low falling numbers
Bigg Red	Leaf rust, leaf spots
Express	FHB, leaf disease
Reeder	Leaf rust, leaf spots
Ulen	Leaf spots, sprouting

Picks for western ND

Name	Pluses	Minuses
Steele-ND (2004 NDSU)	Yield, foliar disease, protein, good in MN	
Knudson (2001 AgriPro)	Yield, leaf rust	Protein, drought prone areas?
Briggs (2003 SDSU)	Leaf rust, yield	Straw strength

Durum varieties

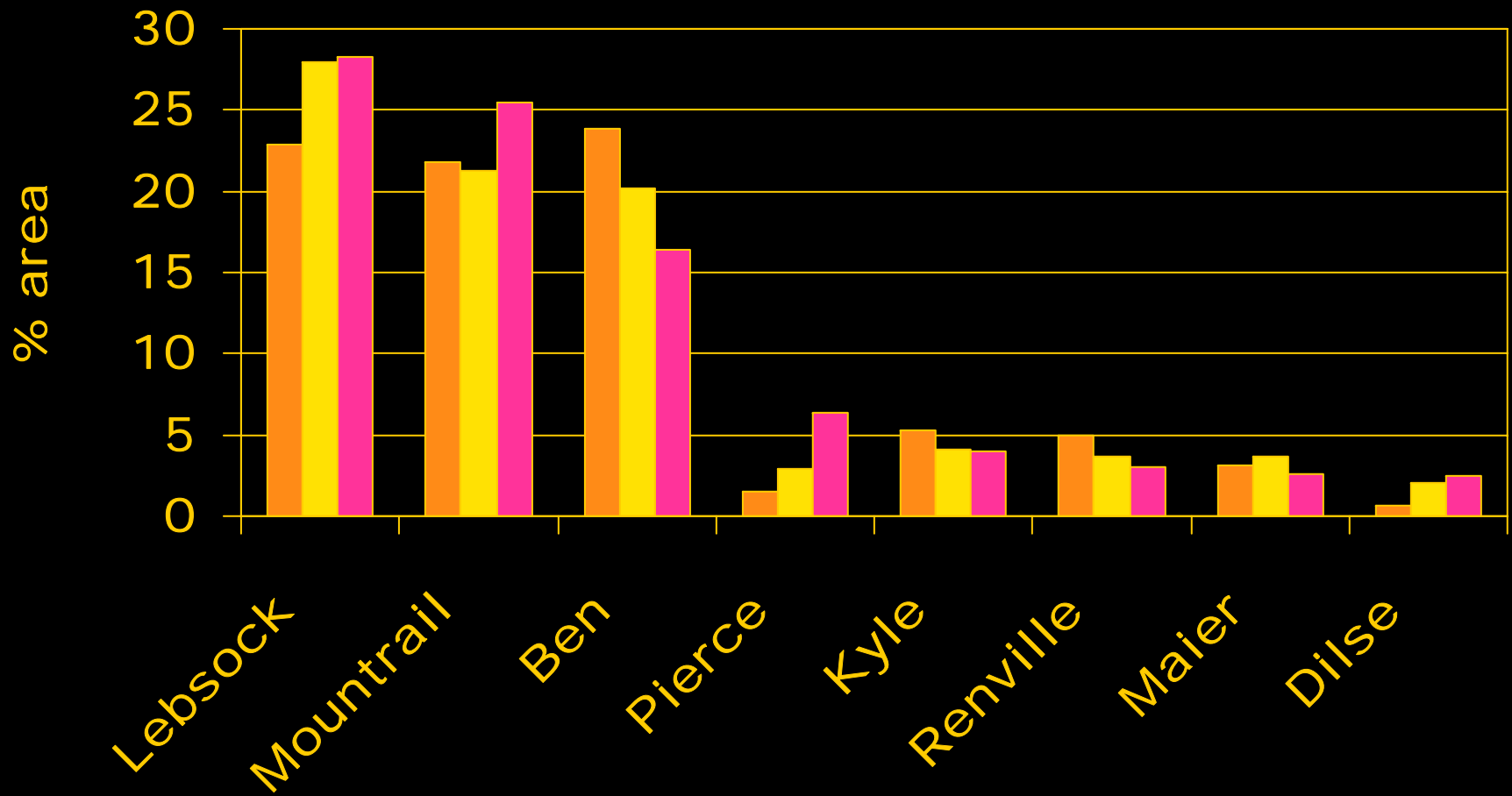


New varieties in 2005

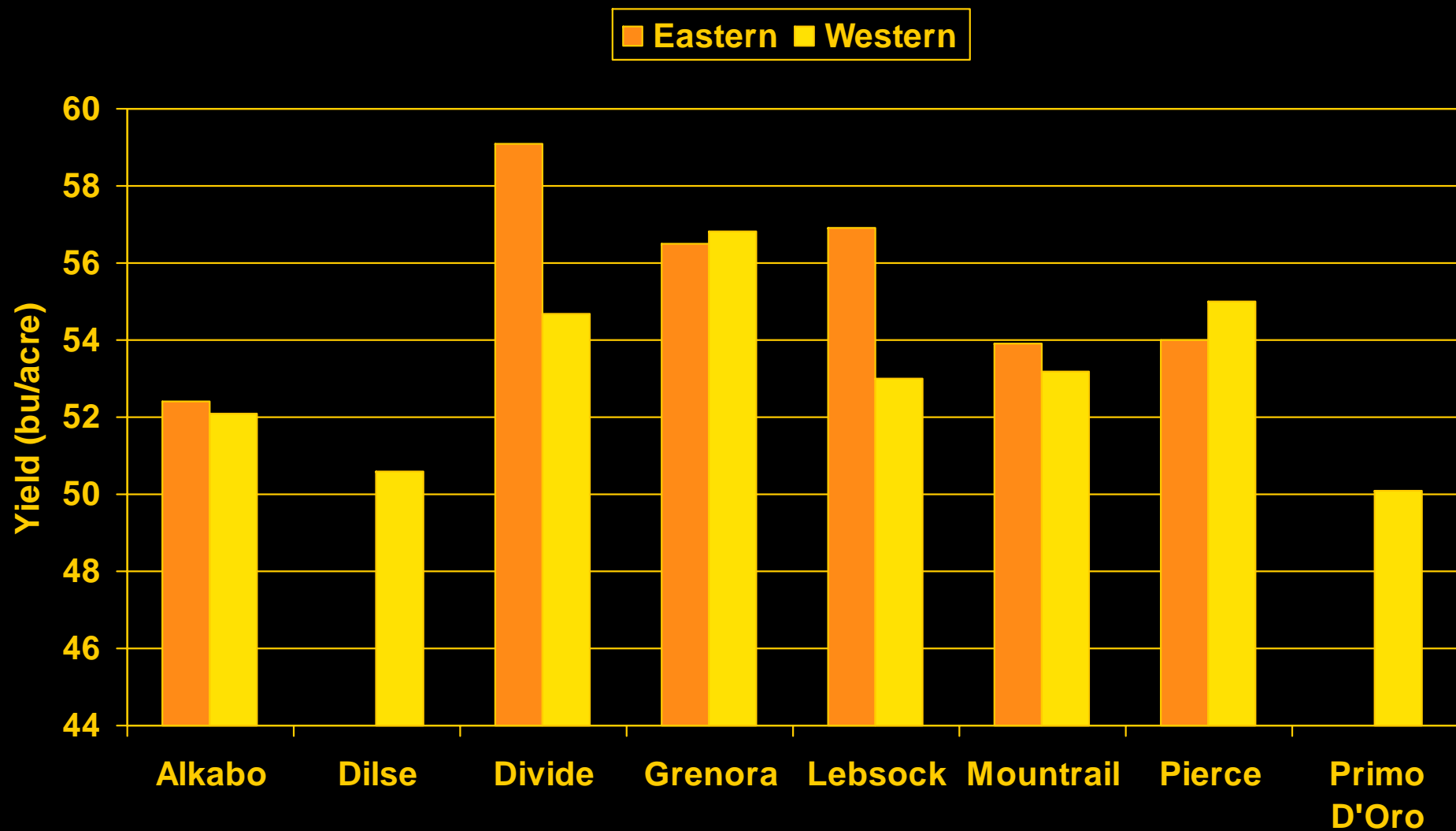
- Alkabo
- Divide
- Grenora
 - NDSU
- Grande D'Oro
 - WestBred/DGP



