

Protein Premiums and Discounts

by
Vance Taylor
ND Mill and Elevator
To the
North Dakota Legislative
Interim Agriculture Committee
Representative Phillip Mueller, Chairman
1/12/2010

Premiums and Discounts for Protein Issues

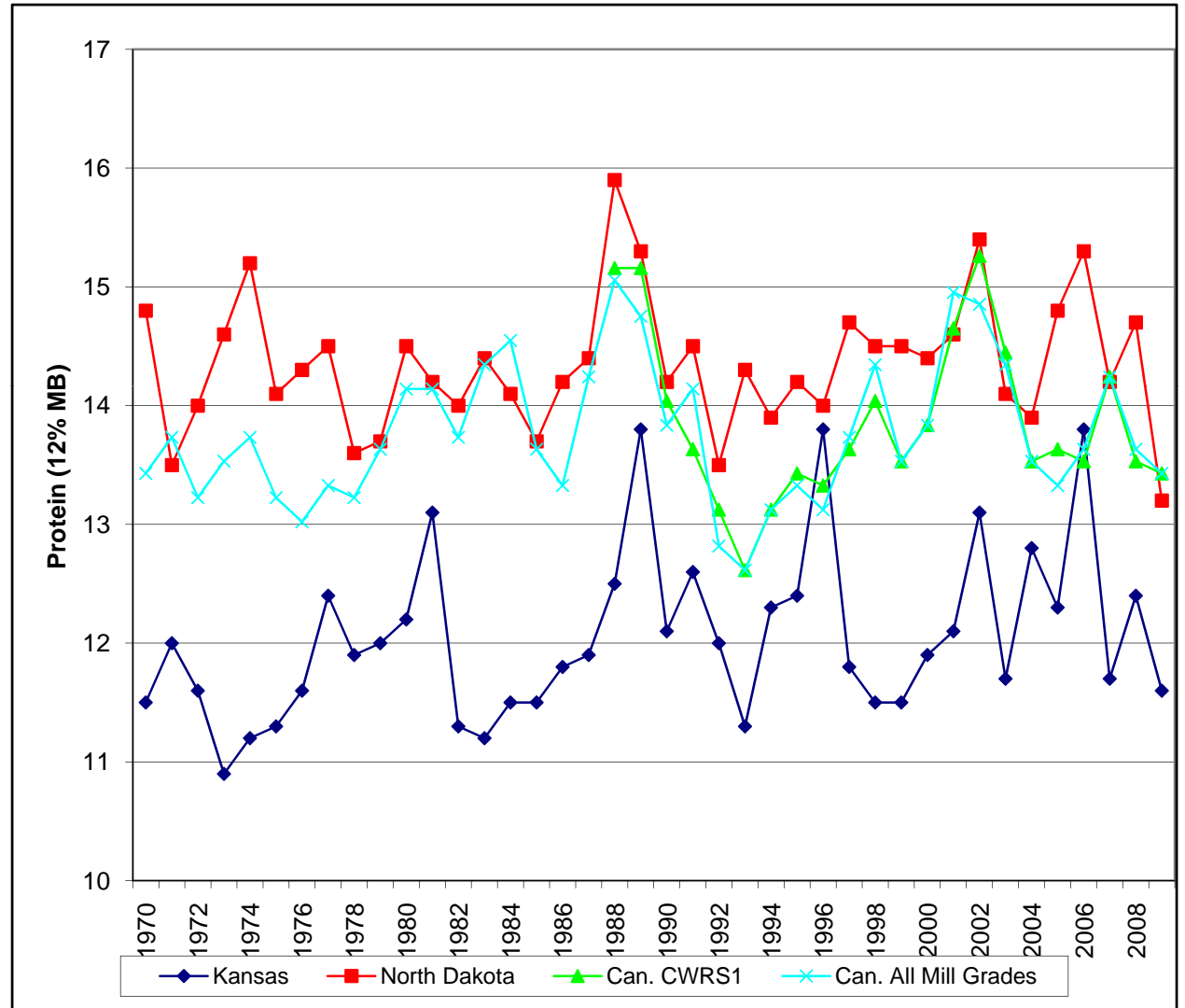
- Ag Producers:
 - Large discounts severely impact wheat producer's returns per acre (but, these are offset in part by concurrent increased yields)
 - Premiums /discounts are typically highly variable, unexpected, non-transparent in some cases and not hedgeable. As a result, discounts are risky, and reduce returns
 - Premiums however, can have a substantial impact on improved returns
- Ag Processors
 - Most sales involve simultaneous purchases of cash grains, and as a result, premiums and discounts have lesser impacts on processors
 - Risks associated with making sales of higher protein flour, and not having the ability to acquire higher protein wheat
- Discounts and premiums:
 - While much attention is on discounts, it should be emphasized that there are concurrent premiums for higher quality wheat which should be viewed favorably
- Other grains and quality factors (non-protein factors in wheat; vomitoxin and malting barley; corn and toxins which impact feeding and DDGs)
 - Issues of wheat protein are not dissimilar from other factors, and from what is occurring in other grains
 - Markets have become extremely responsive to quality, including:
 - growers responsiveness to market signals, albeit in some cases lagged
 - Quality requirements of end-users which have escalated

