

CORN MARKET OUTLOOK FOR 2010-11

EXTENSION OUTLOOK CONFERENCE
OMAHA, NEBRASKA

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FEEDGRAIN MARKETS: CORN & GRAIN SORGHUM



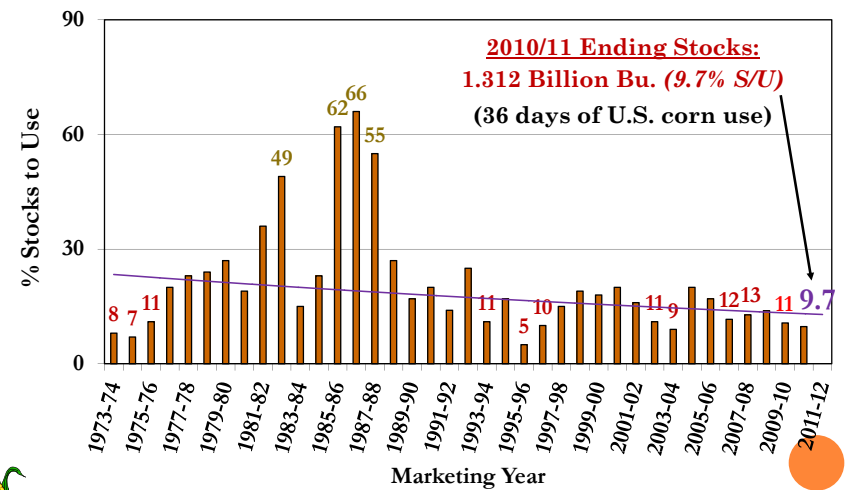
CBOT CORN FUTURES

MONTHLY: JUNE 2001 THROUGH JULY 2010



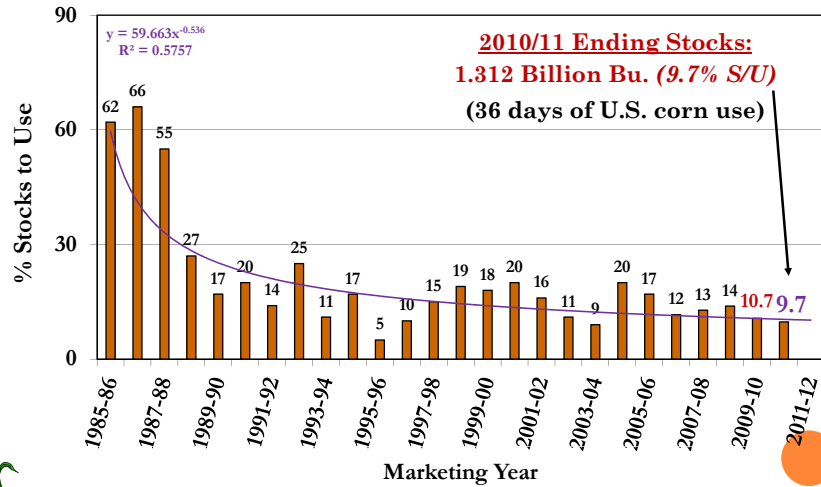
U.S. CORN % END STOCKS-USE

MY 1973-74 THRU MY 2010-11 AUGUST 12, 2010 USDA WASDE REPORT



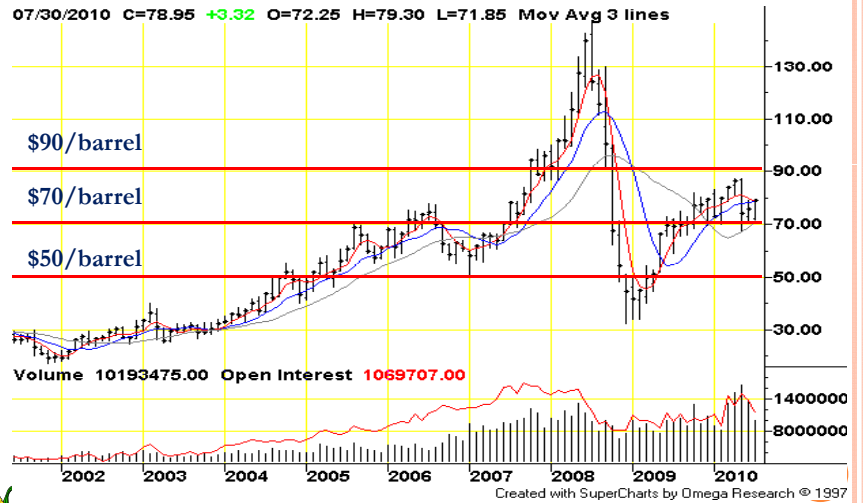
U.S. CORN % END STOCKS-USE

MY 1985-86 THRU MY 2010-11 AUGUST 12, 2010 USDA WASDE REPORT



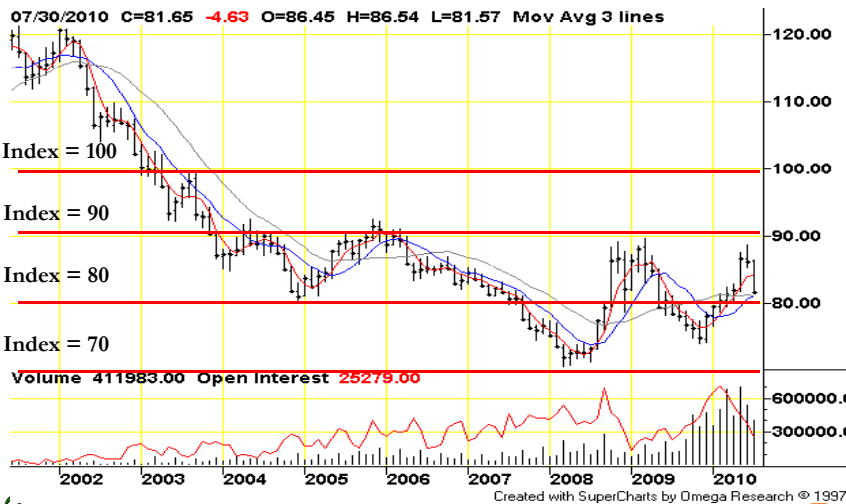
LIGHT CRUDE OIL FUTURES

2001-2010 MONTHLY PRICE CHART (CL - NYMEX)



