

Grain and Oilseed Outlook: Short Term and the Long View

Michael Woolverton
Kansas State University

2009 Insurance Workshop

**“MANAGING THE RISKS OF THE VOLATILITY IN
FARM PRICES AND THE GLOBAL RECESSION”**

November 12, 2009

Ramada Inn
Salina, Kansas



MICHAEL WOOLVERTON

**Professor, Department of Agricultural Economics
Kansas State University**

Email: mikewool@agecon.ksu.edu

Phone: 785.532.1462

Mike Woolverton received his Ph.D. from the University of Missouri. After serving on the faculties of The Ohio State University and Arizona State University, he became the Continental Grain Professor of Agribusiness at the American Graduate School of International Management, where he now has emeritus status. Woolverton is currently Professor and Extension specialist at Kansas State University with responsibilities that include grain marketing and bio-fuel economics.

Professor Woolverton has written five textbooks, the most recent of which is *Agribusiness Marketing: The Management Perspective*, and was the founder and long-time Managing Editor of *Agribusiness: An International Journal*. He was a member of the founding board of directors of the International Agribusiness Management Association, now called the International Food and Agribusiness Management Association.

Woolverton was named an Association Fellow in 2003. Woolverton's research interests include structure and performance of the grain and oilseed marketing system, economics of the bio-energy industries, risk management for commodities, and strategic leadership. He has had extensive international experience including long-term assignments in Europe and Asia and short-term executive education programs in Europe, Asia, North Africa, and the Middle East.

Grain and Oilseed Outlook: Short Term and the Long View

Crop Insurance Workshop 2009

Mike Woolverton
Kansas State University
mikewool@agecon.ksu.edu

Comparative Grain Prices, Dollars per Bushel

| | <u>Ave.</u> ¹ | <u>2008</u> ² | <u>Now</u> ³ |
|-------------|--------------------------|--------------------------|-------------------------|
| Wheat | \$3.36 | \$12.11 | \$4.66 |
| Corn | 2.27 | 5.53 | 3.62 |
| Grn Sorghum | 2.20 | 5.41 | 3.21 |
| Soybeans | 5.64 | 13.11 | 9.77 |

¹ Average price per bushel, 2000-2006

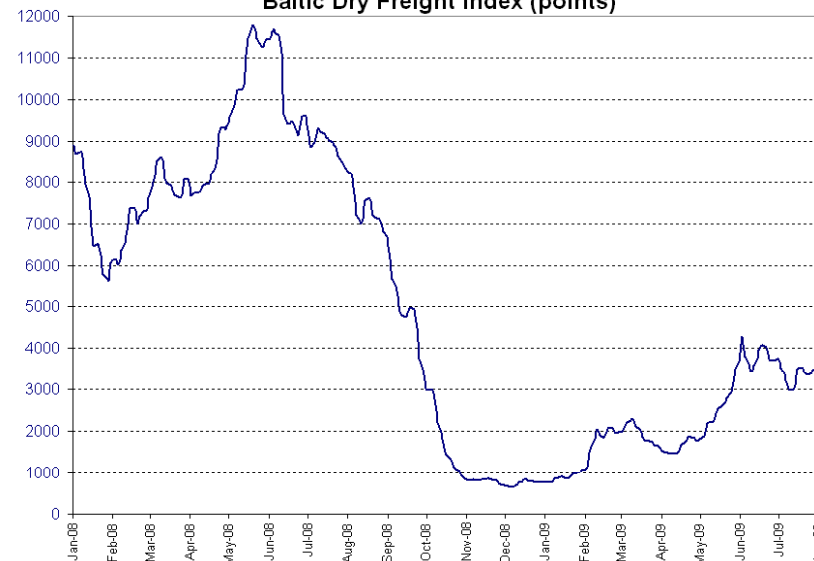
² Kansas City cash truck bids, 11 March 2008

³ Kansas City cash truck bids, 19 October 2009

OUTSIDE INFLUENCES

Global economic recession
Slow demand recovery
Low speculative activity
Oil price and dollar value