Topics

- Supply conditions for protein
 - 2009 is a year in which the major sources of hard wheat protein each had near record low levels
- Definitions: Basis and Protein Premiums
 - Clarify difference between these terms
- Premiums and Discounts for Wheat Protein
 - Comparison across years
 - Seasonal
- Outlook

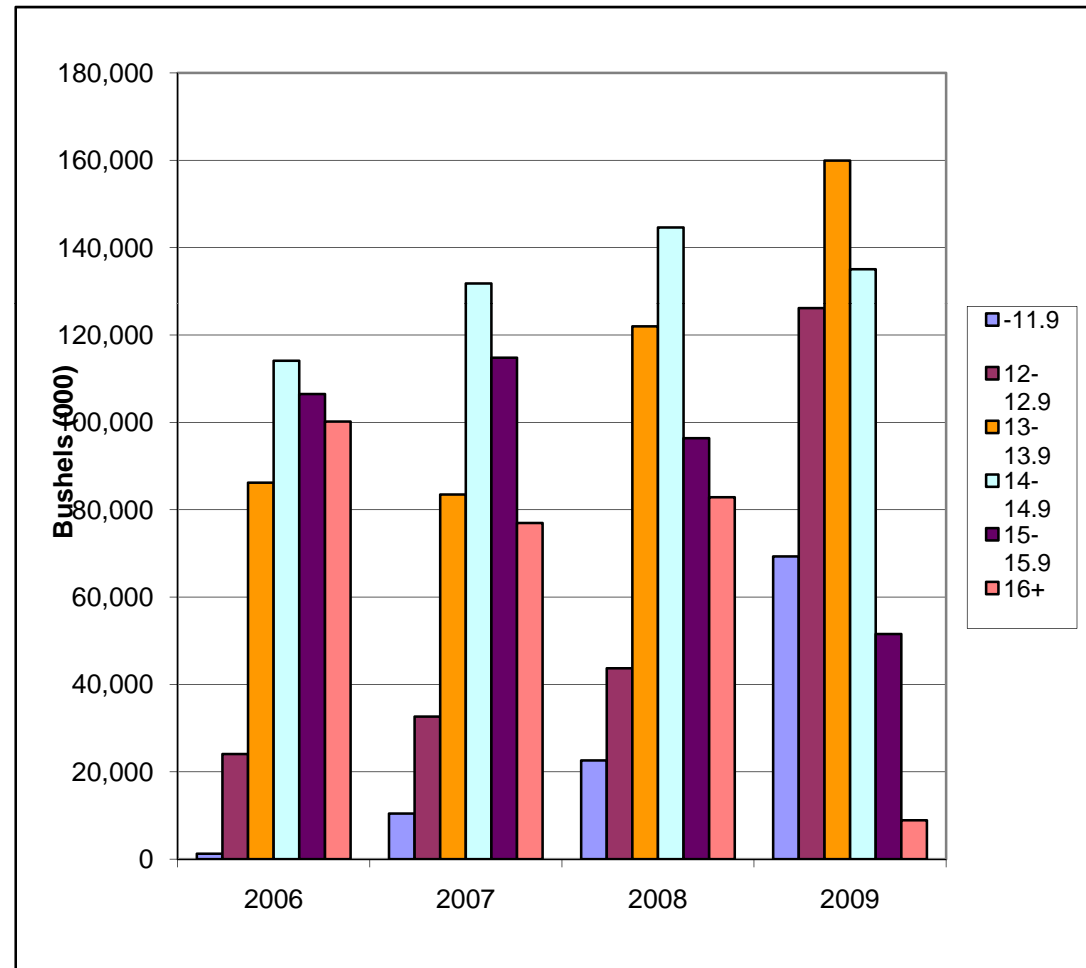
Supply of Protein for Hard Wheats in N. America

- 3 sources of supply for protein in Hard Wheats in N. America (HRW, HRS and CWRs)
- Typically, flour produced from HRS requires wheat in the 14% level, and as such commands premium relative to all others
- 2009 protein conditions
 - Lower levels in HRW, and Canada; and record low levels in HRS in ND
 - Lower HRS protein impacted by
 - Growing conditions
 - Lesser fertilizer
 - Adoption of lower protein varieties in some regions



Quantity of HRS By Protein Category

- Production and yields were unexpectedly large in 2009
- The combination of larger supplies, and lower average protein levels altered the distribution of supplies of different protein levels
- Compared to recent years
 - A large increase in 13% protein and below
 - Supplies of 14% were normal
 - Supplies of wheat with greater than 14% protein were severely reduced
- Impact: Market responded by widening premiums and discounts
 - Premiums for 14's and above went to very high levels; and
 - Discounts for lesser protein went larger than normal