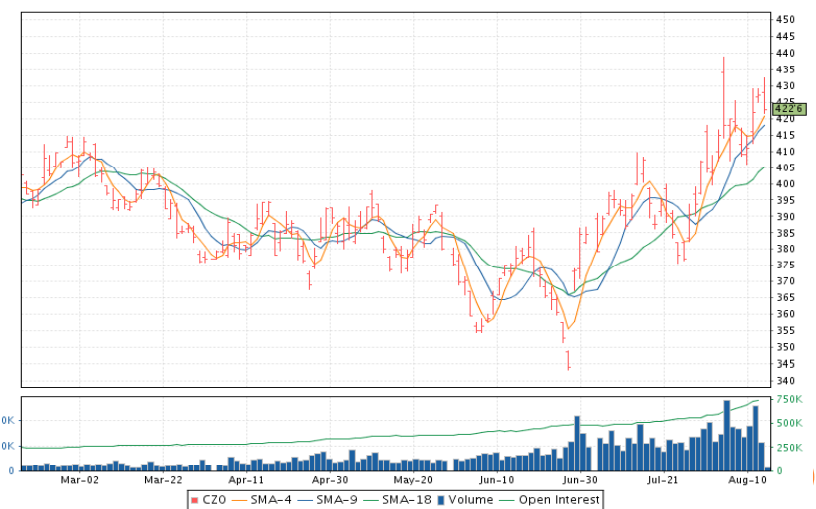
U.S. DOLLAR INDEX: 2001-2010

MONTHLY PRICE CHART (DX - NYBOT)