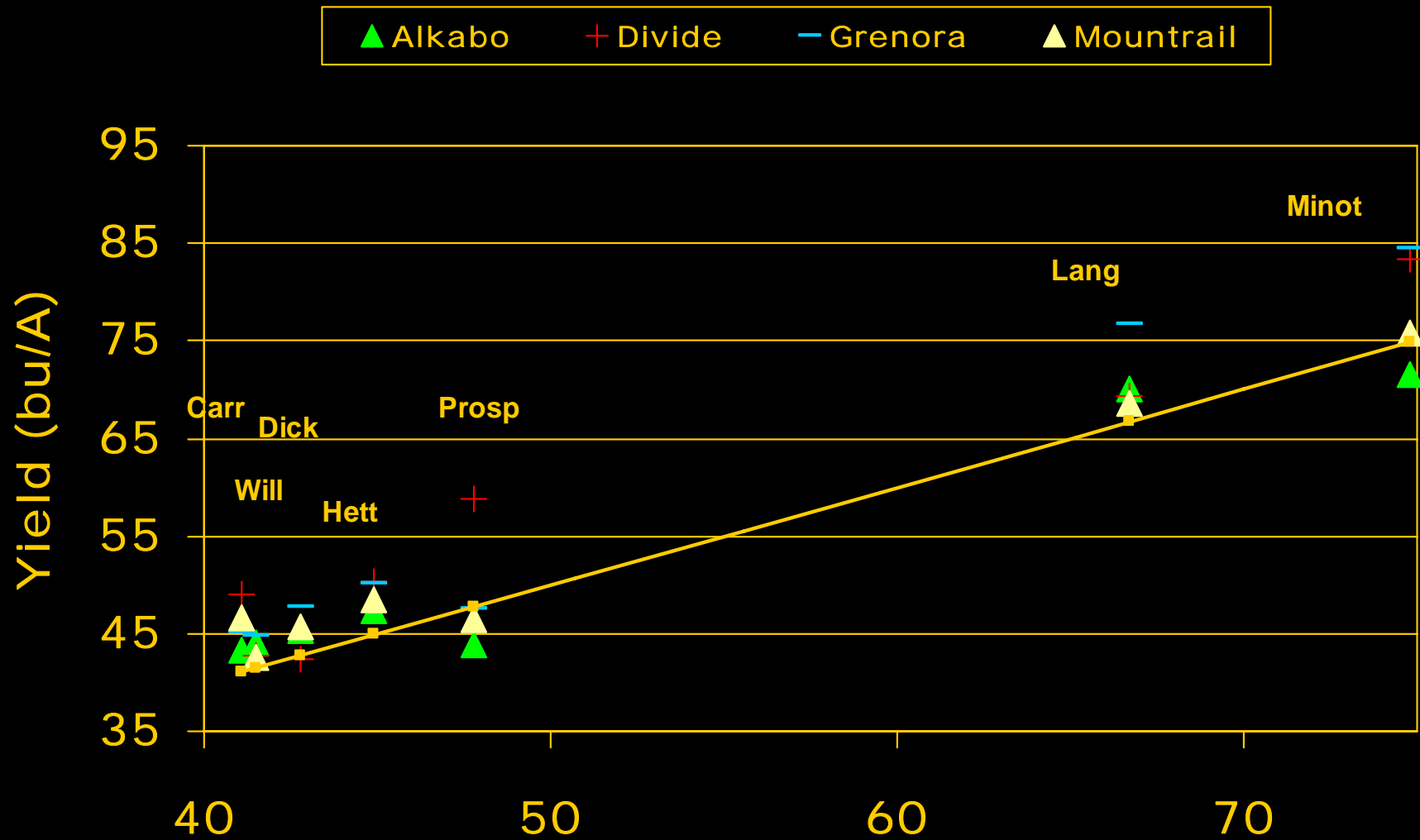
Durum varietal use, 2003-05



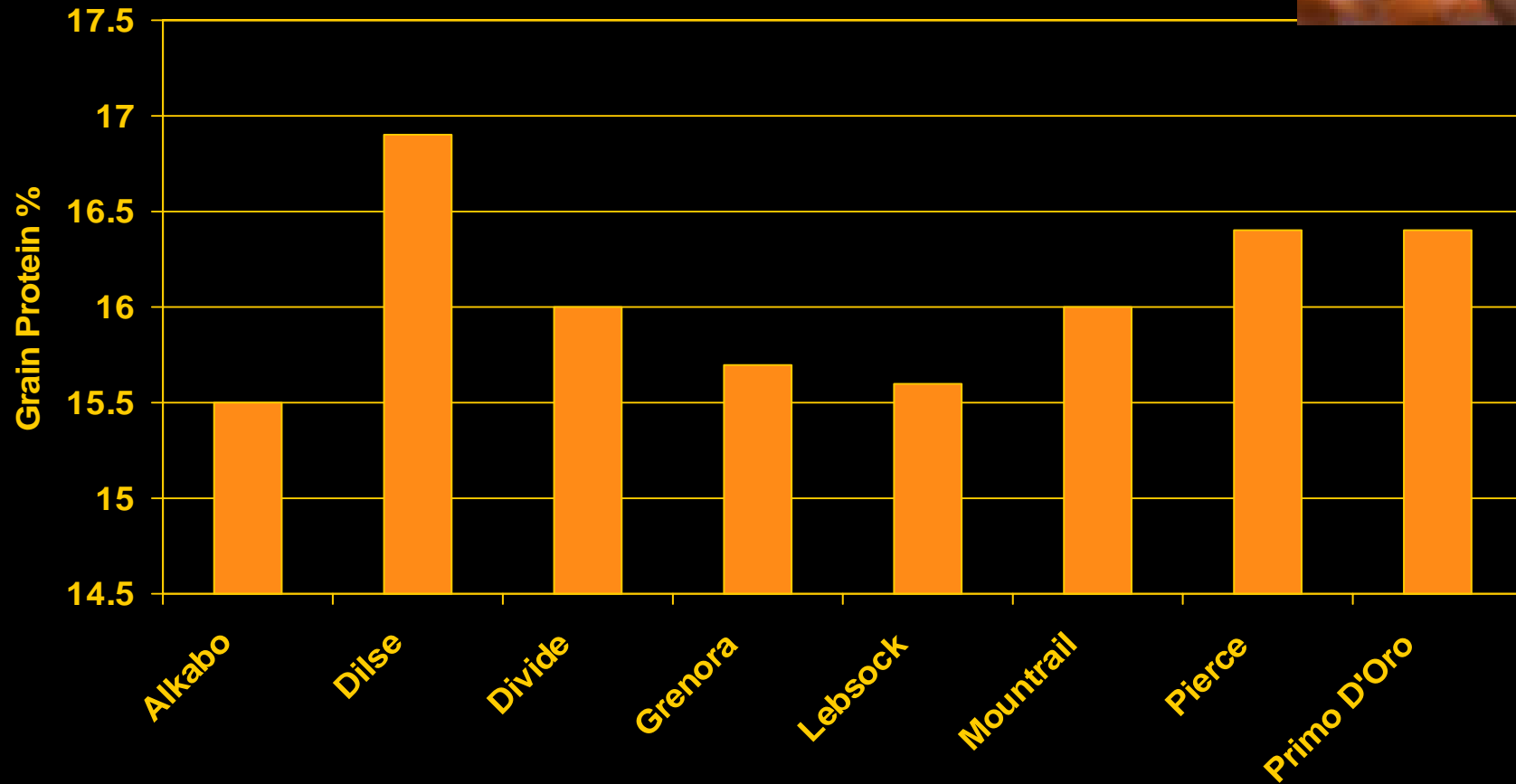
Comparative yield of durum varieties, 2005