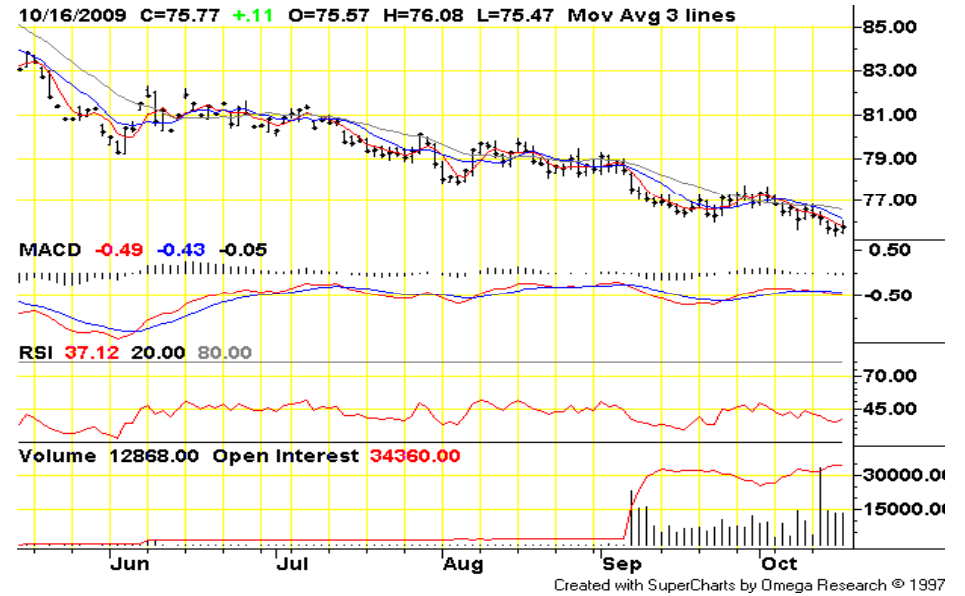
Baltic Dry Freight Index (points)



Oil vs Corn Futures Prices



U.S. DOLLAR



Corn Balance Sheet

| | 06/07 | 07/08 | 08/09 | 09/10 |
|-------------------------|-------------------|-------------------|-------------------|-------------------|
| Plant A. (mil.) | 78.3 | 93.5 | 86.0 | 86.4 |
| Harvest A. (mil.) | 70.6 | 86.5 | 78.6 | 79.3 |
| Bu./A. | 149.1 | 150.7 | 153.9 | 164.2 |
| Production | 10,531 | 13,038 | 12,101 | 13,018 |
| Imports | 12 | 20 | 14 | 10 |
| Beg. Carryover | 1,967 | 1,304 | 1,624 | 1,674 |
| Total Supply | 12,510 | 14,362 | 13,739 | 14,702 |
| Utilization: | | | | |
| Feed and Resid. | 5,591 | 5,938 | 5,231 | 5,400 |
| Food, seed, ind. | 3,490 | 4,363 | 4,976 | 5,480 |
| Ethanol for fuel | 2,119(20%) | 3,026(23%) | 3,700(31%) | 4,200(32%) |
| Exports | 2,125 | 2,436 | 1,858 | 2,150 |
| Total Util. | 11,207 | 12,737 | 12,065 | 13,030 |
| End Carryover | 1,304(12%) | 1,624(13%) | 1,674(14%) | 1,672(13%) |
| U.S. Farm Price | \$3.04 | \$4.20 | \$4.06 | \$3.05-\$3.65 |

U.S. Ethanol Industry at a Glance

- Number of ethanol plants: 2008O 168 2009J 172 2009S¹ 201
- Operating ethanol plants: 168 ? ?
- Plants under const. or expanding: 43 23 ?
- Production capacity operating:(BGPY) 9.9 10.6 11.9
- Projected name plate capacity: 14.6 BGPY end of 2010
- Max. starch-based ethanol inclusion of 15 billion gallons by 2015
- Corn used for ethanol production and percentage of U.S. crop:

| | Bu.(bil.) | Bu.(bil.) | % of Crop |
|-----------|-----------|-----------|-----------|
| 2006/07 – | 2.1 | 10.5 | 20 |
| 2007/08 – | 3.0 | 13.0 | 23 |
| 2009/10 – | 4.2 | 13.0 | 32 |
| 2014/15 - | 5.0 | 15.0 | 33 |

