

# USDA Agricultural Outlook Forum 2007

## AN EXAMINATION OF FARM INCOME AND FACTORS FOR PLAINS AGRICULTURE

Samuel M. Funk

Agricultural Policy Specialist, Kansas State University

Presented: Thursday, March 1, 2007

# Certain Uncertainty

- Things we can track
  - Production Trends
  - Energy Prices
  - General Input Prices
  - Crop Prices
  - Livestock Markets
  - Land Values
- Things we guesstimate
  - Production for crops, livestock
  - Energy Prices
  - General Input Prices
  - Crop Prices
  - Livestock Markets
  - Land Values

# Big Factors

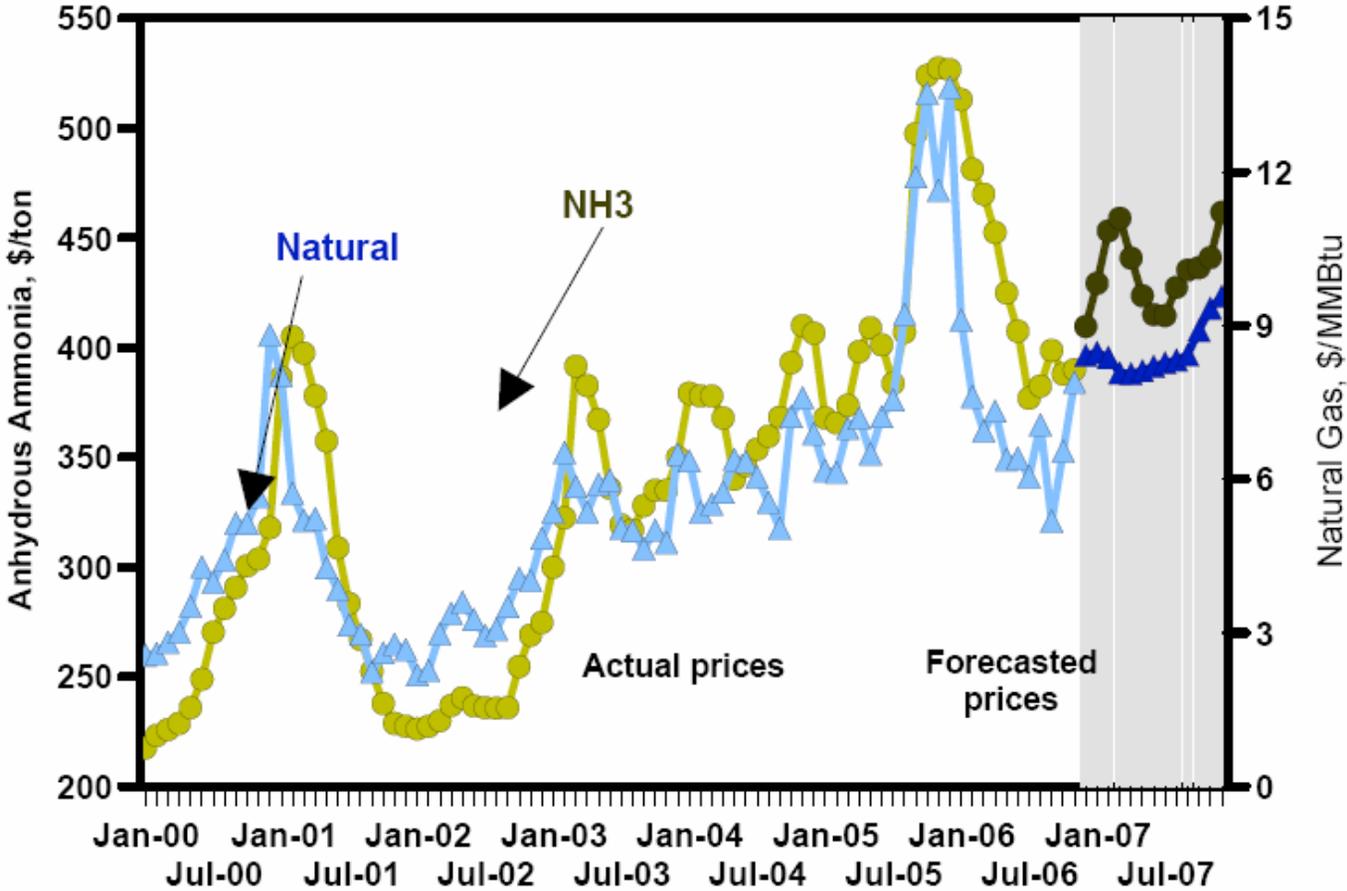
- **PLAINS** Agriculture
  - A moving target: Blowing like the dry wind
  - A chilling reality: Freezing like an ice storm
  - A burning issue: Heating like a wild fire
  - Cows and Crops
- Energy Prices
  - Escalators
  - Moving Walkways

# Big Factors (continued)

- Crop Prices
  - The Good, The Bad, The Ugly
- Livestock Prices
- Land Values
  - Could agriculture once again drive land values up?
- Future Ag Policy
  - Disasters happen in the Plains.  
What will be available?

