

## **24. The New Farm Management Challenge: Pricing in Volatile Markets**

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*Arlo Biere, Ph.D., is professor of agricultural economics and director of the undergraduate program in the Department of Agricultural Economics. He teaches agricultural market structures and business market strategy (AGEC 505) and agribusiness logistics and supply chains (AGEC 632 and AGEC 730). His research deals with agribusiness supply chain issues and strategies.*

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*Michael Langemeier is a professor of Agricultural Economics at KSU. He has been on the faculty at KSU since 1990. Extension and research interests include benchmarking of technical and financial performance, strategic positioning, and economies of size. In addition to his extension and research program, Michael teaches courses in Farm Management, Production Economics, and Managerial Economics.*

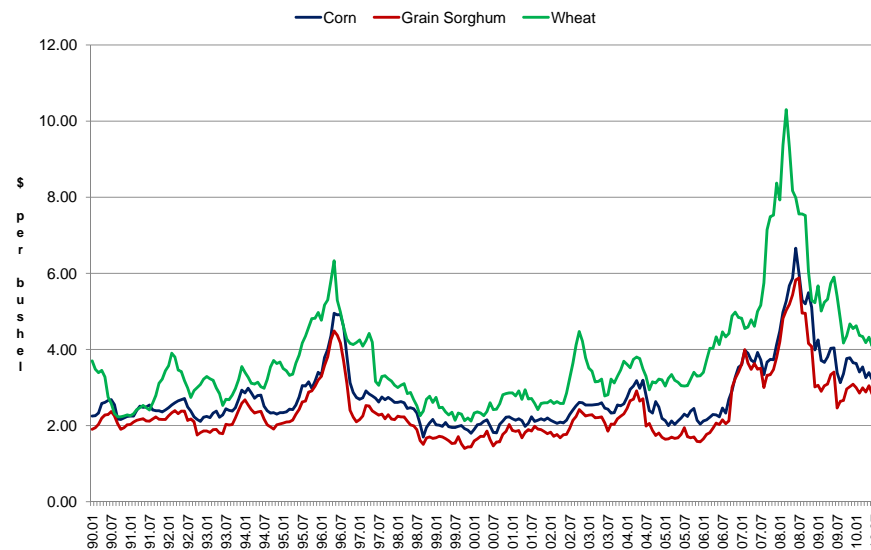
### **Abstract/Summary**

*Until recently, the key drivers of farm profitability were production efficiency and cost management, financing and asset management. Because market prices were relatively stable with moderate fluctuation, marketing was not a key driver that most producers focused on. Over the past three years markets—for both commodities and inputs—have been reacting violently. For example the price of corn for July 2010 on the Board has ranged from less than \$3.40/bu. to \$7.20 per bushel. While volatility may be easing, the need to improve farm marketing for outputs and inputs is apparent. With marketing there is no magic formula and the thought processes are different that for most farm decision making. This session will introduce some of the aspects to consider and promote a discussion and sharing among participants.*

# Pricing in Today's Volatile Ag Markets

Arlo Biere  
 Michael Langemeier  
 Todd Ziegler  
**Risk and Profit Conference**  
**August 19-20, 2010**

Historical Feed Grain Prices



## Competitive Advantage

		Relative Price Per-Unit		
		Lower	Average	Higher
Relative Cost Per-Unit	Lower	1 Indeterminate Position	2 <b>Competitive Advantage</b>	3 <b>Competitive Advantage</b>
	Average	4 <b>Competitive Disadvantage</b>	5 Parity Position	6 <b>Competitive Advantage</b>
	Higher	7 <b>Competitive Disadvantage</b>	8 <b>Competitive Disadvantage</b>	9 Indeterminate Position

Hunt, 2000

## Plan for Session

- Present some thoughts about pricing
- Present some avenues or tools for personal development in making buy and sell decisions
- Examine KFMA whole-farm and enterprise data
- Participant discussion of pricing differences and alternatives

## Preliminary Points

- Studies of the brain and learning demonstrate our dual nature when making decisions
- Pricing is much different from production decisions
- Today, pricing is more critical than ever
- What do we do to improve pricing performance?

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## The Brain and the Dual Self Model

- Compared with other mammals, humans have a much larger cerebral cortex
- Research using functional magnetic resonance scanning (fMR) shows that different parts of the brain are active for different types of activity
  - Areas of the prefrontal cortex are associated with rational, higher cognitive thought.
  - The more central limbic system is the immediate reward system.