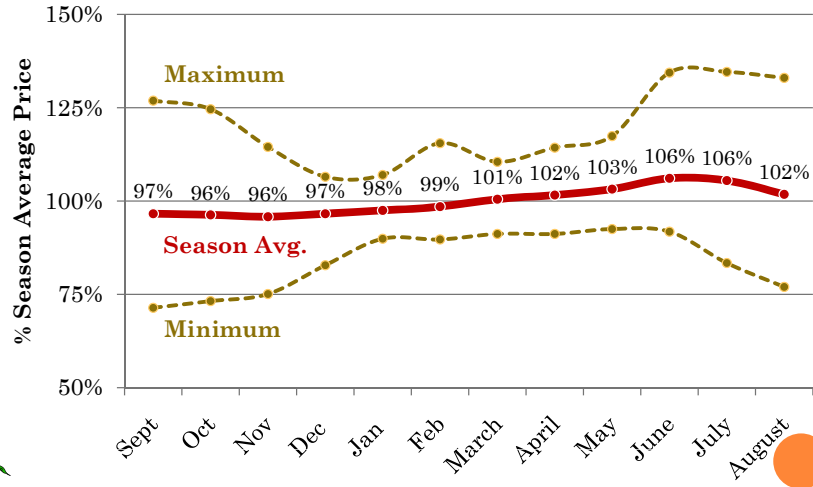
CBOT DEC 2010 CORN FUTURES

FEBRUARY 16 THROUGH AUGUST 16, 2010



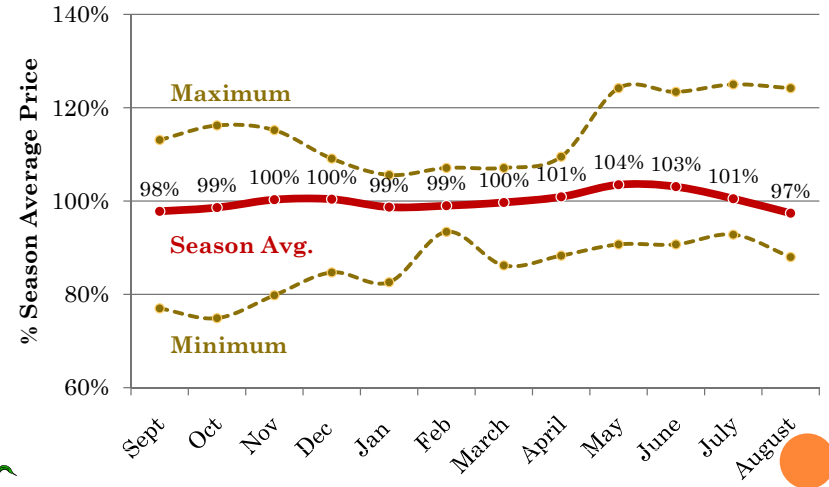
KANSAS CORN SEASONAL \$ INDEX

“NORMAL” MARKETING YEARS: 1973-74 THRU 2009-10



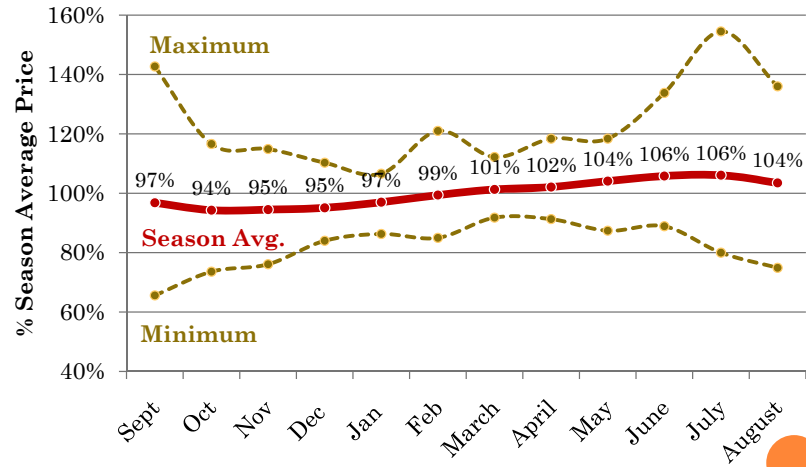
KANSAS CORN SEASONAL \$ INDEX

“SHORT” MARKETING YEARS: 1973-74 THRU 2009-10



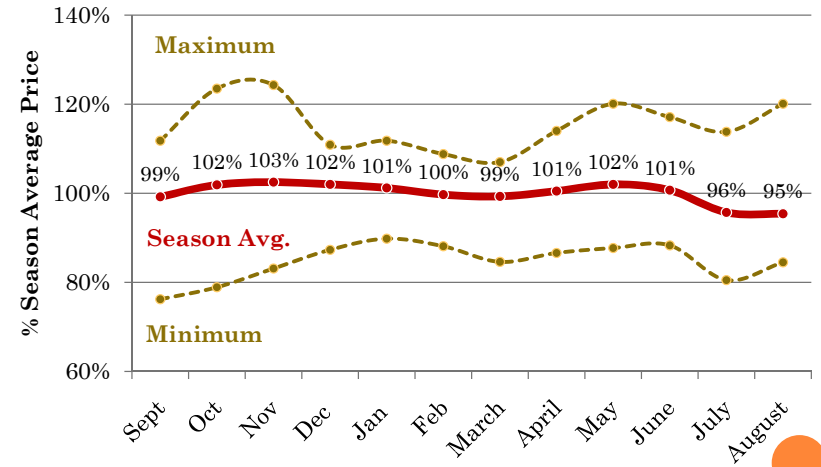
KANSAS MILO SEASONAL \$ INDEX

“NORMAL” MARKETING YEARS: 1973-74 THRU 2009-10



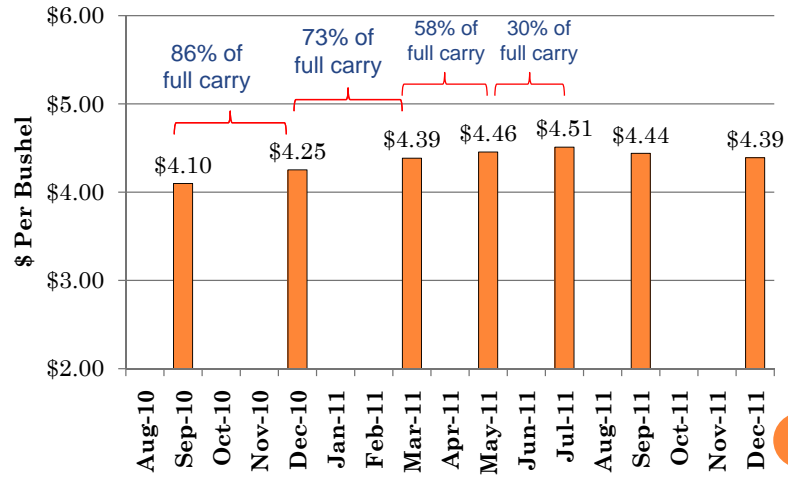
KANSAS MILO SEASONAL \$ INDEX

“SHORT” MARKETING YEARS: 1973-74 THRU 2009-10

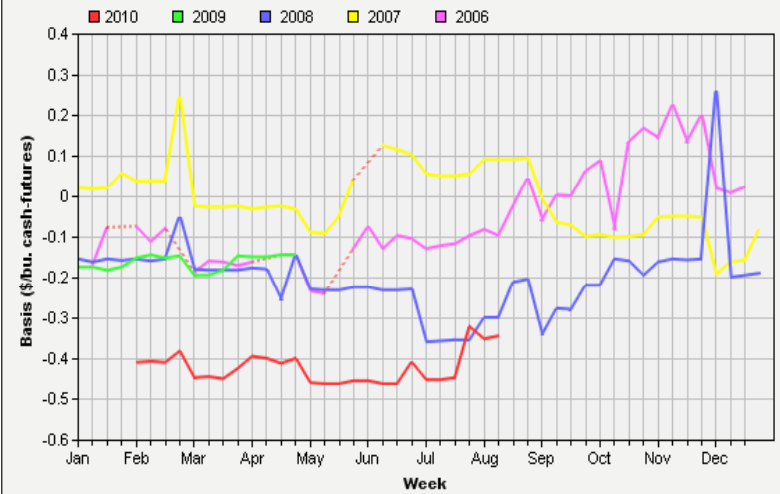


CBOT CORN FUTURES

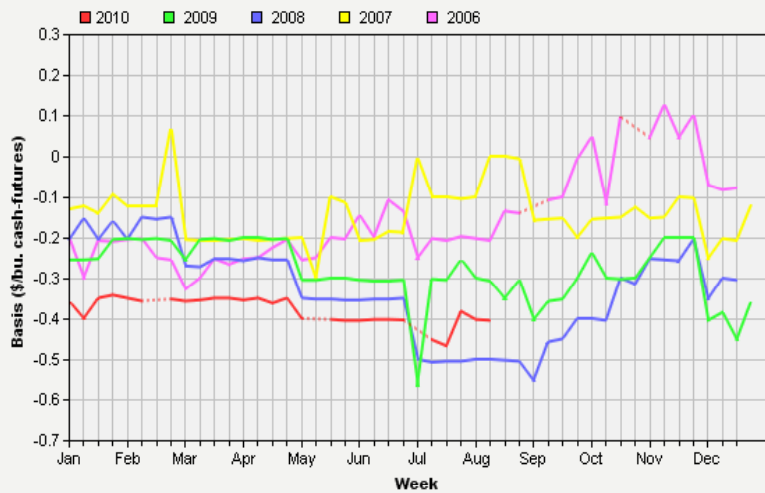
MONTHLY CARRYING CHARGES: AUGUST 16, 2010



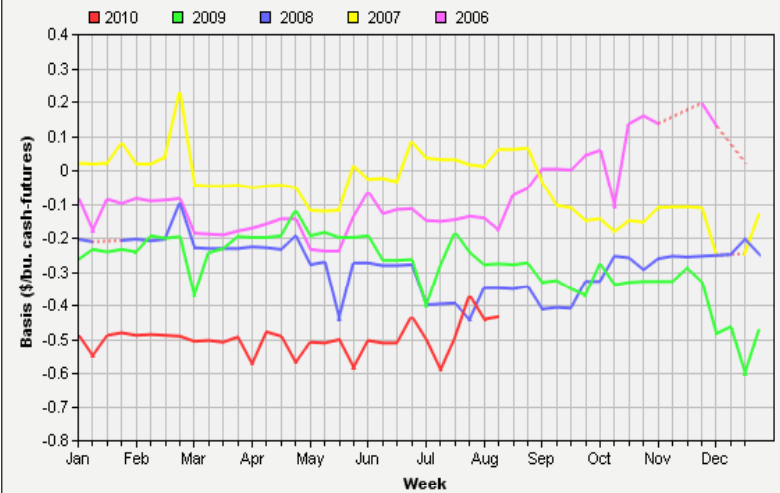
Basis Information: GARDEN CITY, KS - Corn
K-State Dept of Agricultural Economics, www.AgManager.info



Basis Information: SALINA, KS - Corn
K-State Dept of Agricultural Economics, www.AgManager.info



Basis Information: SCOTT CITY, KS - Corn
K-State Dept of Agricultural Economics, www.AgManager.info



U.S. FEEDGRAIN SUPPLY

○ Corn

- 2010 Yields, Production, Supplies @ record highs
 - Planted acres ↓ 1.5% (1.358 ma) vs expectations (June 2010)
 - Questions re: final U.S. corn yields?? (industry sources)

○ Grain Sorghum

- ↑ 2010 Yield & Production prospects (vs July Crop Prodn Rpt)
 - Planted acres ↓ 4% (250,000 ac) vs expectations (June 2010)
 - U.S. Sorghum acreage declining since MY 2008-09

○ “Lingering” 2009 U.S. Corn Crop Issues

- Late 2009 harvest, poor crop quality, evidence of spoilage & dockage @ markets, low test weights, etc.
 - How do 2009 crop problems affect market S/D estimates?