Price change from previous year, %	
Month-Yr	Anhydrous Ammonia
Sep-06	-19.8%
Oct-06	-26.0%
Nov-06	-26.1%
Dec-06	-23.2%
Jan-07	-17.3%
Feb-07	-6.9%
Mar-07	-3.4%
Apr-07	-3.7%
May-07	-1.5%
Jun-07	0.6%
Jul-07	8.6%
Aug-07	10.5%
Sep-07	7.9%
Oct-07	11.2%
Nov-07	11.8%
Dec-07	12.9%

Figure 1. Monthly anhydrous ammonia prices, Corn Belt basis.

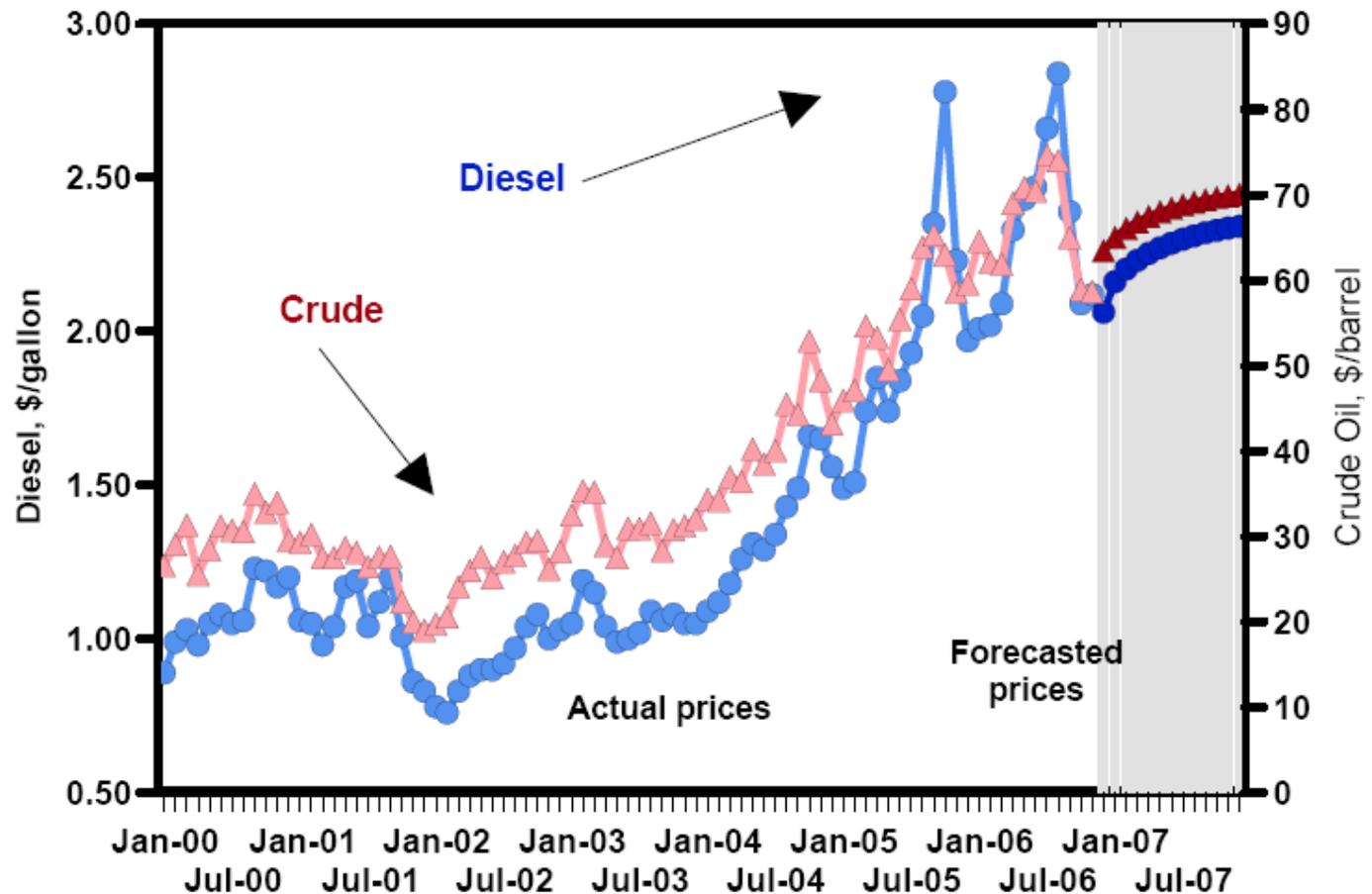


Source: Dr. Kevin Dhuyvetter, Department of Agricultural Economics, KSU

Price change from previous year, %

Month-Yr	Diesel
Sep-06	1.7%
Oct-06	-24.8%
Nov-06	-4.9%
Dec-06	4.7%
Jan-07	7.5%
Feb-07	9.1%
Mar-07	6.8%
Apr-07	-3.3%
May-07	-6.5%
Jun-07	-7.4%
Jul-07	-13.5%
Aug-07	-18.6%
Sep-07	-2.9%
Oct-07	11.4%
Nov-07	10.2%
Dec-07	13.6%

Figure 2. Monthly diesel prices, Southwest Kansas basis.