¹ Source: Renewable Fuels Association, October 15, 2009

Ethanol Profit Margin

(\$ per gallon)

| Prices | July 07 | Sept. 08 | Oct. 09 |
|---------------|--------------|--------------------------|--------------------------|
| Corn (\$/bu.) | 3.2725 | 5.48 ¹ | 3.685 ² |
| Ethanol | 1.905 | 2.20 | 1.888 |
| RBOB | 1.98 | 2.854 | 1.987 |
| | | | |
| Profit Margin | <u>+0.26</u> | <u>+0.01³</u> | <u>+0.17⁴</u> |

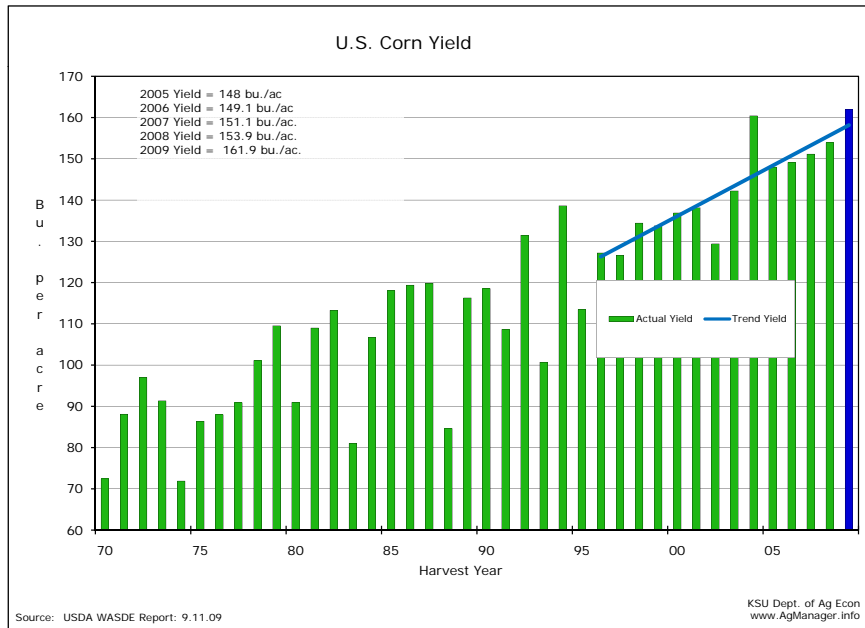
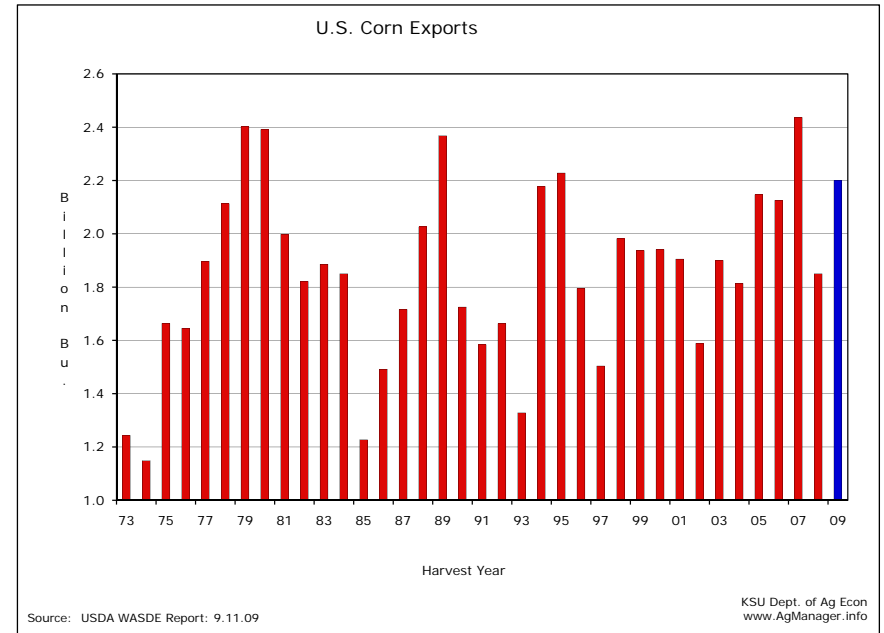
¹ Prices Sept. 2008. Breakeven corn price: \$5.52