Price Reporting

- Various mechanisms exist for price reporting. These include highly transparent price reporting for futures.
- Public price reporting exists at some terminal markets. These have lesser transparency than futures, but greater transparency than more local cash markets. Traditionally, prices are reported daily for 13-15% protein; but, recently began reporting values for 12% protein
- Prices quoted at local elevators are largely reflective of these market conditions.
 - Also reflect local market conditions
 - Are the basis of transactions with growers

Market	What is reported
MGEX Futures	Prices for futures as defined above
Below have public price reporting mechanisms through the USDA AMS	
MGEX Cash Market	Prices for cash transactions; including premiums and discounts for protein, and other factors
Other Terminal Markets (Portland, KC, etc)	Selected cash prices, but, not specific with respect to premiums and discounts
Below do not have public price reporting mechanisms	
Local elevators and individual mills	Prices for cash transactions, including premiums and discounts for deviations from milling quality specifications

Market Specifications

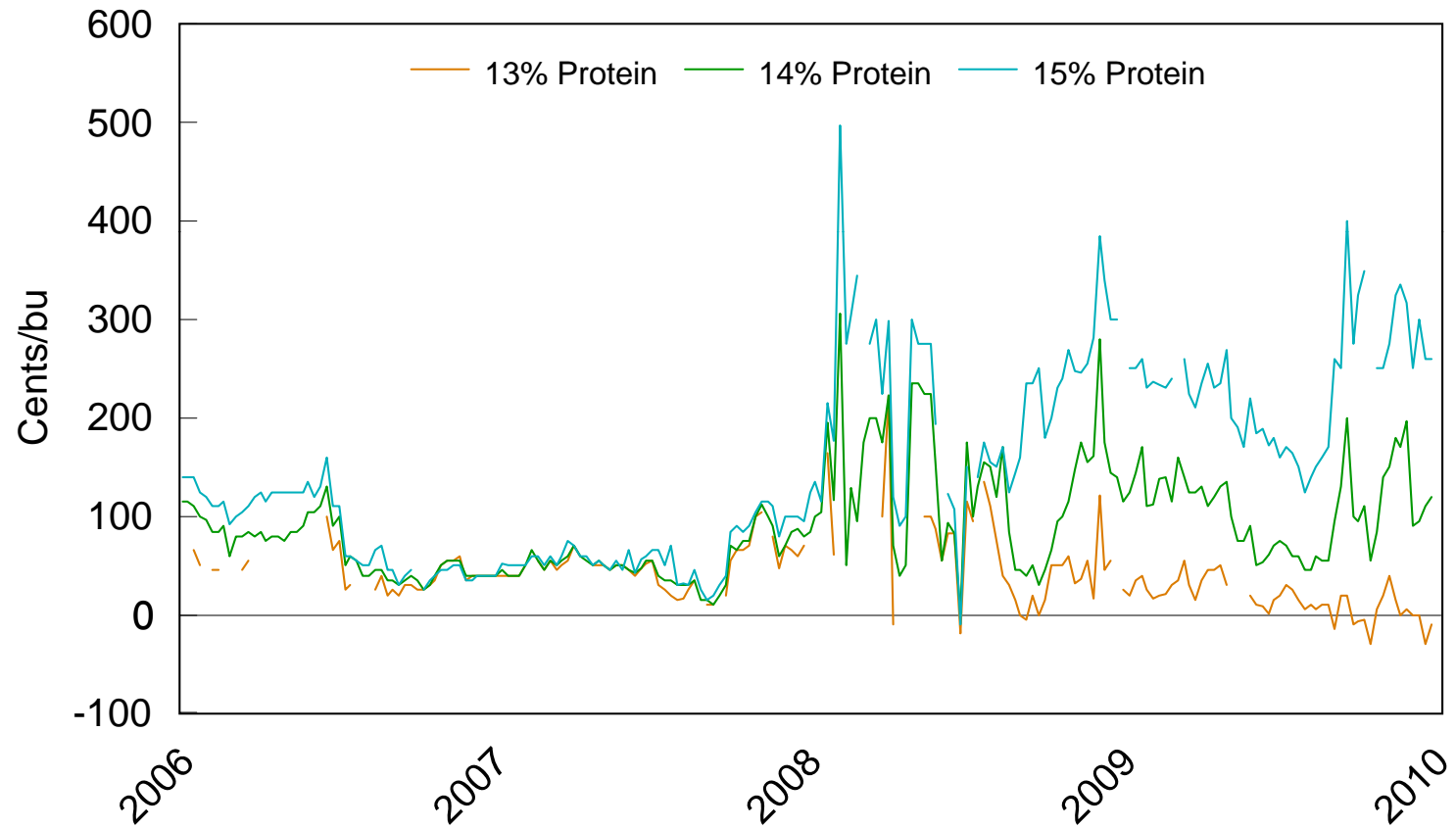
- Premiums and discounts emerge as price differentials in the cash and futures market
- Futures has a lower specification than that required in the cash market which is commonly referred as *Milling Quality*
- Differences between cash and futures market values is referred to as the *basis* and used for price quoting in buying/selling grain
- Price differences arise attributed to the differences in these specifications