Source: Dr. Kevin Dhuyvetter, Department of Agricultural Economics, KSU

**Table 1. Natural Gas and Anhydrous Ammonia (NH3) Prices**

Year	Natural gas /1	Year-to-year change		NH3 /2	Year-to-year change		Natural gas /3
		\$/MMbtu	percent		\$/ton	percent	
2000	\$3.89	-----	-----	\$223	-----	-----	\$2.82
2001	\$3.85	(\$0.04)	-1.0%	\$356	\$133	59.7%	\$6.01
2002	\$3.25	(\$0.60)	-15.5%	\$232	(\$124)	-34.8%	\$2.81
2003	\$5.40	\$2.15	66.0%	\$320	\$88	38.1%	\$5.24
2004	\$5.81	\$0.41	7.6%	\$358	\$38	11.7%	\$5.71
2005	\$8.09	\$2.28	39.2%	\$391	\$33	9.1%	\$6.84
2006	\$6.48	(\$1.60)	-19.8%	\$490	\$99	25.5%	\$9.53
2007 (F)	\$8.22	\$1.73	26.8%	\$420	(\$70)	-14.2%	\$8.00

/1 Mar-Sep average of NYMEX futures

/2 Oct-May average (Oct-Dec of previous year)

/3 Natural gas prices that coincide with NH3 prices, i.e., Sep-Apr average (Sep-Dec of previous year)

F = forecast

Source: Dr. Kevin Dhuyvetter, Department of Agricultural Economics, KSU

**Table 2. Crude Oil and Off-road Diesel Fuel Prices**

Year	Crude oil /1	Year-to-year change \$/barrel	percent	Diesel fuel /2	Year-to-year change \$/gal	percent
2000	\$30.70	-----	-----	\$1.09	-----	-----
2001	\$26.98	(\$3.72)	-12.1%	\$1.09	\$0.01	0.6%
2002	\$27.05	\$0.07	0.3%	\$0.94	(\$0.15)	-14.1%
2003	\$30.53	\$3.49	12.9%	\$1.05	\$0.11	12.1%
2004	\$41.85	\$11.31	37.1%	\$1.37	\$0.32	30.0%
2005	\$58.00	\$16.15	38.6%	\$2.04	\$0.67	48.5%
2006	\$68.07	\$10.07	17.4%	\$2.41	\$0.38	18.6%
2007 (F)	\$68.48	\$0.41	0.6%	\$2.29	(\$0.12)	-5.2%