² Prices Oct. 19, 2009. Breakeven corn price: \$4.34

³ Ethanol profit for a 100 million gallon plant = \$1.0 million

⁴ Profit = \$17.0 million

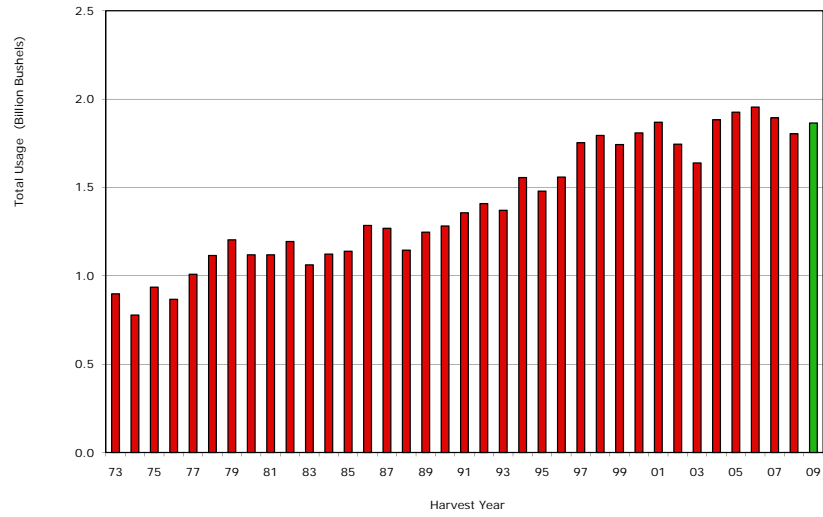
Distiller's Grain revenue would be about \$45 million.



Soybean Balance Sheet

| | 06/07 | 07/08 | 08/09 | 09/10 |
|------------------------|-----------------|----------------|----------------|-----------------------|
| Plant A. (mil.) | 75.5 | 64.7 | 75.7 | 77.5 |
| Harvest A. (mil.) | 74.6 | 64.1 | 74.7 | 76.6 |
| Bu./A. | 42.9 | 41.7 | 39.7 | 42.4 |
| Production | 3,197 | 2,677 | 2,967 | 3,250 |
| Imports | 9 | 10 | 15 | 10 |
| Beg. Carryover | 449 | 574 | 205 | 138 |
| Total Supply | 3,655 | 3,261 | 3,187 | 3,398 |
| Utilization: | | | | |
| Crushings | 1,808 | 1,801 | 1,662 | 1,690 |
| Seed | 80 | 93 | 95 | 94 |
| Exports | 1,116 | 1,161 | 1,280 | 1,305 |
| Residual | 77 | 0 | 11 | 79 |
| Total Util. | 3,081 | 3,056 | 3,049 | 3,169 |
| End Carryover | 574(19%) | 205(7%) | 138(5%) | 230(7%) |
| | | | | |
| U.S. Farm Price | \$6.43 | \$10.10 | \$9.97 | \$8.00-\$10.00 |

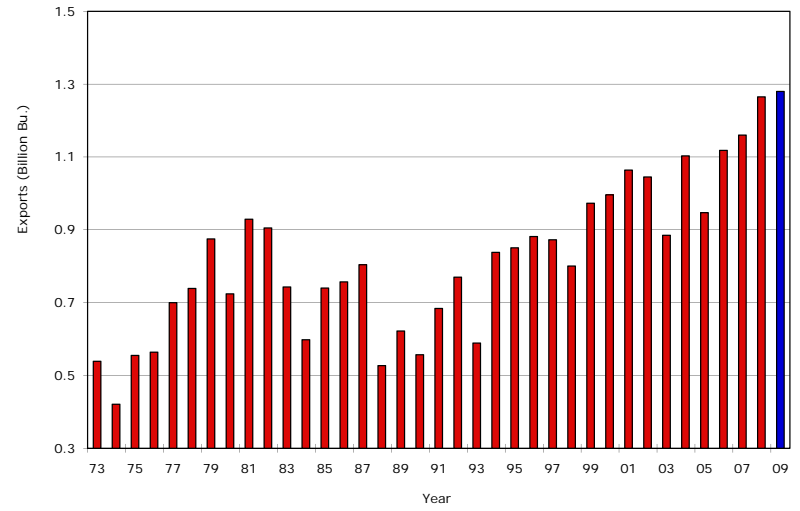
U.S. Total Soybean Usage



Source: USDA WASDE Report 9.11.09 & K-State Ag. Econ. Dept.