Yield stability of new durum varieties, 2005.



Grain protein content of durum varieties, 2005



Durum Picks – *one year's data is risky*

Name	Pluses	Minuses
Divide	Yield, scab rating (MR), protein	
Grenora	Stable yield	MS for scab, protein, test wt
Pierce	Yield and quality	
Lebsock	Yield, test weight	Protein



Hard White Wheat

What is hard white wheat?



- One of 6 economic classes of wheat
- Color in bran is control by three genes, white wheat does not have any of these color genes
- All other genes are similar to those in HRW

Why the interest in white wheat?

- End users prefer some characteristics of white wheat
 - Better flour extraction
 - Whole wheat products have a more appealing color and less bitter taste
 - White wheat bran is less obvious in flour and other products

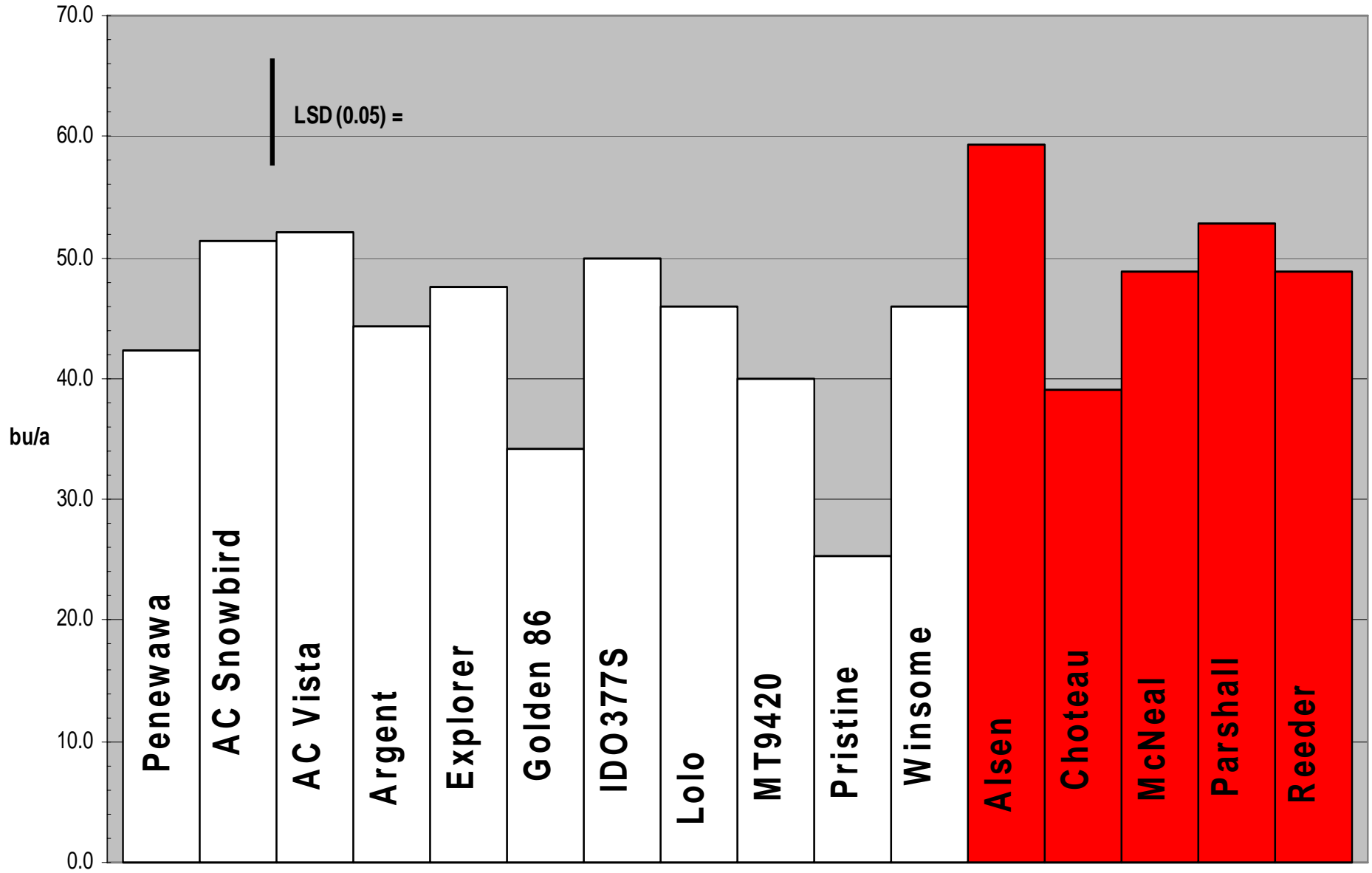


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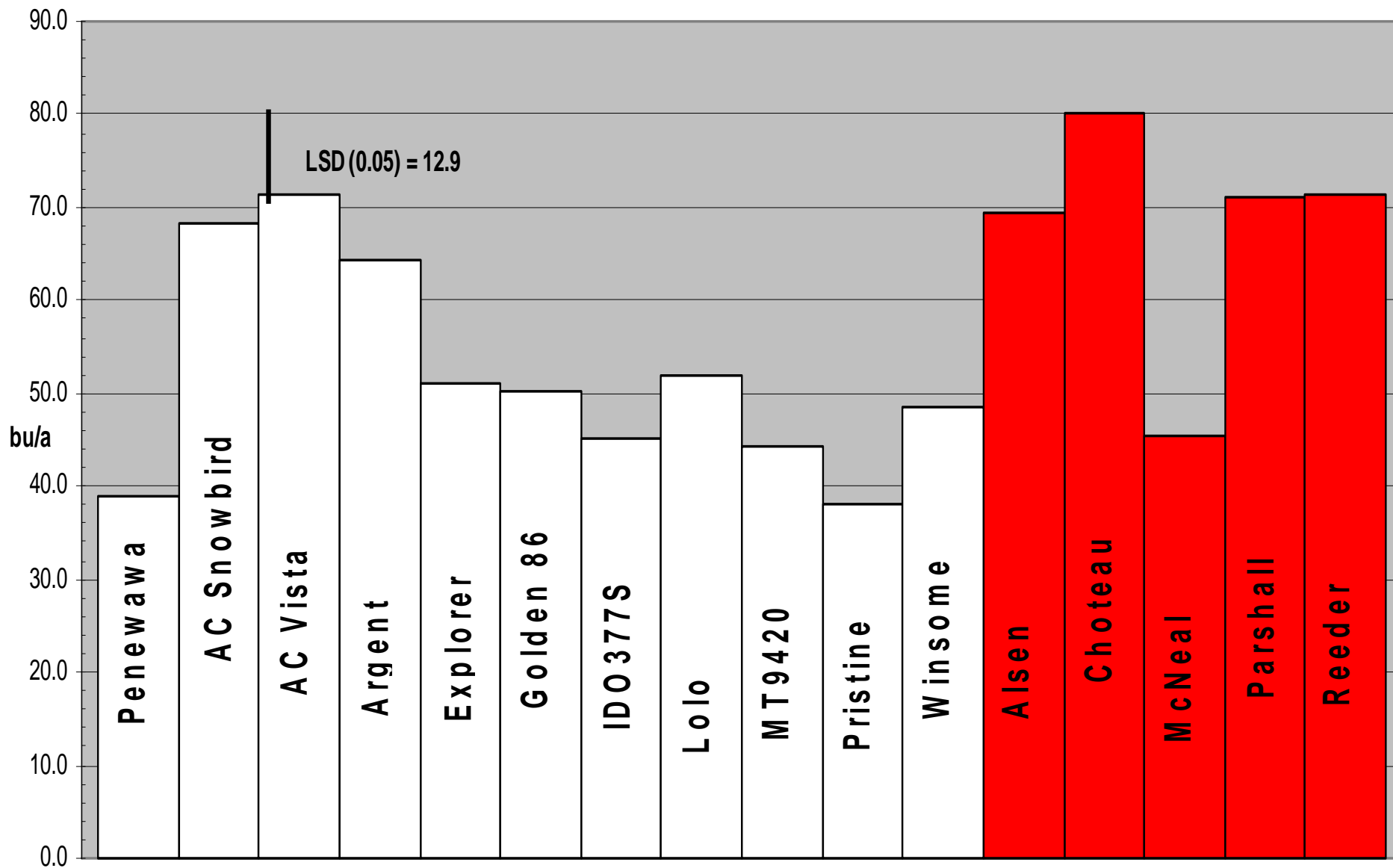
- Demand for wheat in Asia is growing – white wheat is preferred for making some noodles
- Australian hard white wheat currently preferred source for noodles