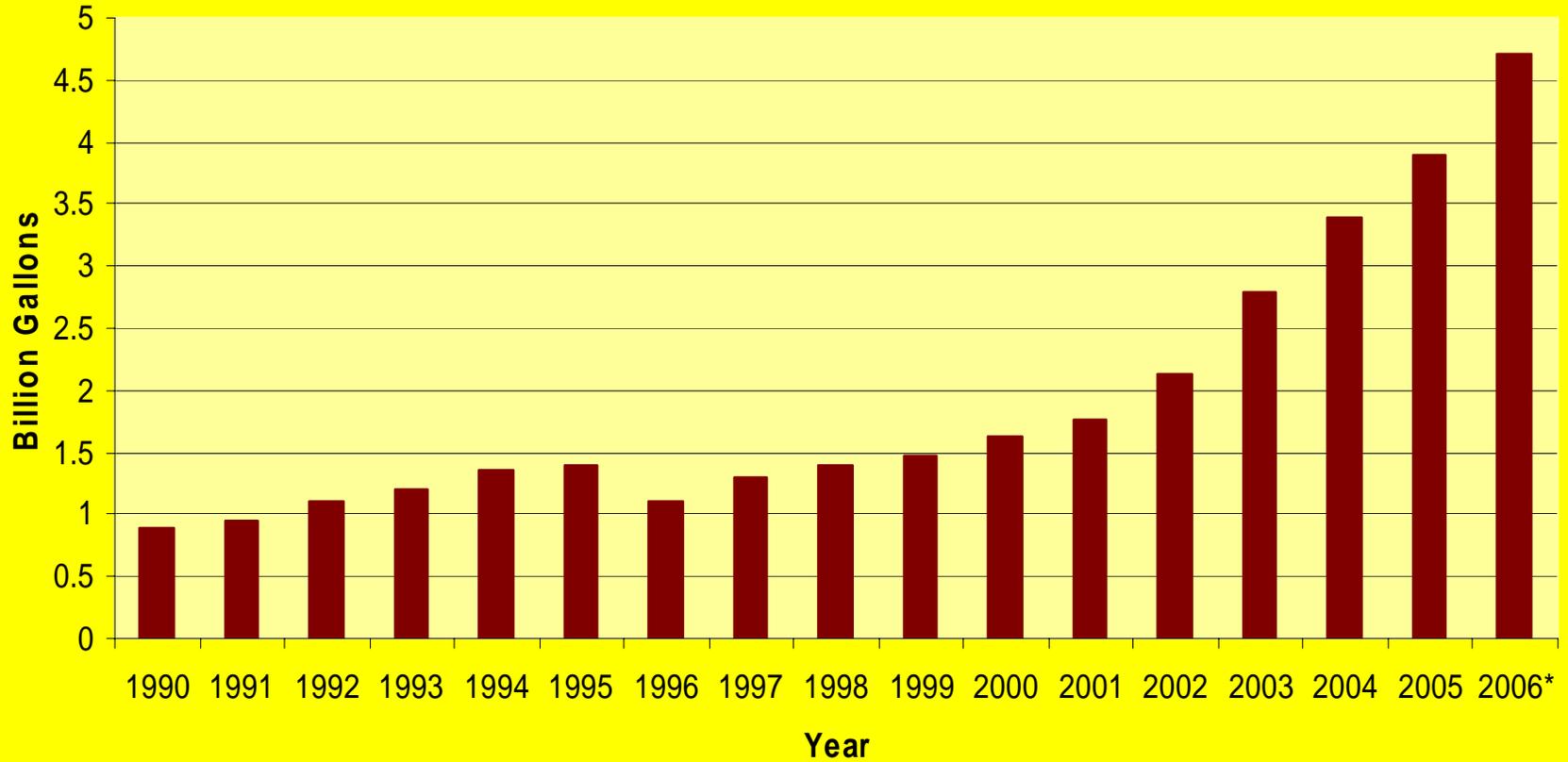
/1 Mar-Oct average of NYMEX futures

/2 Mar-Oct average

F = forecast

Source: Dr. Kevin Dhuyvetter, Department of Agricultural Economics, KSU

# U.S. Ethanol Production



Source: Renewable Fuels Association & K-State Research & Extension

# Ethanol Production Capacity

- 2006: 5.1 Billion Gallons Annually
- By the end of 2008: 8.9 Billion Gallons
- The Energy Policy Act of 2005 as a Floor
  - Not a Ceiling
  
- Cellulosic Ethanol on the way: 125 MGPY
  - ½ the Requirement for Cellulosic in the EPACT 2005

“Biofuels are real, and it’s also a way to address climate change.

“In 2006 and 2007 as well, we are seeing a Perfect Storm for Bio-Fuels.”

--Brent Erickson, Executive Vice President  
of BIO’s Industrial & Environmental Section

C Z7 [10] - CORN (DAY)

LAST: 398'4

CHANGE: ▼ 0'6

HIGH: 400'0

LOW: 397'6

2/12/2007



CBOT ADVANTAGE

Source: CBOT

WN7 [10] - WHEAT (DAY)