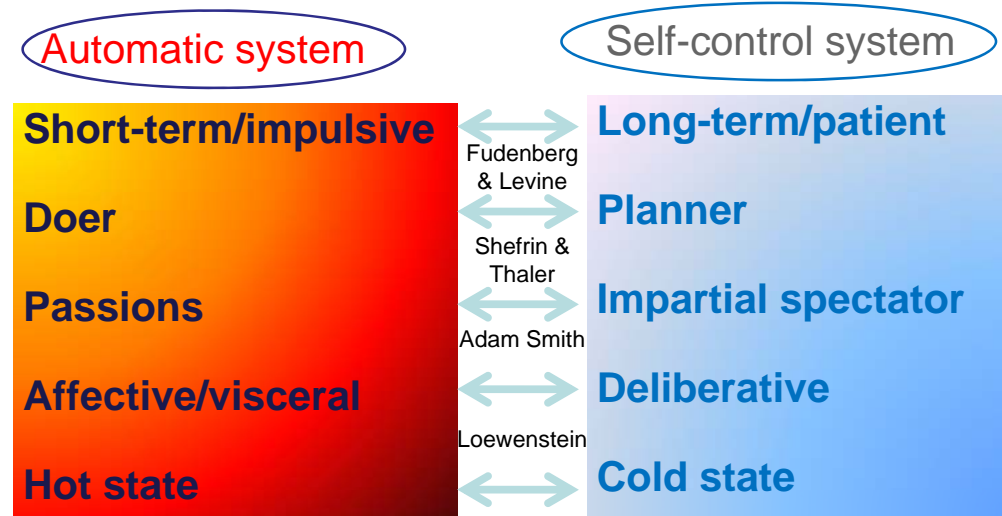
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## One May Invoke

- **Automatic Processes**
  - Susceptible to impulses or temptations
  - **Central limbic system**
- **Self-Control Processes**
  - Immune to such temptations
  - **Prefrontal cortex**

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## Examples



Bernheim & Rangel; Loewenstein

Slide from: Russell James III, J.D., Ph.D.

## We Have the Choice of Which to Use

- Automatic Processes
  - Susceptible to impulses or temptations
  - Central limbic system
- Self-Control Processes
  - Immune to such temptations
  - Prefrontal cortex

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## Relevance to Farm Management

- Production decisions are unlike pricing decisions
  - Production decisions and processes are based on steady knowledge with less risk and uncertainty.
    - Weather is the major source of risk, experience helps us cope with its impact.
    - It is easier to use self-control processes.
  - Future prices are unknown and unknowable. Because of this, thinking and deciding about marketing is much different, and therefore it is easy to call on the automatic or emotional system instead of the rational system in one's brain.

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## Examples of Market Risk and Uncertainty

- Fear
  - Fear that if I sell today the price will increase tomorrow.
  - Fear that since I did not sell yesterday at the higher price, the price may be even lower tomorrow (look what I “lost”).

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## Examples of Market Risk and Uncertainty

- Risk
  - What will be my yield?
  - What will the basis be, next month, next year?
- Uncertainty
  - How do I know what will happen in the future?
    - Will there be a drought or a flood?
    - What will other counties do?

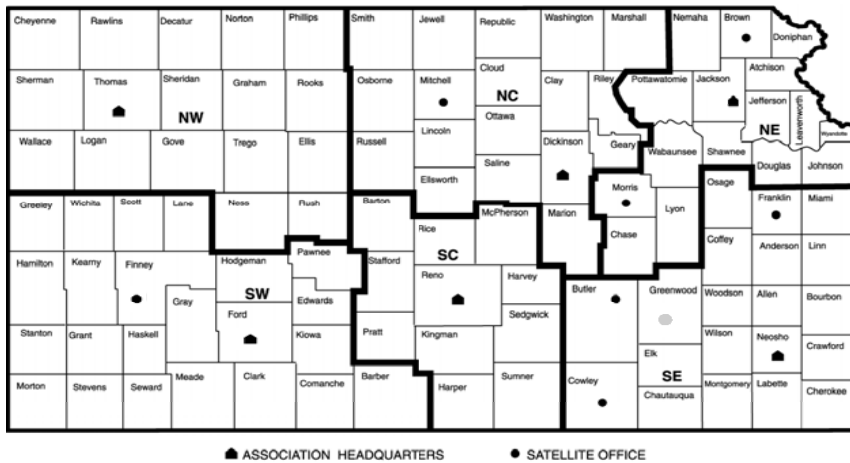
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**Note the emotional content in the previous two slides!**

## KFMA Data

- **Whole-Farm**
  - KFMA farms with both wheat and grain sorghum from 2005 to 2009
  - Farms categorized using economic total expense ratio (ETER)
- **Wheat Enterprise**
  - Profit Thirds
  - Relative Importance of Price