U.S. FEEDGRAIN CROP PROGRESS

(AUGUST 15, 2010)

○ Corn Progress & Condition

- Progress (18 major states)
 - 74% Dough Stage vs 58% 5 year average
 - 32% Dent Stage vs 22% 5 year average
- Condition (18 major states)
 - 69% Good-to-Excellent vs 71% week ago & 67% in 2009

○ Grain Sorghum Progress & Condition

- Progress (11 major states)
 - 84% Headed vs 77% 5 year average
 - 35% Coloring vs 38% 5 year average
 - 23% Mature vs 25% 5 year average
- Condition (11 major states)
 - 64% Good-to-Excellent vs 66% week ago & 47% in 2009



ACCURACY OF USDA AUGUST 1ST CORN & GRAIN SORGHUM PRODUCTION FORECASTS

Crop	% RMSE (Root Mean Square Error)	90% Confidence Interval	Average Forecast Error	Largest Forecast Error	Years Above / Below Final
Corn	6.0%	10.3%	392 mb	1,085 mb	12 / 8
<u>Application:</u> U.S. August 2010 Corn # 13.365 bb	67% Chance <u>+/- 801 mb</u> 12.6 bb to 14.2 bb	90% Chance <u>+/- 1.376 bb</u> 12.0 bb to 14.7 bb	Average <u>Error</u> 2.9%	<u>Range:</u> 12.280 bb to 14.450 bb	
Grain Sorghum	9.4%	16.2%	35 mb	108 mb	10 / 10
<u>Application:</u> U.S. August 2010 Milo # 383.4 mb	67% Chance <u>+/- 36 mb</u> 347 mb to 419 mb	90% Chance <u>+/- 62 mb</u> 321 mb to 446 mb	Average <u>Error</u> 9.1%	<u>Range:</u> 275 mb to 491 mb	

U.S. FEEDGRAIN DEMAND

○ ↑ Feedgrain Demand (response to ↓ \$s)

- Old Adage: “Best cure for low prices is low prices”
 - Have low 2009 corn test weights ↑ MY 2009-10 use???

○ ↑ Exports of Corn & Grain Sorghum

- 58% of World corn exports by U.S. in MY 2010-11
 - U.S. Corn Exports in MY 2010-11 @ 2.05 bb (↑ 3.8%)
 - Tighter World Coarse Grain S-D (FSU-12, Canada, Brazil)

○ “Stable” Domestic Use in MY 2010-11

- Corn-Feed & Residual Use @ 5.35 bb (↓ 3.2%)
- Corn-Ethanol Use @ 4.70 bb (↑ 4.4%)
- Corn-Other FSI Use @ 1.39 bb (↑ 1.8%)



U.S. CORN SUPPLY-DEMAND

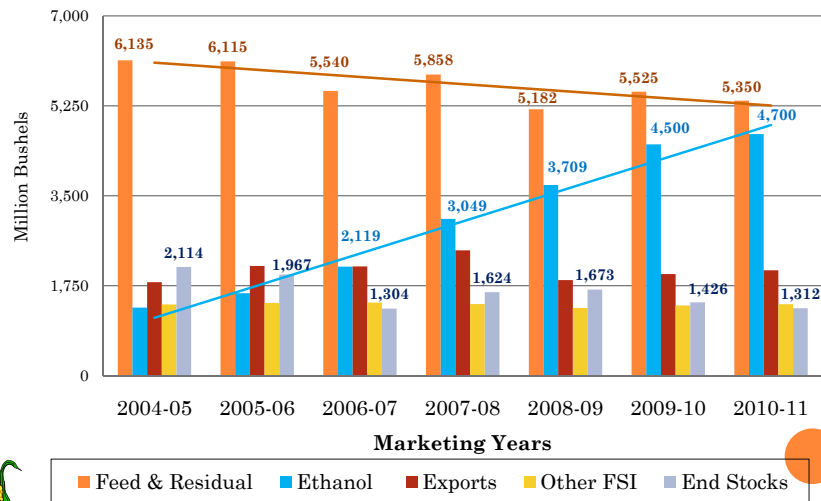
USDA WASDE REPORT: AUGUST 12, 2010

	2008-09	2009-10	2010-11
Planted Ac. (mln.)	86.0	86.5	87.9
Harvested Ac (mln.)	78.6	79.6	81.0
Yield (bu./ac.)	153.9	164.7	** 165.0
Beginning Stocks	1,624	1,673	1,426
Production	12,092	13,110	** 13,365
Total Supplies	13,729	14,791	** 14,802
Ethanol	3,709	4,500	4,700
Other Food, Seed, Ind.	1,316	1,365	1,390
Exports	1,849	1,975	2,050
Feed & Residual	5,182	5,525	5,350
Total Use	12,056	13,365	13,490
End Stocks (%S/U)	(13.9%) 1,673	(10.7%) 1,426	(9.7%) 1,312
U.S. Ave. Farm \$	\$4.06	\$3.50-\$3.60	\$3.50-\$4.10