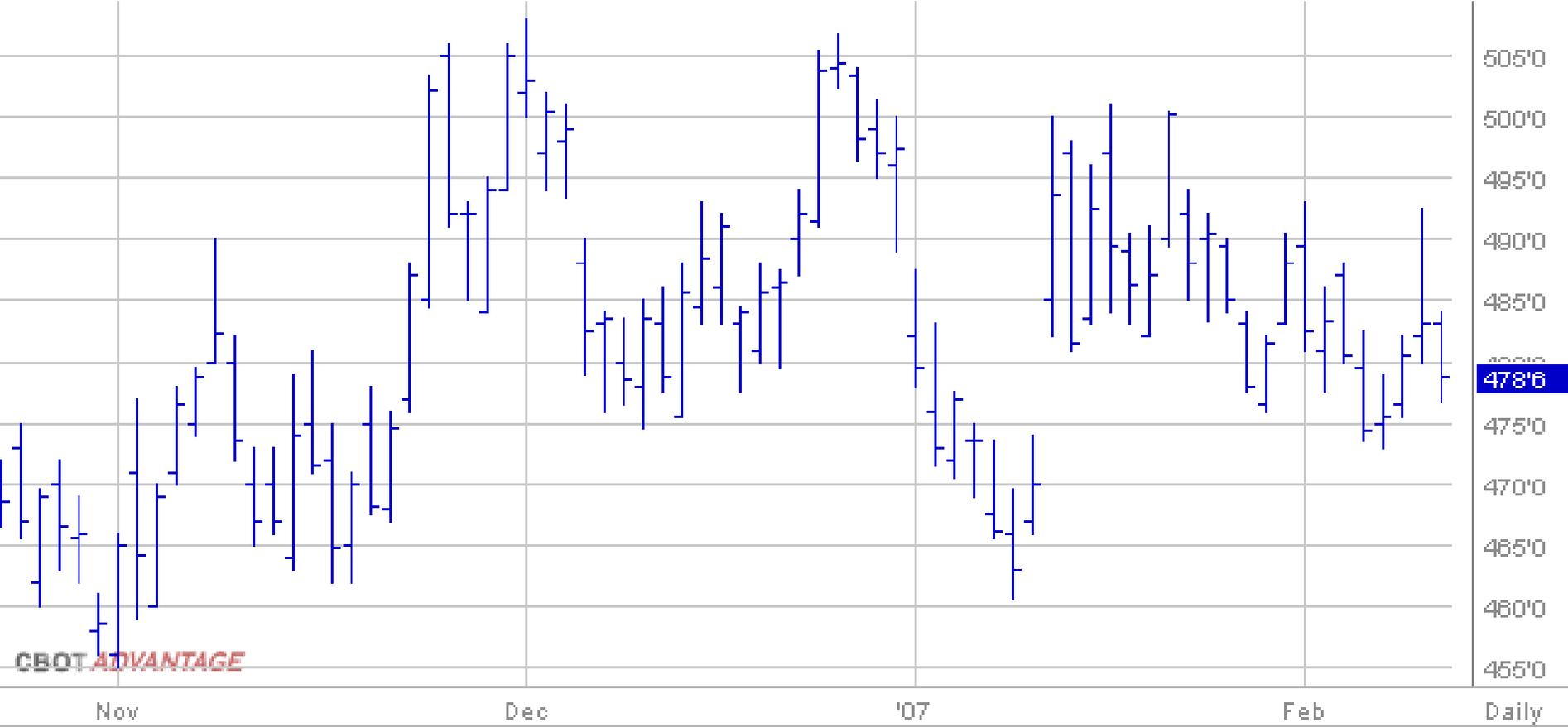
LAST: 478'6

CHANGE: ▼ 4'2

HIGH: 484'0

LOW: 476'6

2/12/2007



CBOT *ADVANTAGE*

Source: CBOT

S X7 [10] - SOYBEANS (DAY)