MGE Futures Delivery and Cash Wheat Specification		
Factor	Future Delivery Specification	Milling Quality Wheat (Cash) Market Specifications
Grade	No. 2 NS (ob)	No 1 DNS
Protein	13.5% or 13% at 3c/b discount	13-15%
Test Weight	58 or 60 ob @+2c/b	58 lbs
Moisture	<13.5%	<13.5%
Falling Numbers	Not specified	>300
Vomitoxin	Subject to FDA	<2 ppm
Damage	Grade limit	<1.5%
Dockage	<1.5%	<1.5%

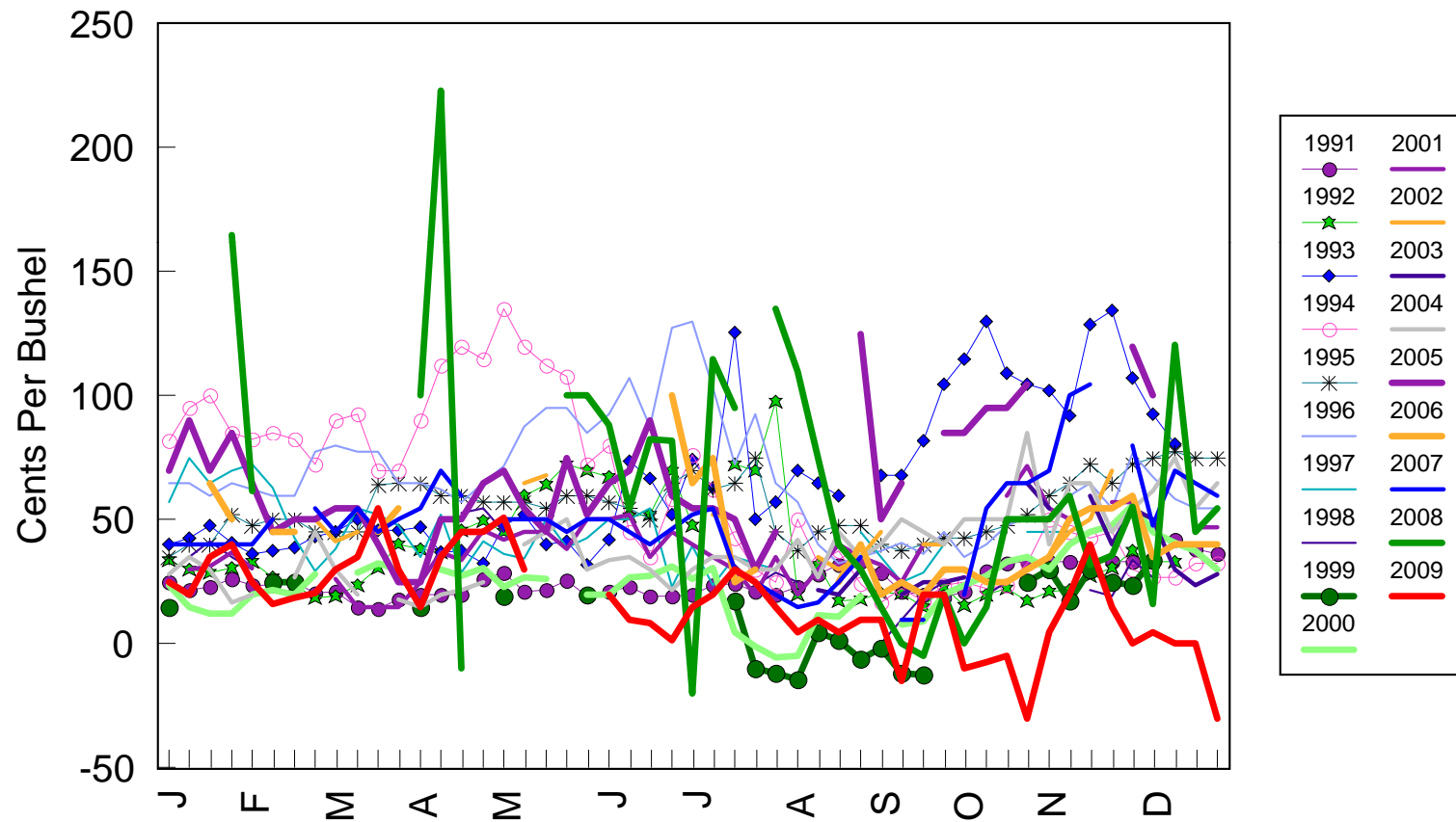
Basis and Protein Premiums

- Charts to follow. Major points are
 - Basis for HRS 14 and above increased sharply following harvest; more recently premiums have been declining. Ultimately this follows typical seasonal patterns counts for 13s increased sharply following harvest
 - Typically, 13s have a basis of about 0c/b (due in part to the delivery mechanisms at MGEX futures)
 - Discounts for 13s vs. 14s are greater than normal, and highly volatile in 2009
 - Normally, this spread is about -25c/b
 - Following harvest, this discount increased to -180c/b, and then increased back to the -100c/b range
 - More recently, it has ranged from -200 to -80c/b