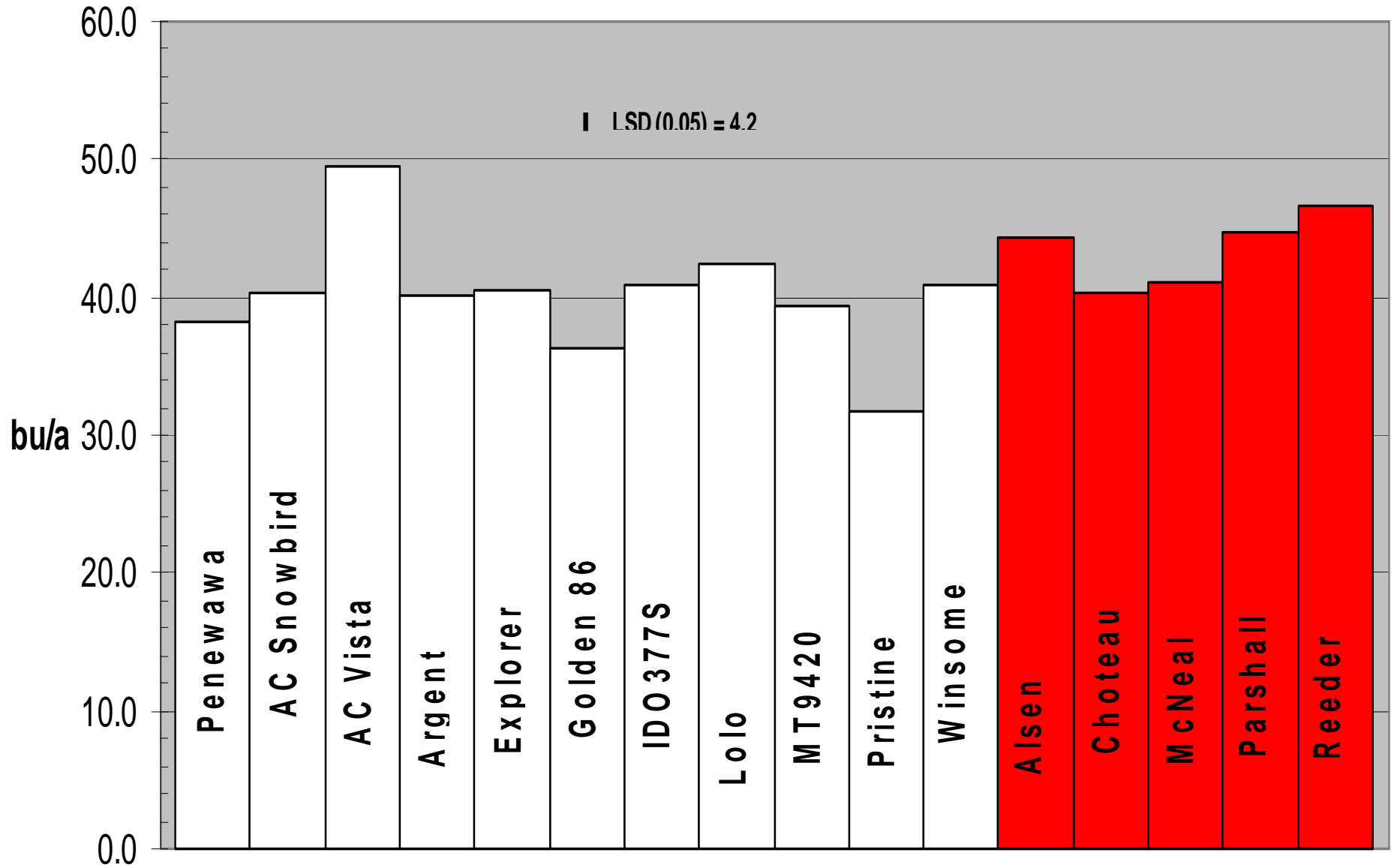
2005 Commercial HWSW Yield Trial, Casselton, ND