LAST: 797'4

CHANGE: ▼ 3'4

HIGH: 800'0

LOW: 794'0

2/12/2007

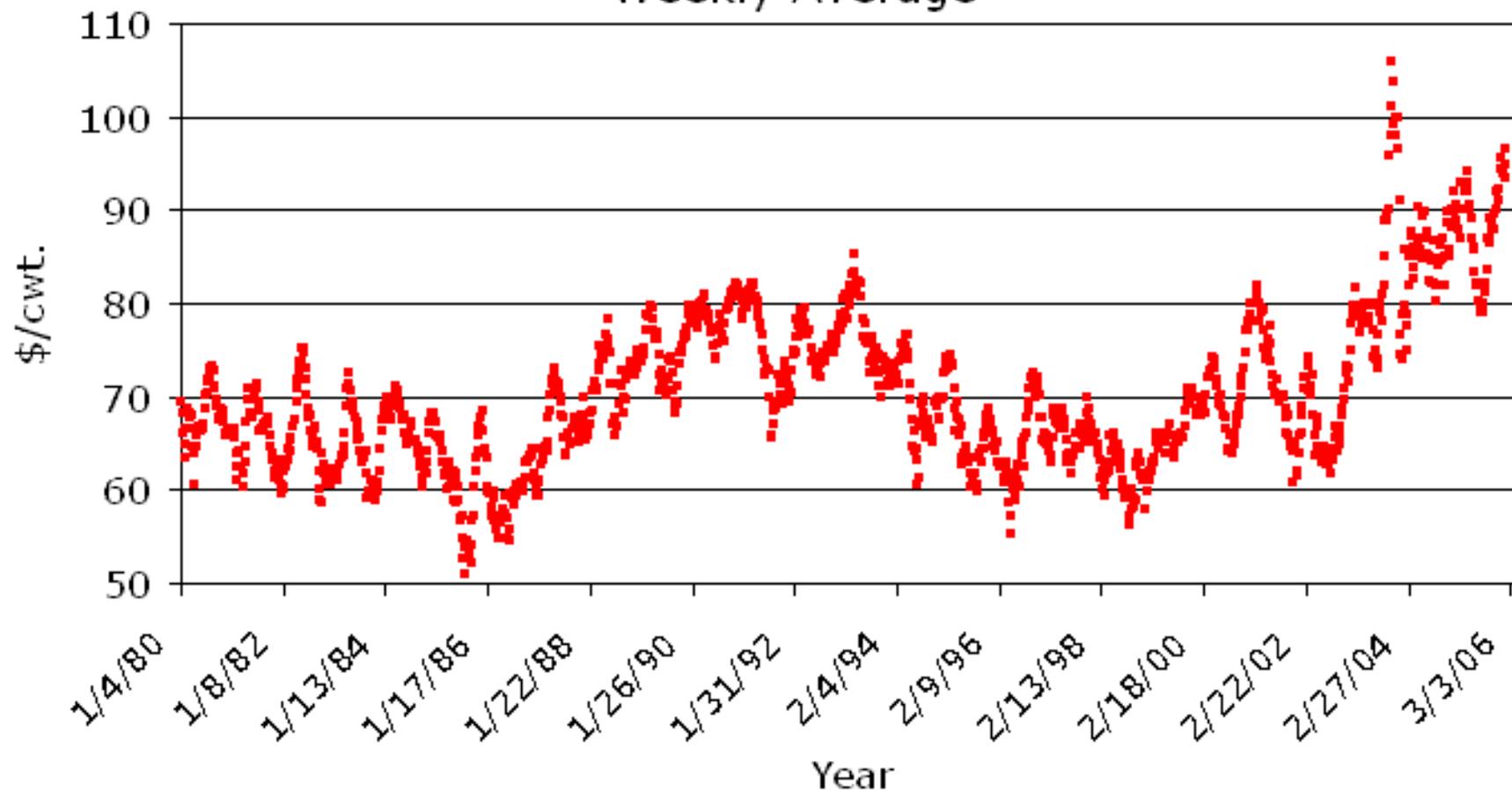


Source: CBOT

# Technology

- Conversion of biofuels feedstock
  - The Growth of Corn
  - The Transition to Wheat
  - The Utilization of Cellulosic
- Marketability of “*farmaceuticals*”

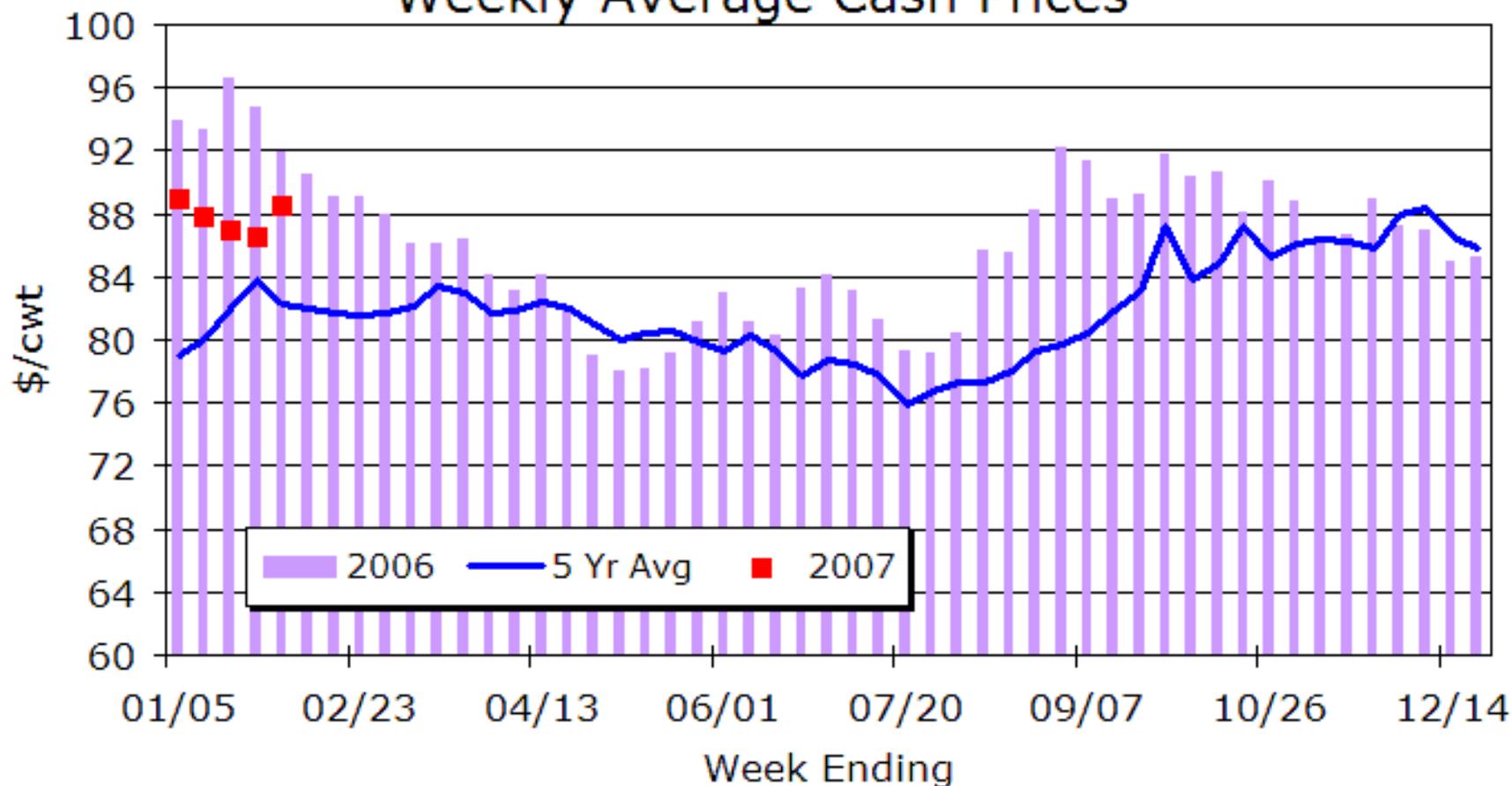
# Kansas Direct Slaughter Steer Prices Weekly Average