KSU Dept. of Ag Econ
www.AgManager.info

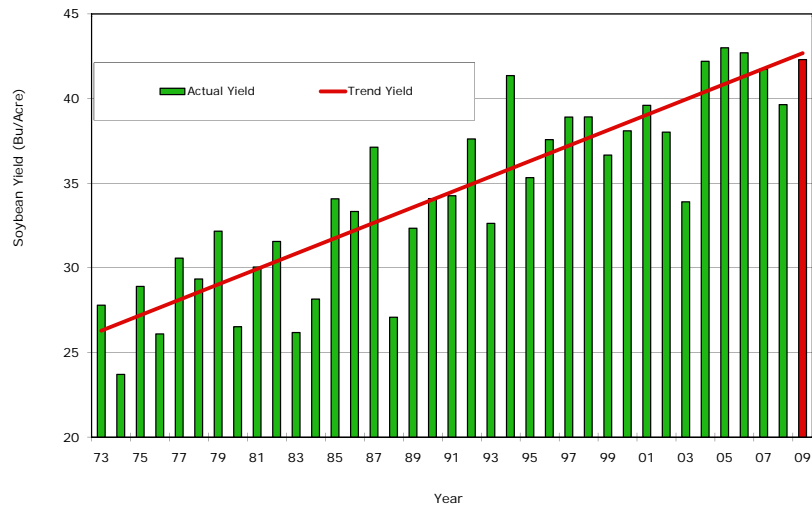
U.S. Soybean Exports



Source: USDA WASDE Report 9.11.09 & K-State Ag. Econ. Dept.

KSU Dept. of Ag Econ
www.AgManager.info

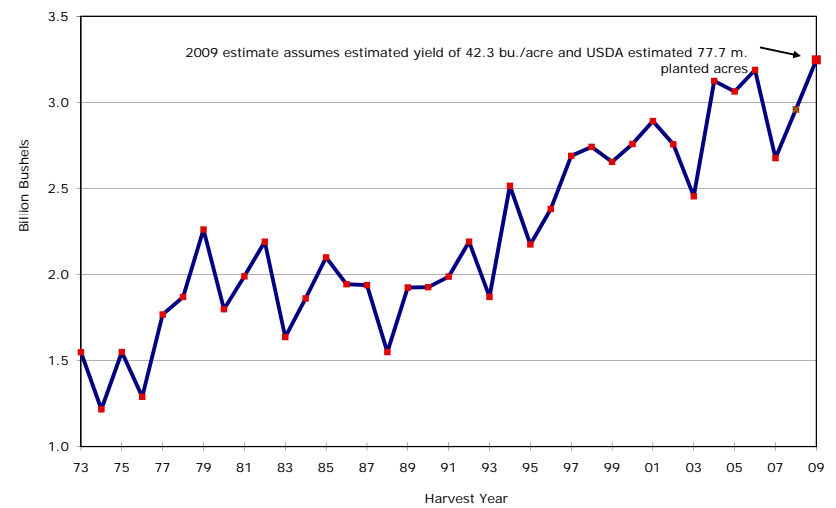
U.S. Soybean Yields



Source: USDA WASDE Report 9.11.09 & K-State Ag. Econ. Dept.