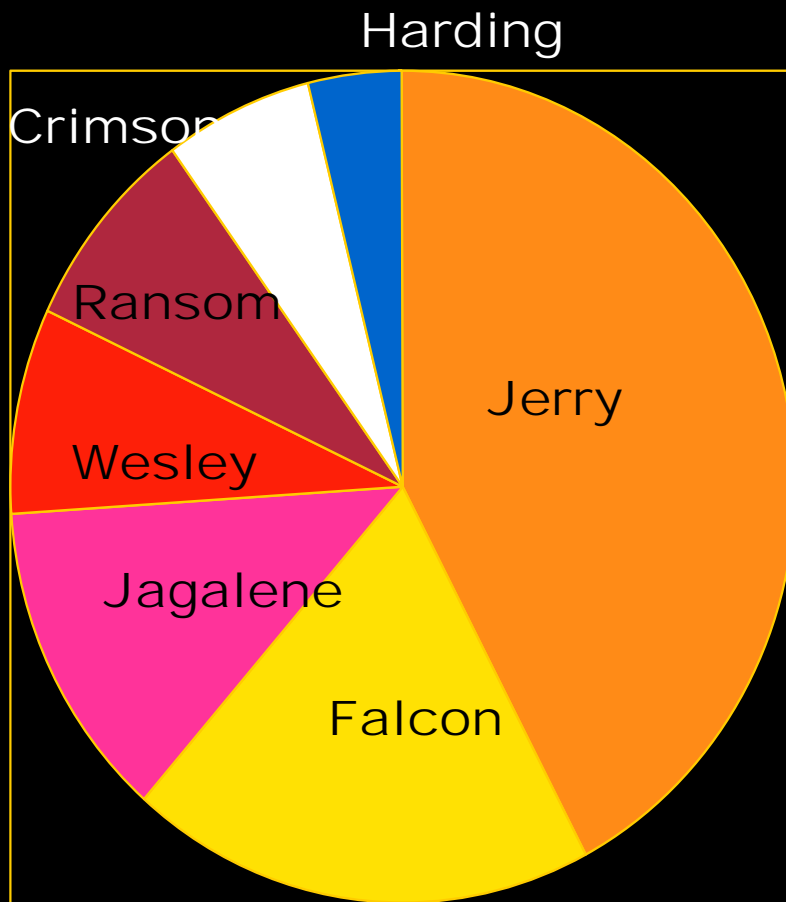
2005 Commercial HWSW Yield Trial, Minot ND



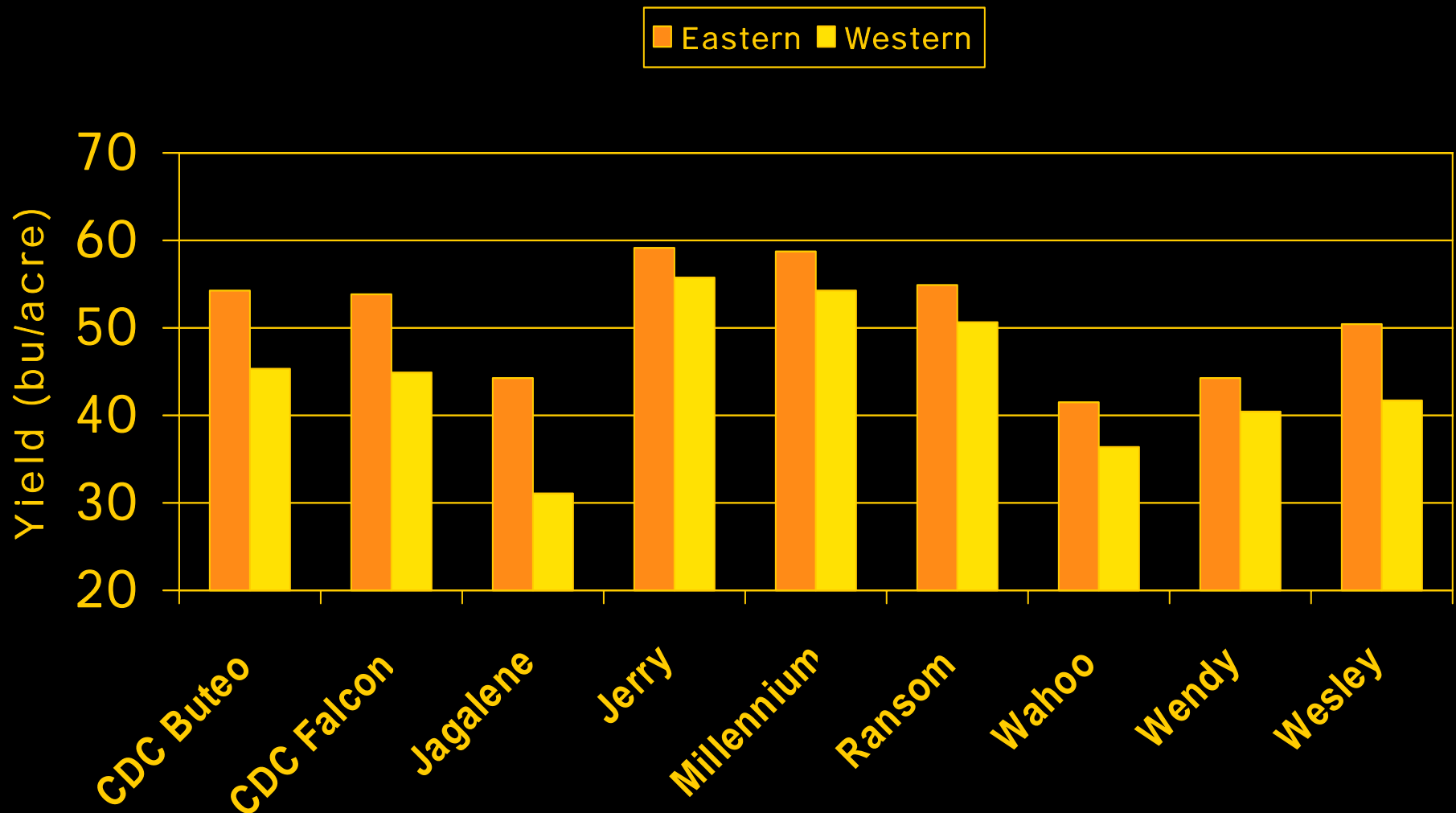
2005 Commercial HWSW Yield Trial, Williston, ND