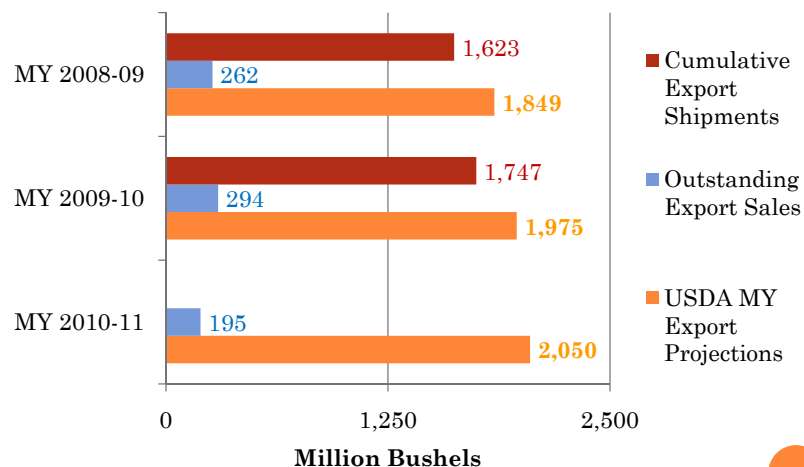
U.S. CORN USE & END STOCKS

MY 2004-05 THRU MY 2010-11 AUGUST 12, 2010 USDA WASDE REPORT



U.S. CORN EXPORT PROGRESS

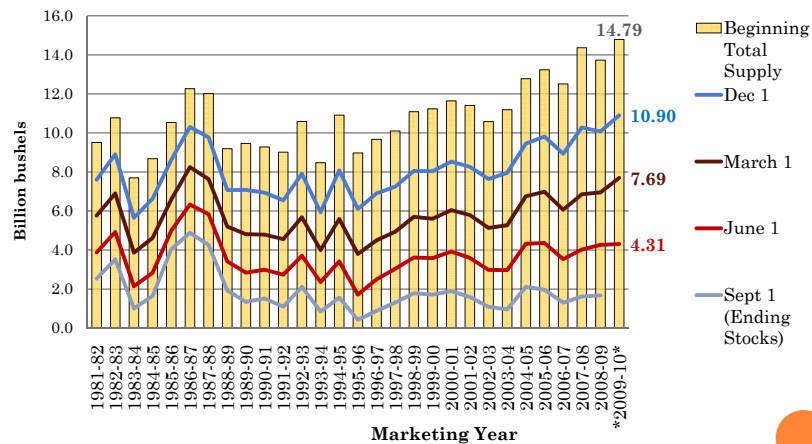
AS OF AUGUST 5, 2010 (MY 2009-10 WEEK # 49 OF 52)



Total Shipments & Sales in MY 2009-10 running 8% ahead of last year

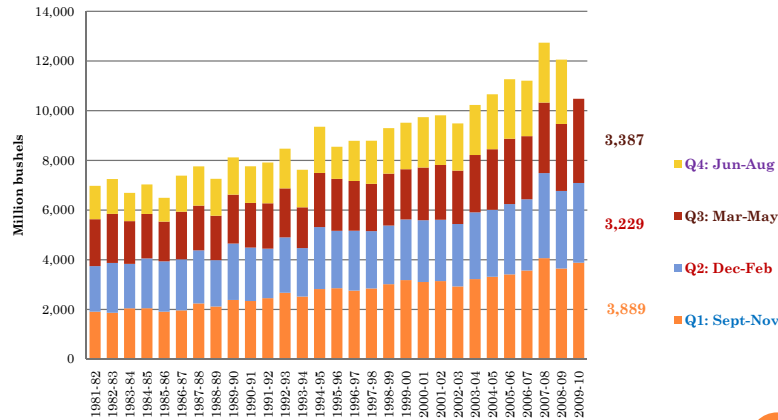
U.S. CORN TOTAL SUPPLY & QUARTERLY USE SINCE MY 1981-82

(SOURCE: USDA NATIONAL AGRICULTURAL STATISTICAL SERVICE)



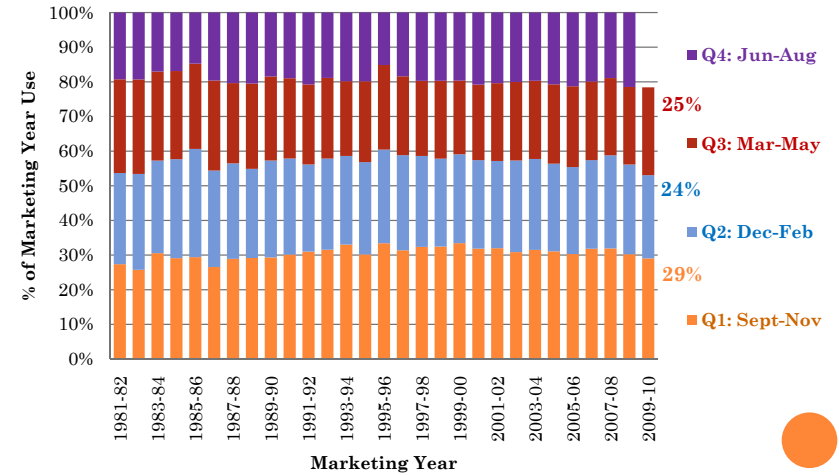
U.S. CORN USE BY QUARTER SINCE MY 1981-82

(SOURCE: USDA NATIONAL AGRICULTURAL STATISTICAL SERVICE)



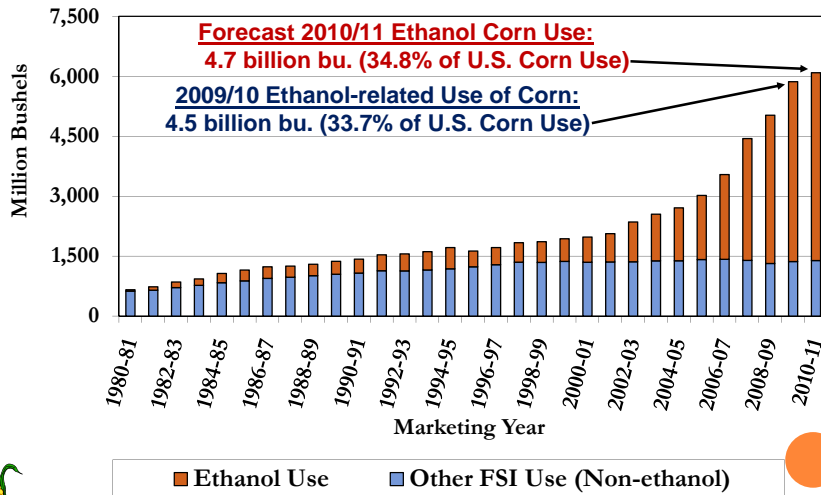
PERCENT U.S. CORN USE BY QUARTER SINCE THE 1981-82 MARKETING YEAR

(SOURCE: USDA NATIONAL AGRICULTURAL STATISTICAL SERVICE)



U.S. CORN ETHANOL - FSI USE

AUGUST 12, 2010 USDA WASDE REPORT



U.S. ETHANOL INDUSTRY TRENDS

	Dec '06	Oct '08	August '10
No. operating Ethanol Plants:	109	175	201
Plants under construction:	35	43	12*
Current capacity: (BGPY)	5.3	10.7	13.6

- Projected name plate capacity: 14.61 BGPY
 - * Maximum starch-based ethanol inclusion under current U.S. energy policy of 15 billion gallons by year 2015

Corn Use for Ethanol Production

Mktg. Year	Bln. Bu.	% of Crop
2007/08	3.05	24%
2008/09	3.71	31%
2009/10	4.50	34%
2010/11	4.70	35%



ETHANOL PROFIT MARGIN

EST. ETHANOL PLANT PROFIT MARGIN (\$ / GALLON)