K
S

U.S. Soybean Production



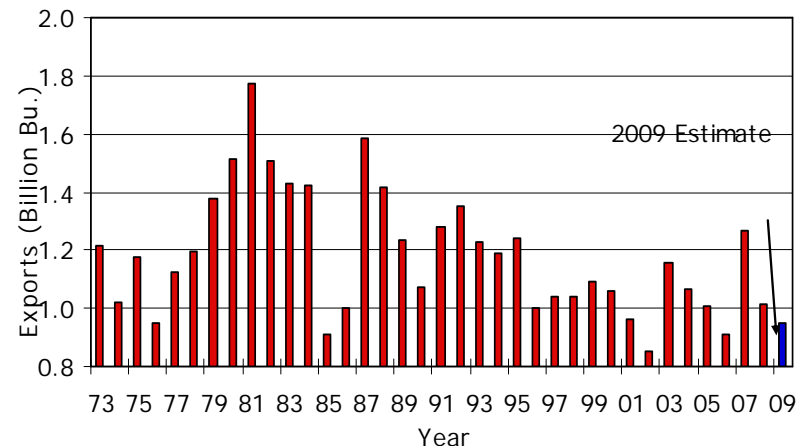
Source: USDA WASDE Report 9.11.09

KSU Dept. of Ag Econ
www.AgManager.info

U.S. Wheat Balance Sheet

| | 06/07 | 07/08 | 08/09 | 09/10 |
|------------------------|---------------|---------------|---------------|----------------------|
| Plant A. (mil.) | 57.3 | 60.5 | 63.2 | 59.1 |
| Harvest A. (mil.) | 46.8 | 51.0 | 55.7 | 50.1 |
| Bu./A. | 38.7 | 40.2 | 44.9 | 44.4 |
| Production | 1,812 | 2,051 | 2,499 | 2,220 |
| Imports | 122 | 113 | 127 | 110 |
| Carryover | 571 | 456 | 306 | 864 |
| Total Supply | 2,505 | 2,620 | 2,932 | 2,987 |
| Utilization: | | | | |
| Feed and Res. | 121 | 15 | 260 | 190 |
| Food | 938 | 947 | 925 | 955 |
| Seed | 82 | 88 | 75 | 78 |
| Exports | 908 | 1,264 | 1,015 | 900 |
| Total Util. | 2,049 | 2,314 | 2,275 | 2,123 |
| Carryover | 456 (22%) | 306 (13%) | 657(29%) | 864 (41%) |
| U.S. Farm Price | \$4.26 | \$6.48 | \$6.78 | \$4.55-\$5.15 |

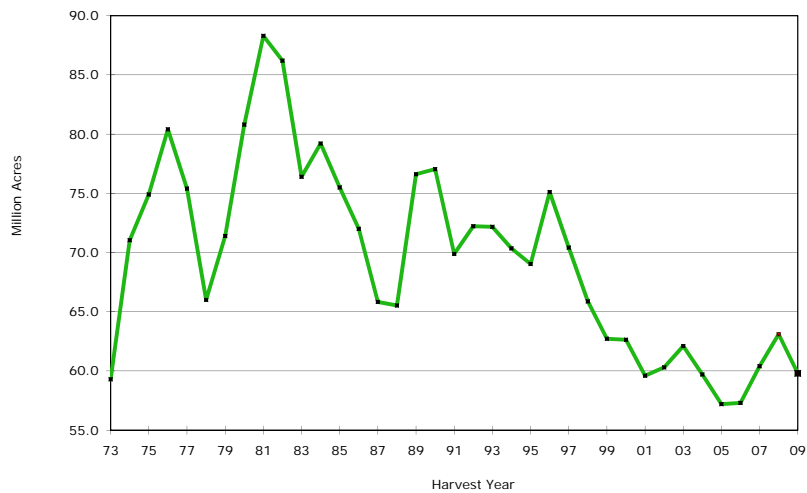
U.S. Wheat Exports



Source: USDA WASDE Report 8.12.09 & K-State Ag. Econ. Dept.