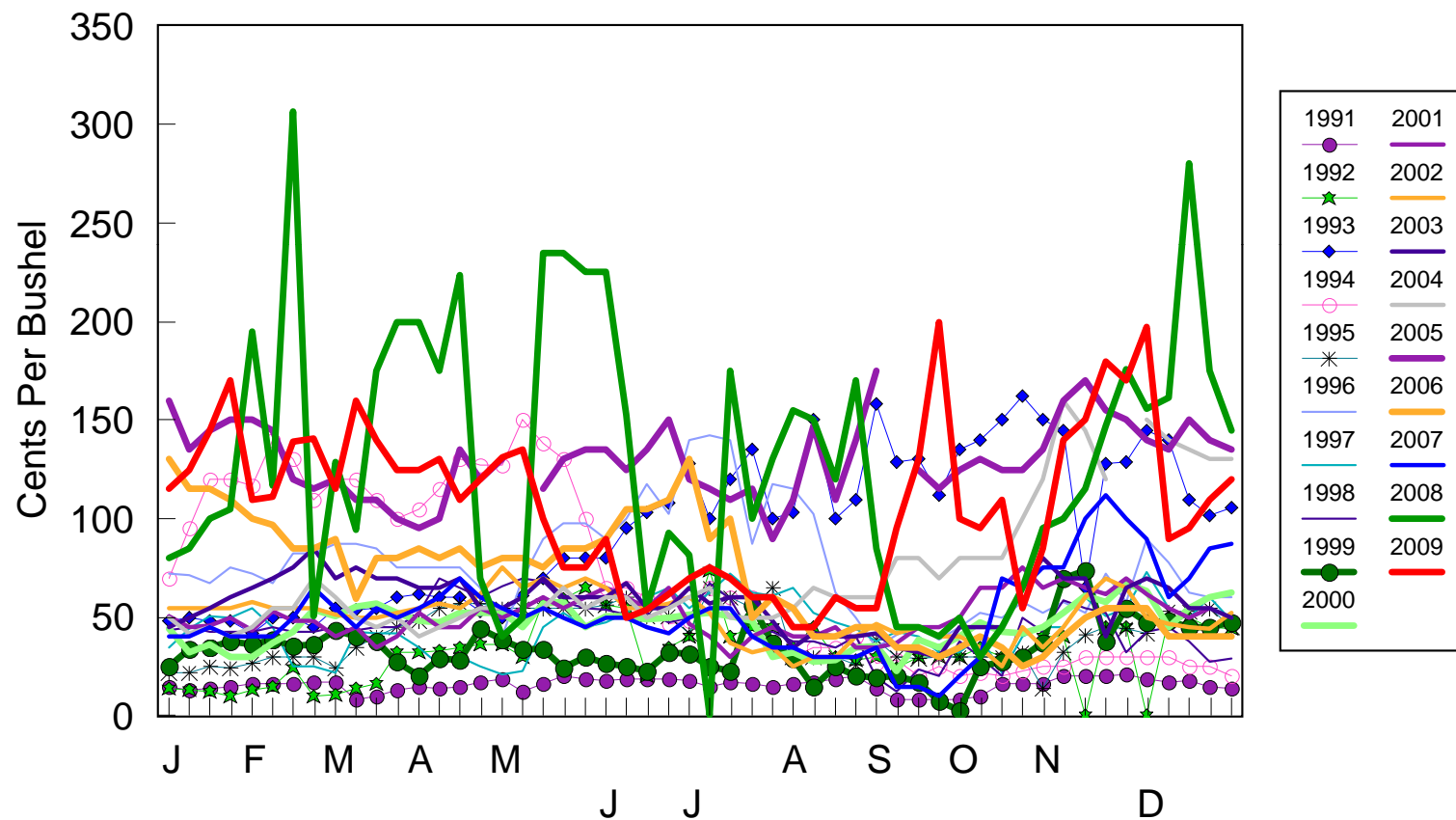
Mpls. Protein Basis 2006-2010