Prices	7/13/07	9/12/08	8/11/10
Corn (\$/bu.)	\$3.53	\$5.11	\$3.95 ^{1/2} ¹
Ethanol \$/gal	\$1.96	\$2.09	\$1.72 ^{7/8}
RBOB Gas \$/gal	\$1.98	\$2.85	\$1.98 [≈]
Profit Margin \$/gal	+\$0.25	(\$0.05) ²	(\$0.12) ³

¹ Prices August 11, 2010. Breakeven corn price = \$3.53 ^{1/2} / bu

² Sept. 2008 Ethanol loss: 100 million gall. plant = (\$5 million)

³ August 11, 2010 Ethanol loss: 100 million gallon plant = (\$12 million)



Estimated Ethanol Production Margins

Weekly Average: March 2005 – June 2010



Calculated using nearby ethanol & corn futures prices, adjusted for other processing costs



U.S. GRAIN SORGHUM SUPPLY-DEMAND

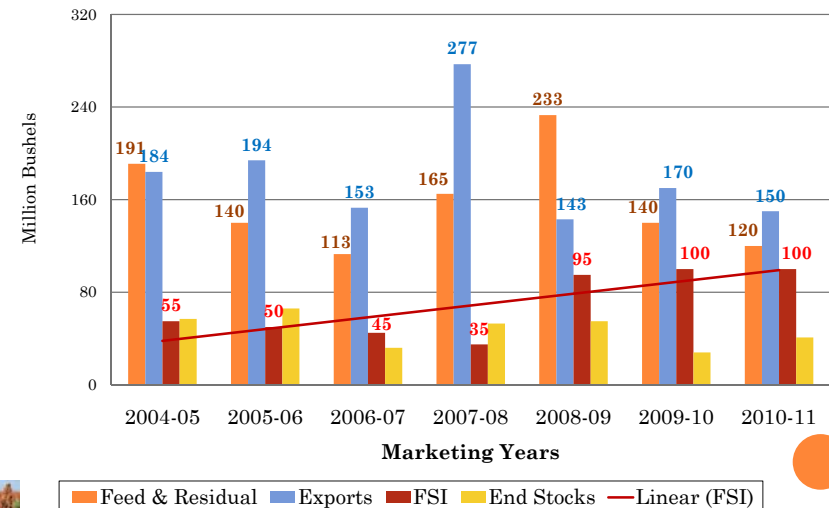
USDA WASDE REPORT: AUGUST 12, 2010

	2008-09	2009-10	2010-11
Planted Acres (mln.)	8.3	6.6	6.0
Harvested Ac. (mln.)	7.3	5.5	5.2
Yield (bu./ac.)	65.0	69.4	74.1
Beginning Stocks	53	55	28
Production	472	383	383
Total Supplies	525	438	411
Food, Seed, Industrial	95	100	100
Exports	143	170	150
Feed & Residual	233	140	120
Total Use	471	410	370
Ending Stocks (%S/U)	(11.7%) 55	(6.8%) 28	(11.1%) 41
U.S. Avg. Farm \$	\$3.20	\$3.10-\$3.20	\$3.20-\$3.80



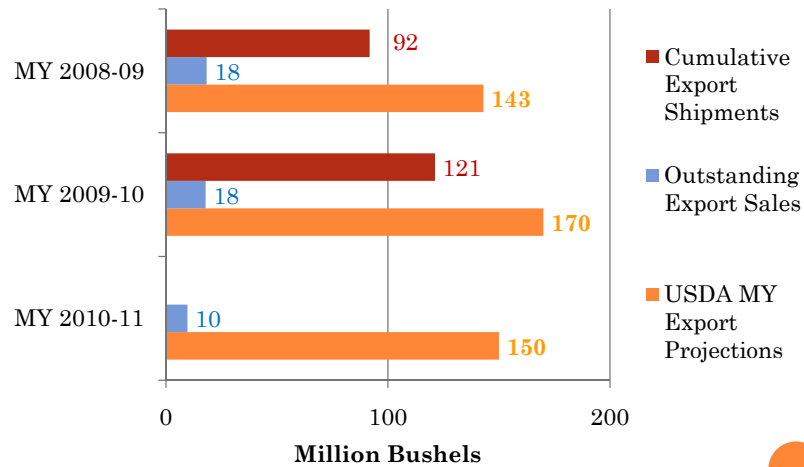
U.S. GRAIN SORGHUM USE

2004-05 THRU 2010-11 MARKETING YEARS AUGUST 12 2010 USDA WASDE REPORT



U.S. GRAIN SORGHUM EXPORTS

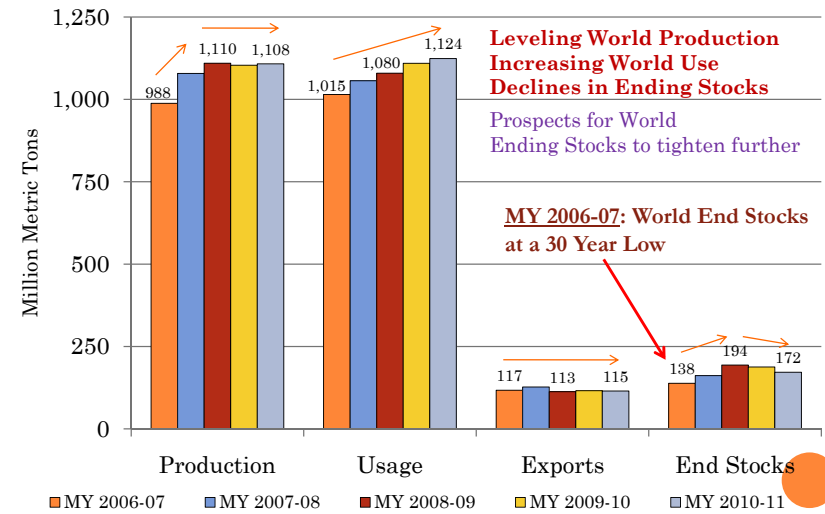
AS OF AUGUST 5, 2010 (MY 2009-10 WEEK # 49 OF 52)