Source: USDA & K-State Research & Extension

KSU Dept. of Ag Econ  
[www.agmanager.info](http://www.agmanager.info)

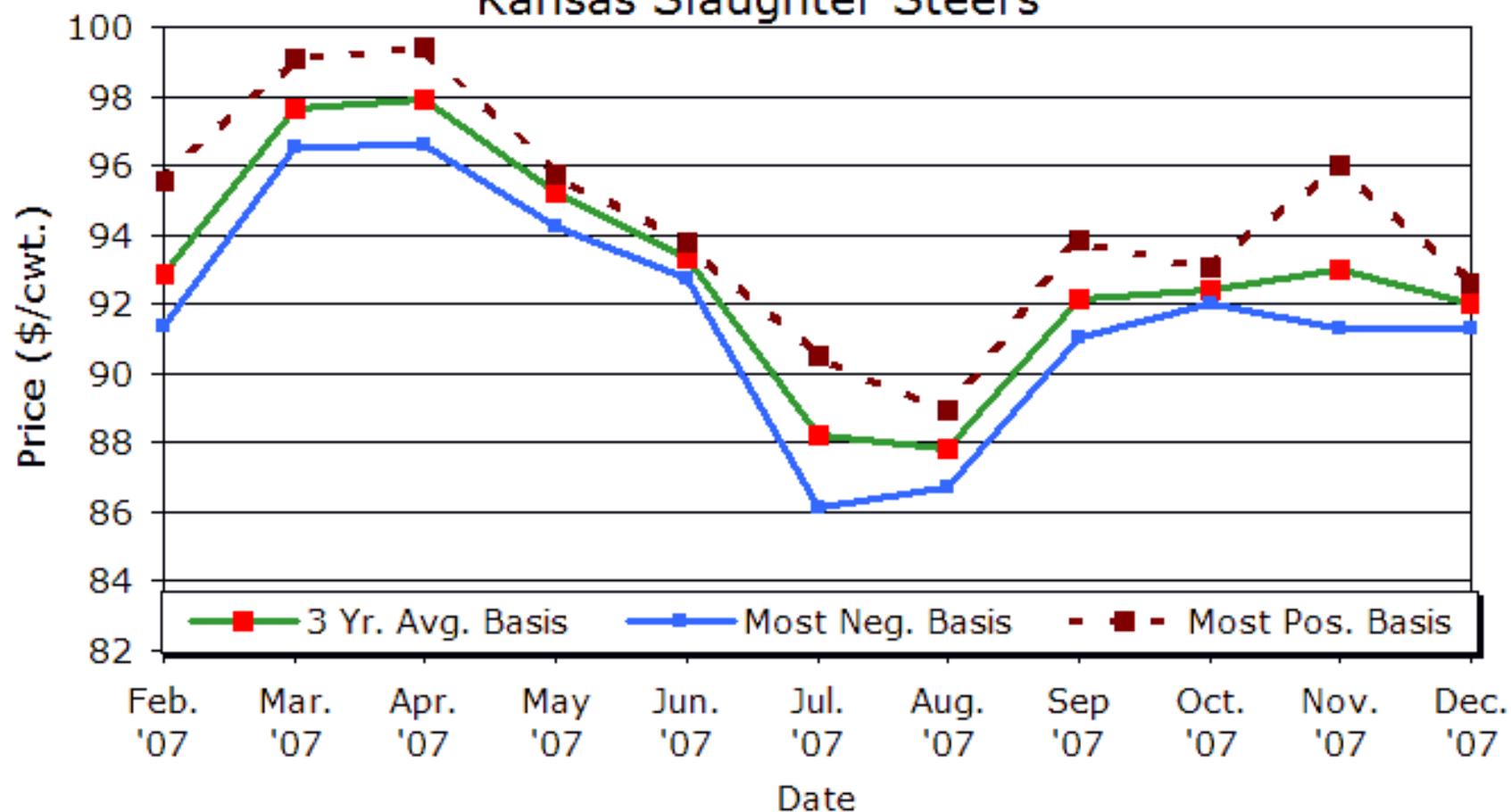
# Kansas Direct Slaughter Steers Weekly Average Cash Prices



Source: AMS-USDA, Dodge City, KS  
& K-State Research & Extension

KSU Dept. of Ag Econ  
[www.agmanager.info](http://www.agmanager.info)