KSU Dept. of Ag Econ
www.AgManager.info

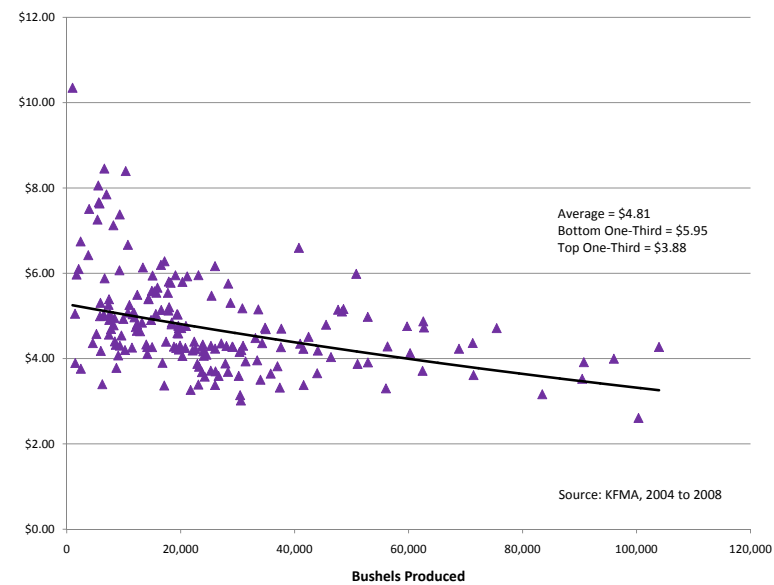
U.S. Wheat Planted Acreage



Source: USDA WASDE Report 9.11.09

KSU Dept. of Ag Econ
www.AgManager.info

Figure 2. Cost per Bushel of Wheat in Kansas



**WORLD WHEAT TRADE, MMT
2009/10 (Projected)**

| <u>Major Importers</u> | | <u>Major Exporters</u> | |
|------------------------|------|------------------------|------------|
| No. Africa | 18.6 | FSU-12* | 32.4 (26%) |
| Mid East | 18.1 | U.S. | 24.5 (20%) |
| SE Asia | 12.1 | EU-27 | 20.0 |
| EU-27 | 6.5 | Canada | 18.5 |
| Brazil | 6.5 | Australia | 15.5 |
| | | Argentina | 2.5 |

* Russia – 16.5; Ukraine – 8.5; Kazakhstan – 7.0
Source: USDA, WASDE Report, October 2009

**WORLD COARSE GRAIN TRADE,
MMT, 2009/10 (Projected)**

| <u>Major Importers</u> | | <u>Major Exporters</u> | |
|------------------------|------|------------------------|------------|
| N. Afr/M.E. | 19.7 | U.S. | 58.6 (53%) |
| Japan | 19.4 | FSU-12 | 12.2* |
| Mexico | 11.9 | Argent. | 9.9 |
| Saudi Arabia | 9.3 | Austral. | 4.7 |
| S. Korea | 7.6 | Canada | 3.6 |
| SE Asia | 4.3 | | |
| EU-27 | 2.9 | | |

Source: USDA, WASDE Report, October 2009; * Ukraine – 9.0, Russia – 2.4

**WORLD SOYBEAN TRADE, MMT
2009/10 (Projected)**

| <u>Major Importers</u> | | <u>Major Exporters</u> | |
|------------------------|------------|------------------------|------------|
| China | 39.5 (52%) | U.S. | 35.5 (46%) |
| EU-27 | 12.4 | Brazil | 23.7 |
| Japan | 4.0 | Argent. | 9.7 |
| Mexico | 3.5 | | |

Source: USDA, WASDE Report, October 2009

**WORLD'S LEADING EXPORTERS,
MMT, 2009/10 (Projected)**

| <u>Country/Region</u> | <u>Amount</u> | <u>Commodities</u> |
|-----------------------|---------------|--------------------|
| United States | 121.7 | CG, SB, W, R |
| FSU-12 | 44.6 | W, CG |
| Brazil | 33.3 | SB, CG, R |
| EU-27 | 24.4 | W, CG, R |
| Canada | 20.5 | W, CG |
| Argentina | 22.1 | CG, SB, W |
| Australia | 19.4 | W, CG |

Source: USDA, WASDE Report, October 2009

Grain Market Summary

- **Wheat** – Global production down 3%, but ending stocks up 10%; Quality issues; Russian pricing
- **Corn/CGs** – Global production down 1% and ending stocks down 5%; Possible record U.S. yield; Adequate U.S. stocks, but not surplus; Livestock feed demand?; U.S. ethanol demand up slightly
- **Soybeans** – Projected global production up 16% and ending stocks up 27%; But very low U.S. stocks; If harvest is less than anticipated, will be a supply shortfall until S.A. harvest

Factors to Watch:

- U.S. fall crop harvests
- S. Hemisphere plantings
- Rate of global demand recovery

GLOBAL FOOD DEMAND

- China, Brazil, Russia, Indonesia, Nigeria, Ethiopia, Vietnam, and The Middle East are growing faster than the world average
- **Long Term Challenge – Feed people**
 - 7 billion in 2012
 - 8 billion in 2030
 - 9 billion in 2050
- **Will need 70% more food by 2050**

(UN Projections, March and October 2009)

LONG TERM

- Economic and income growth in developing countries will recover
- Global population will continue to grow and people will seek to improve diets
- Global demand growth for grains and oilseeds will put pressure on available supplies and prices
- Agricultural producers and agribusiness will prosper

For information updates visit the KSU
Agricultural Economics website:
AgManager.info