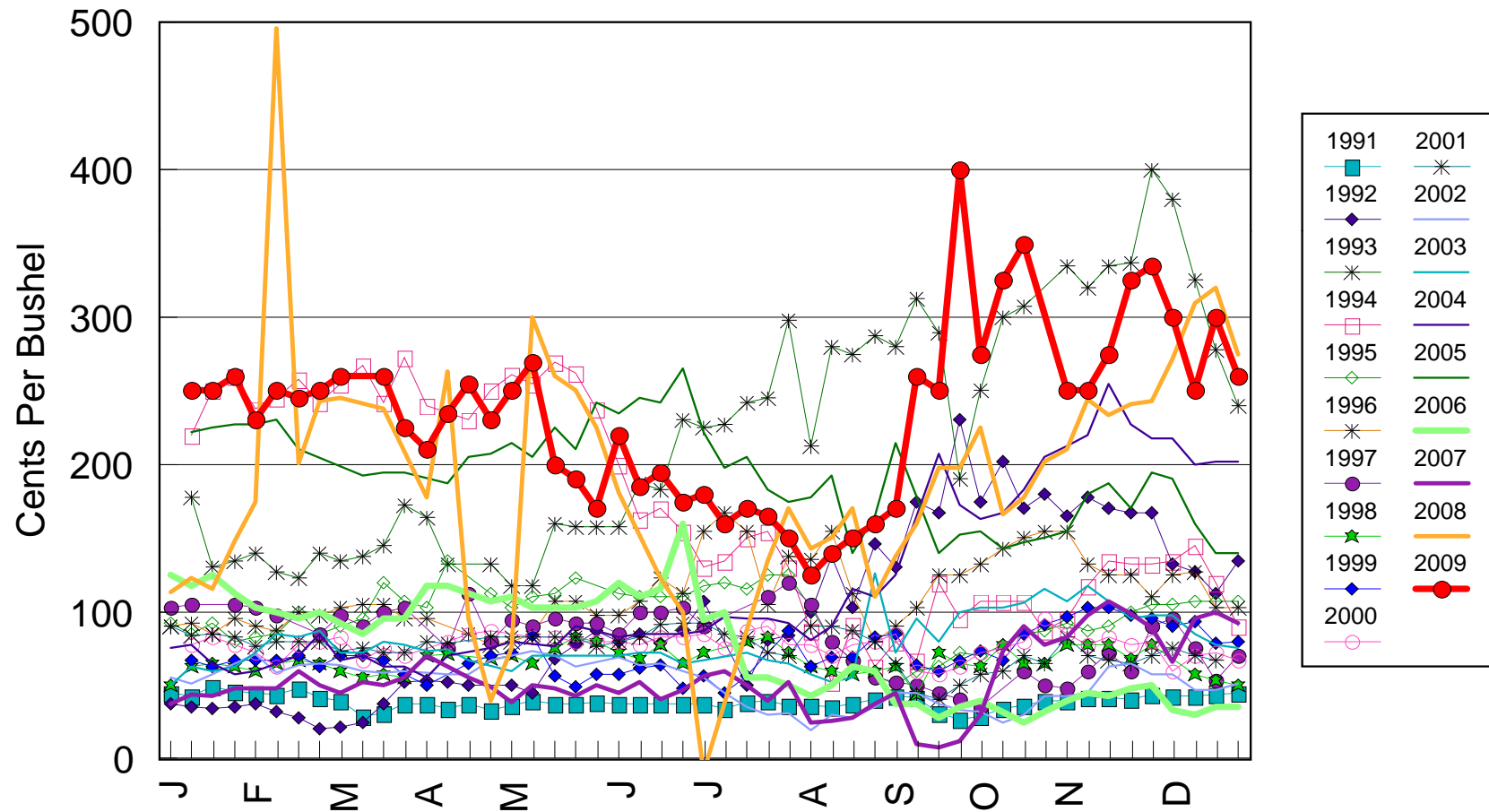
13% Wheat Basis Mpls Relative to Nearby Mpls Futures