## Mid-Month Futures Based Price Forecasts Kansas Slaughter Steers

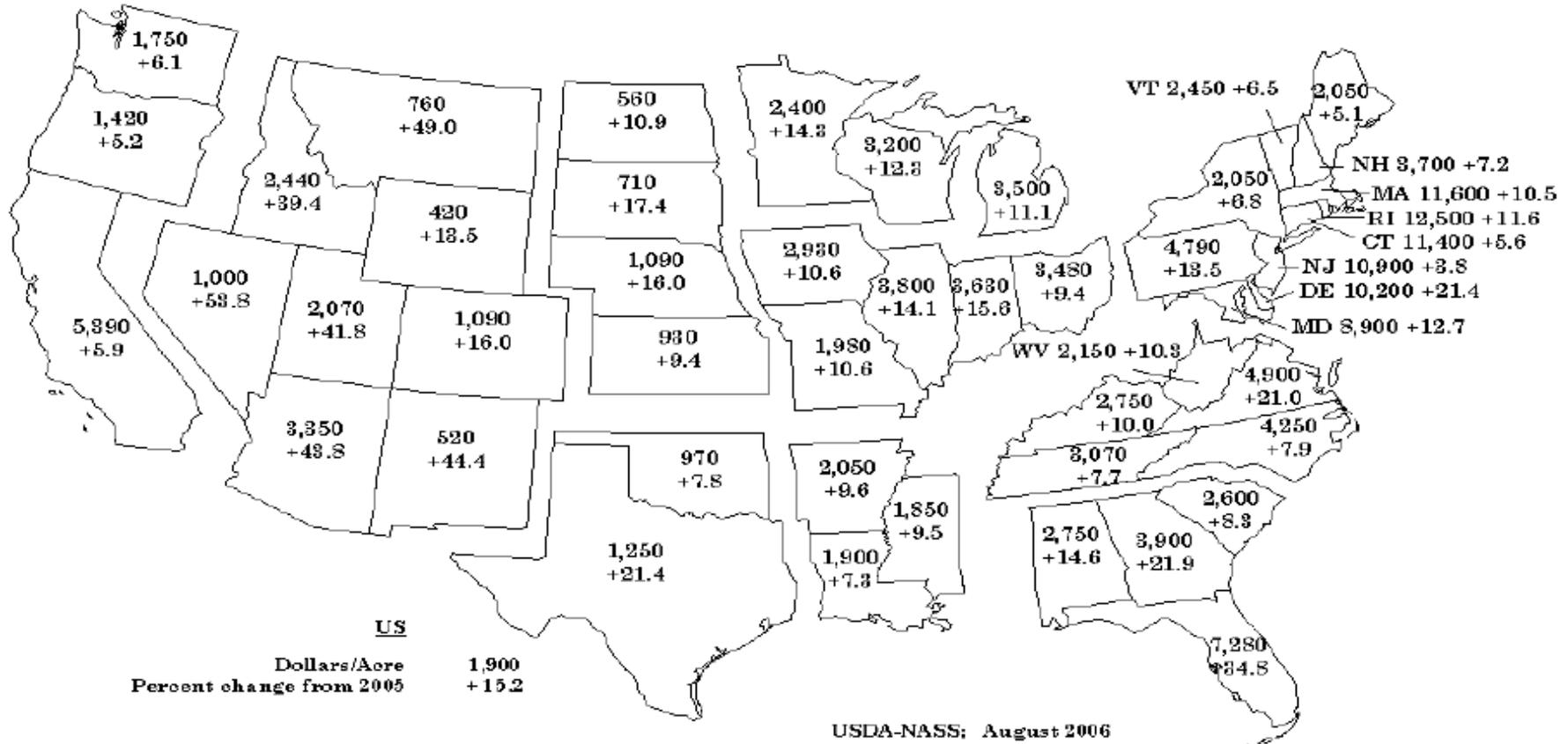


Source: CME & K-State Research & Extension  
 Forecasts = 2/9/07 Futures Price + Basis Estimates

KSU Dept. of Ag Econ  
[www.agmanager.info](http://www.agmanager.info)

## 2006 Farm Real Estate Value by State

Dollars per Acre & Percent Change from 2005



# Farmland Values

- Purchase Prices 
- Cash Rents  (generally)
- Recent trends are pressuring cash rental rates up.
  - How High?
  - Availability?
- If you could find the ground and lock it in, there is an opportunity to “start up”

# Farm Income Across the Plains

- Bullish if expectations are for excess crops
- Bearish, in the near term, if net buyer for crops
- Long-Term Questions:
  - Feed v. Fuel
  - Productivity Levels
  - Market Implications

For More Information:

[www.agserve.com](http://www.agserve.com)

[www.agmanager.info](http://www.agmanager.info)

[funk@agecon.ksu.edu](mailto:funk@agecon.ksu.edu)

(785) 313-2344