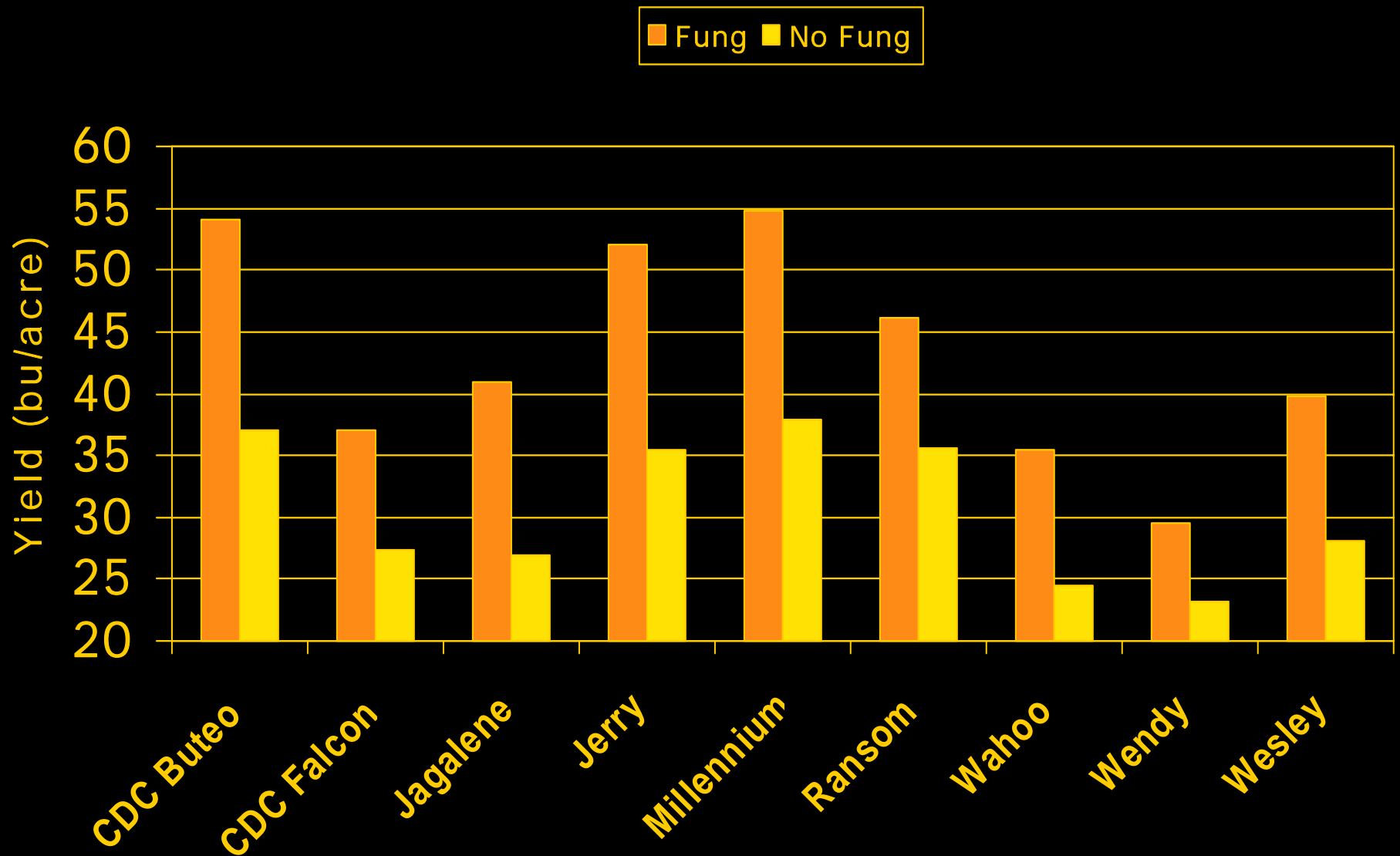
Winter Wheat varietal use



Yield of winter wheat varieties in eastern and western ND, 2005



Yield of winter wheat varieties with and without fungicide, Ransom Co., 2005



Conclusions

- Main challenge in 2006 was disease:
 - Pick varieties with good resistance, even when spraying
 - New varieties differ significantly in their response to disease
 - Data from 2006 should help pick the most resistant varieties
 - Reduce risks by including disease resistance as an important criterion in selecting a variety