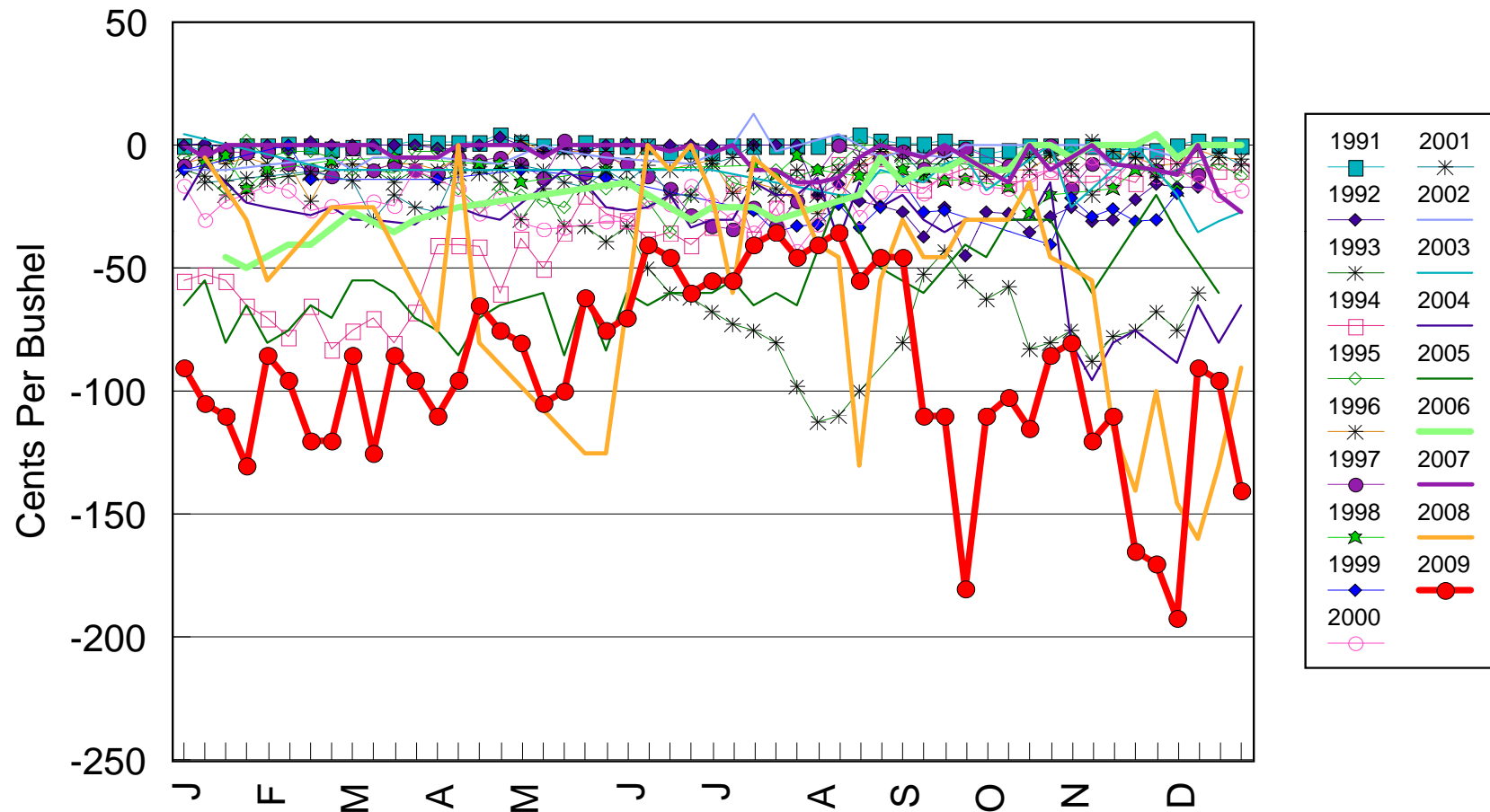
14% Wheat Basis Mpls Relative to Nearby Mpls Futures



15% Wheat Basis Mpls Relative to Nearby Mpls Futures

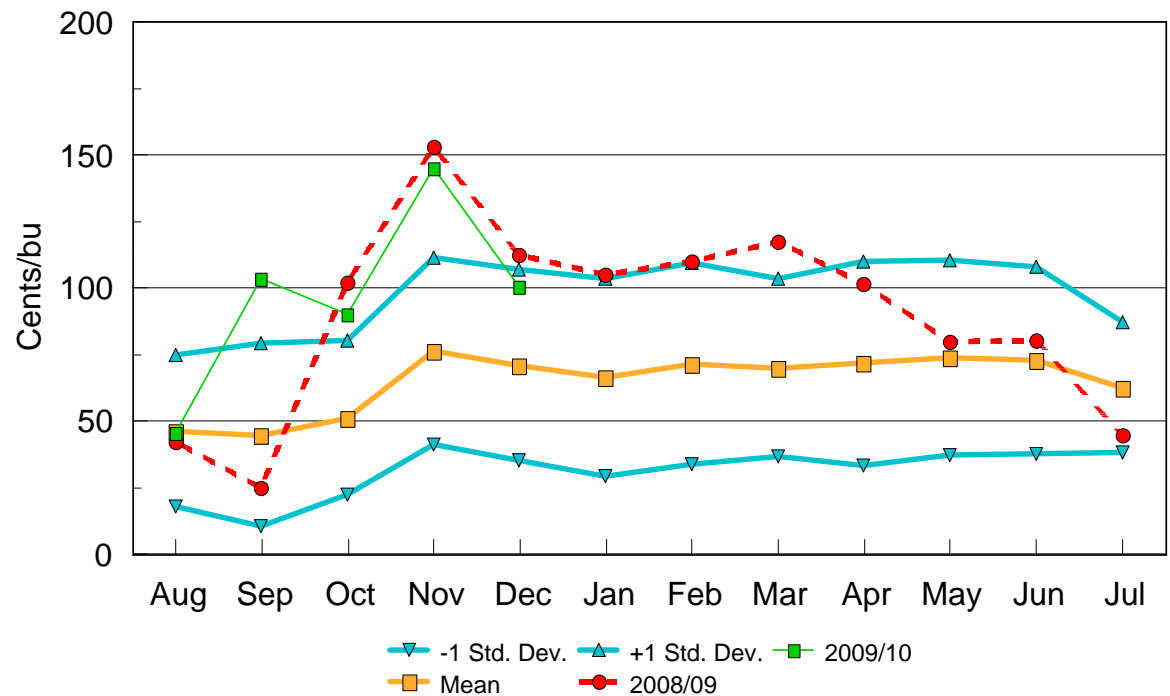


Wheat Protein Spread (14-13)