Kansas Farm Management Associations



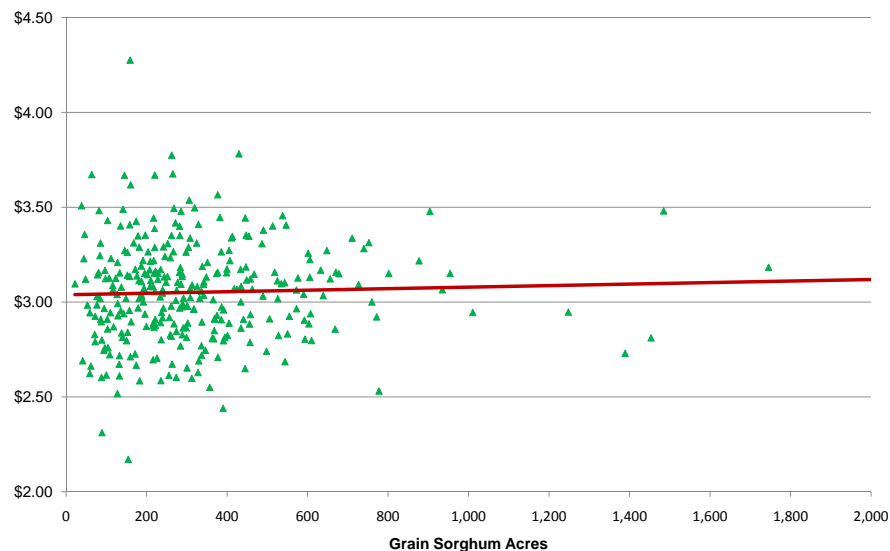
## Whole-Farm Data

	ETER < 1 (Top Category)	ETER > 1 (Bottom Category)
Total Acres	2,750	1,832
Value of Farm Production	\$605,615	\$292,108
Operating Profit Margin (OPM)	0.2351	0.0981
OPM < 0	0%	26%

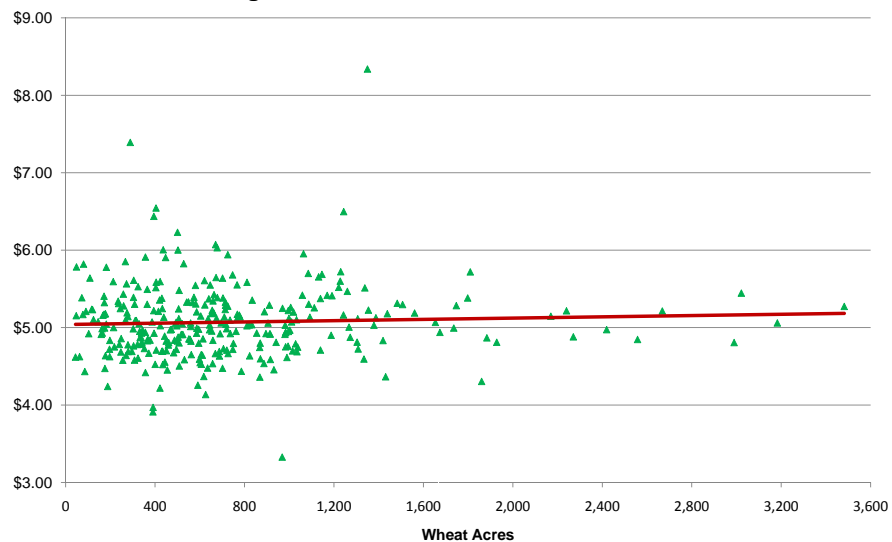
# Whole-Farm Data

	ETER < 1 (Top Category)	ETER > 1 (Bottom Category)
Grain Sorghum Yield	84.6	78.1
Grain Sorghum Price	\$3.08	\$3.04
Wheat Yield	40.0	37.6
Wheat Price	\$5.16	\$5.02

Average Grain Sorghum Price, KFMA Farms, 2005 to 2009



Average Wheat Price, KFMA Farms, 2005 to 2009



# Wheat Enterprise Data

	High One-Third NR per Acre	Low One-Third NR per Acre	Percentage Difference
Enterprise Acres	1,034	521	98%
Yield per Acre	40.8	37.0	10%
Price per Bushel	\$5.12	\$4.93	4%
Gross Income per Acre	\$204.27	\$181.51	13%

## Wheat Enterprise Data

	High One-Third NR per Acre	Low One-Third NR per Acre	Percentage Difference
Fertilizer	\$29.16	\$42.22	-31%
Machinery	\$48.40	\$61.35	-21%
Total Cost per Acre	\$168.62	\$233.50	-28%
Net Return per Acre	\$35.65	-\$51.99	

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## Net Return per Acre

- Regression Analysis
  - Each one acre increase adds \$0.024 per acre to net return.
  - Each one bushel increase adds \$2.46 per acre to net return.
  - Each \$0.10 increase in price adds \$2.62 per acre to net return.
  - Farms in western Kansas had a net return that was \$28 per acre higher than farms in central Kansas.

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## Audience Participation

- What strategies do you use?
- What would you like to discuss?
- What tools would be helpful?
- What else?

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## Contact Information

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  - KFMA Newsletter (contact Michael Langemeier)

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