Total Shipments & Sales in MY 2009-10 running 26% ahead of last year

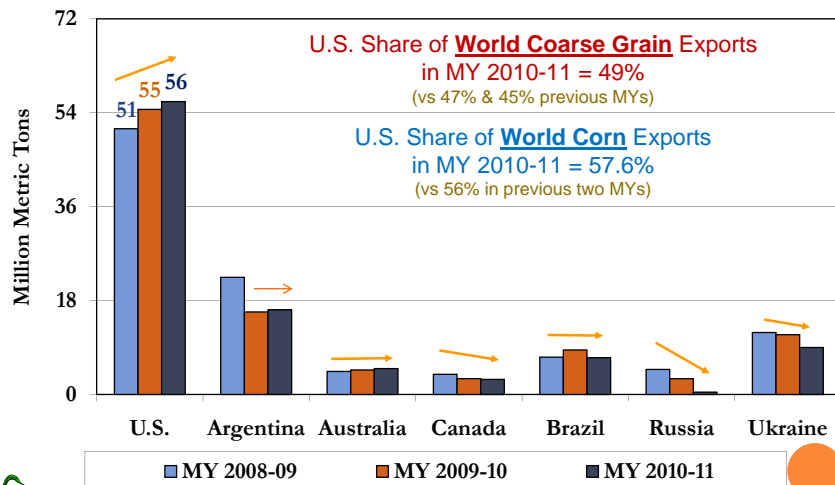
WORLD COARSE GRAIN S-D

MY 2006-07 THRU MY2010-11 AUGUST 12, 2010 USDA WASDE REPORT



COARSE GRAIN EXPORTERS

MY 2007-08 THRU MY 2010-11 AUGUST 12, 2010 USDA WASDE REPORT



FEEDGRAIN PRICE OUTLOOK:

CORN & GRAIN SORGHUM



CBOT CORN FUTURES PRICE %'S

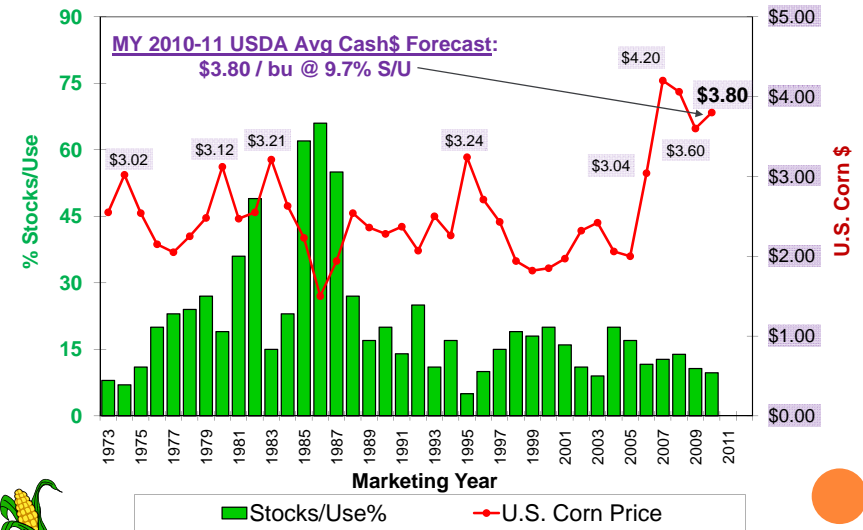
BASED ON OPTION PREMIUMS FOR DEC-2010 & JULY-2011

	Dec 2010 CBOT Corn	July 2011 CBOT Corn
Price on 8/16/2010	\$4.24	\$4.51
Low 10%	\$2.88	\$2.50
Low 30%	\$3.93	\$3.38
Middle 50%	\$4.15	\$4.09
High 70%	\$4.38	\$4.95
High 90%	\$5.46	\$8.77
Prob. Of \$ Falling	59%	60%