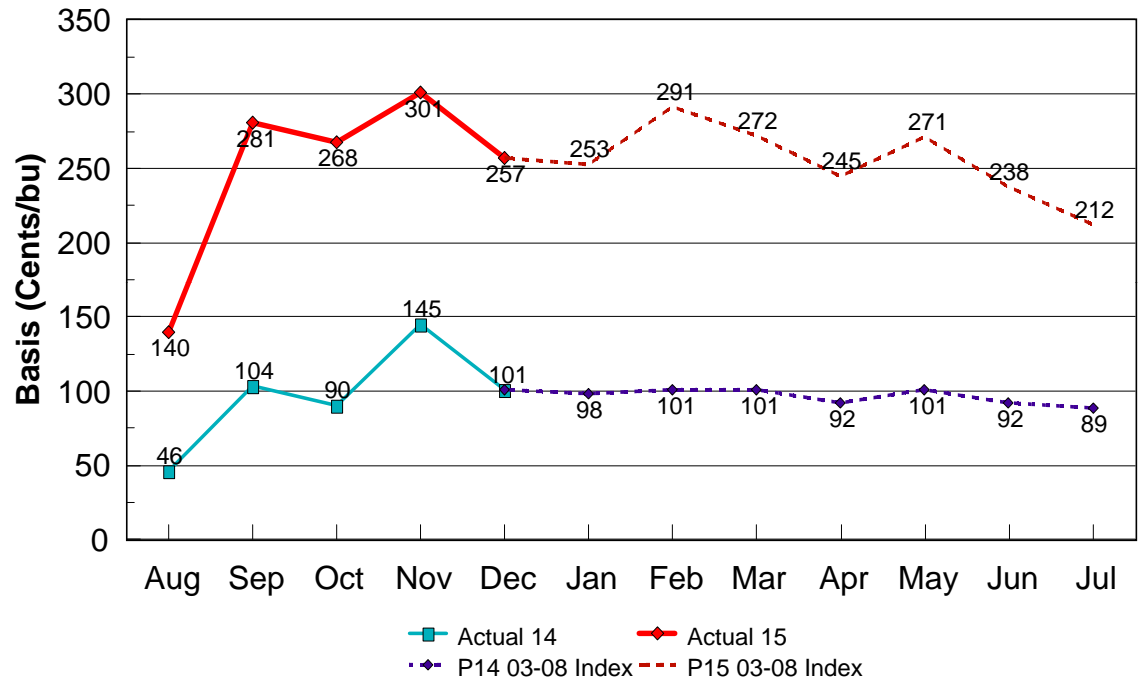
14% Basis Behavior for Mpls Average of 1998-2007 compared to 2008 and 2009

- The average basis has a fairly predictable behavior as shown
- 2008 and again in 2009, the basis increased to near-record highs during November (illustrated here and above)
- Since then, they have moderated down, but, remain high by historical standards
- Outlook: typically, there is a moderate increase in basis through March, and then basis declines as the HRW harvest approaches



Seasonal projections of basis values

- Basis and premiums are highly seasonal. Typically, increasing from a harvest low, to a seasonal peak in November, and then declining
- The rate of increase in November depends on the supply of protein
- The rate of decline from March to July is in anticipation of new-crop HRW harvest, and depends on the outlook for that crop



Summary

- Wheat markets in 2009 have been severely impacted by the reduced supply of protein in hard wheats.
- Premiums and discounts for protein responded:
 - Responses in the premium/discount market have been virtually all a response to the reduced supplies of protein
 - Discounts became very large, and volatile
 - Premiums escalated to near record high levels, but generally followed typical seasonal patterns
- Observations
 - There appears to be an escalation in volatility in premiums and discounts
 - Mechanisms for reporting premiums/discounts may not be as robust as typically, in part due to changes in the industry structure (fewer buyers; shuttle transactions etc)
 - Adopting of higher yielding varieties in traditional HRS growing regions, has the impact of exacerbating discounts. This will likely continue as this wheat has to compete in the larger lower protein markets
 - For HRS, HRW and Durum wheat in the Dakotas, as well as for other grains (e.g., malting barley), quality supplies, requirements of end-users will continue to be of great significance to growers, merchandisers and processors.