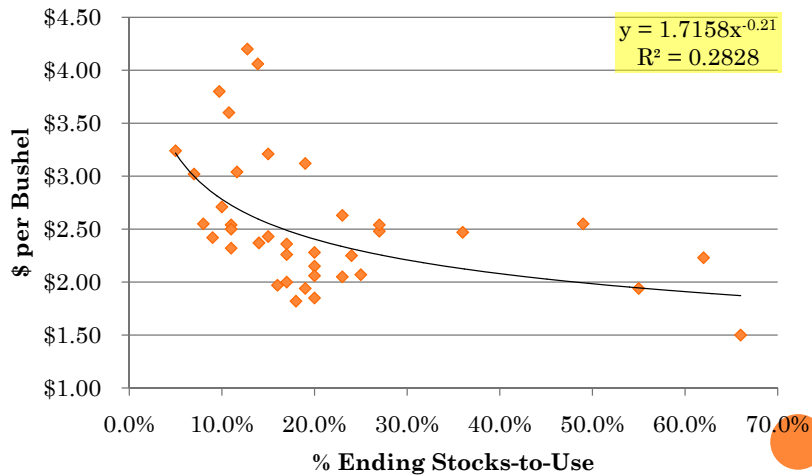
U.S. CORN %STOCKS/USE vs PRICE\$

MY 1973-74 THRU MY 2010-11 AUGUST 12, 2010 USDA WASDE REPORT



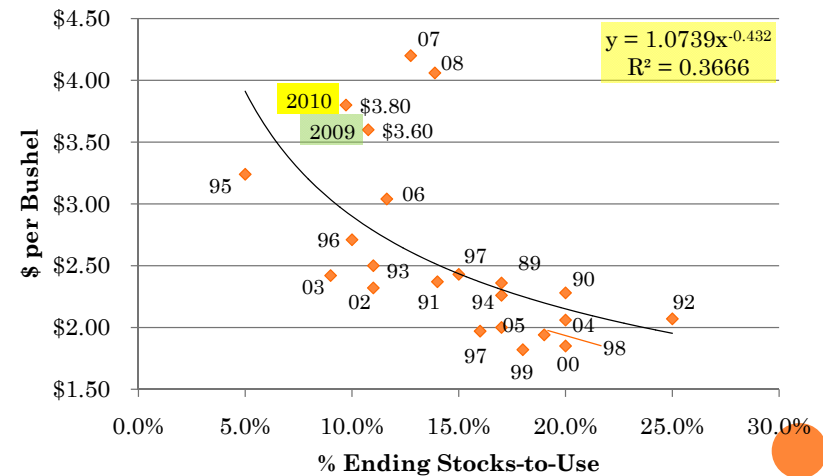
U.S. CORN PRICE VS %STOCKS-TO-USE

MY 1973-74 THROUGH MY 2010-11



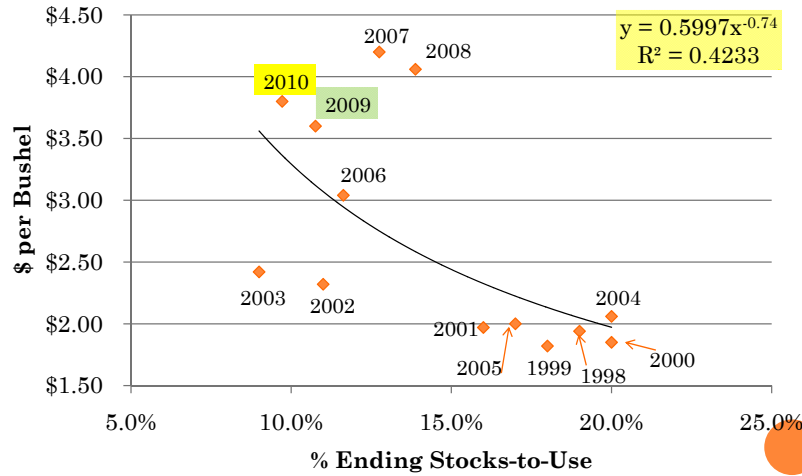
U.S. CORN PRICE VS %STOCKS-TO-USE

MY 1989-90 THROUGH MY 2010-11 – POST-ERA OF LARGE GOVT HELD STOCKS



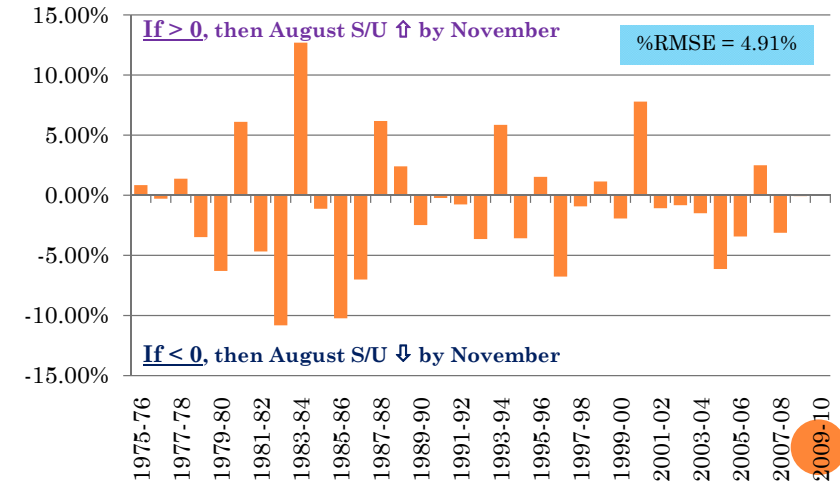
U.S. CORN PRICE VS %STOCKS-TO-USE

MY 1998-99 THROUGH MY 2010-11 – ERA IDENTIFIED BY TYNER, ET AL. (2008)



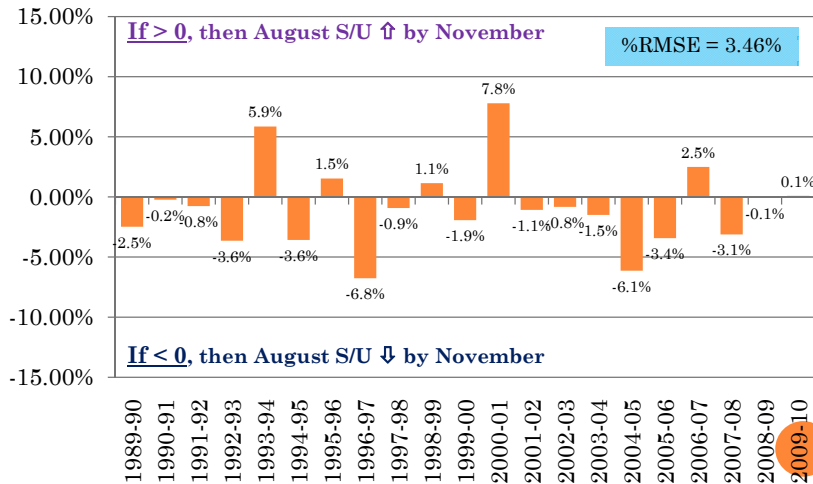
U.S. CORN % S/U FORECAST ERRORS

AUGUST TO NOVEMBER USDA WASDE FORECASTS, 1975-2009



U.S. CORN % S/U FORECAST ERRORS

AUGUST TO NOVEMBER USDA WASDE FORECASTS, 1989-2009



CORN PRICE MODEL & FORECAST INPUTS FOR MY 2010-11

o Corn Price Model (MY 1998-99 thru MY 2009-10)

- $\ln(P_t^{\text{Corn}}) = f [E(\%S/U_t^{\text{Corn}}), P_{t-1}^{\text{Soybeans}}]$
- $\ln(P_t^{\text{Corn}}) = 0.956 - (4.251 * E(\%S/U_t^{\text{Corn}})) + (0.093 * P_{t-1}^{\text{Sb}})$

o High / Expected / Low Corn\$ Scenarios

- Adjust $E(\%S/U_t^{\text{Corn}})$ by $+ / - \% \text{ RMSE} = 3.36\%$

A. $E(\%S/U_t^{\text{Corn}}) - \% \text{RMSE} = 6.36\% \ \& \ P_{t-1}^{\text{Sb}} = \$9.60 / \text{bu}$

B. $E(\%S/U_t^{\text{Corn}}) = 9.27\% \ \& \ P_{t-1}^{\text{Sb}} = \$9.60 / \text{bu}$

C. $E(\%S/U_t^{\text{Corn}}) + \% \text{RMSE} = 13.08\% \ \& \ P_{t-1}^{\text{Sb}} = \$9.60 / \text{bu}$

U.S. AVERAGE CORN PRICE FORECAST FOR MY 2010-11

○ High Corn \$ Scenario

- $P_t^{\text{Corn}} = \$4.85 / \text{bu}$ @ 17th percentile

○ Expected Corn \$ Scenario

- $P_t^{\text{Corn}} = \$4.20 / \text{bu}$ @ 50th percentile

○ Low Corn \$ Scenario

- $P_t^{\text{Corn}} = \$3.64 / \text{bu}$ @ 83rd percentile

→ Compared to MY 2010-11 WASDE Forecast of \$3.50 to \$4.10 (midpoint = \$3.80)

FEEDGRAIN MARKET DIRECTION

○ “Tighter” Corn Stocks in MY 2010-11

- Down to 1.312 bb & 9.7% S/U
 - Possible impact if U.S. corn S/U trends lower in future as opposed to “large supply” expectations?

⇒ Energy, Currency, Other Crop\$ Impacts?

- U.S. Feedgrain S/D = f [Bioenergy, Oil Markets]
- U.S. Export Sales = f [USD\$, World Grain S/D]
- Grain \$ Volatility = f [Economy, Other Markets]

○ Competition for Crop Acres in 2010-11

- Winter Wheat vs Other Crops → Fall 2010
- DEC Corn vs NOV Soybeans → Spring 2011



QUESTIONS?

www.AgManager.info

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