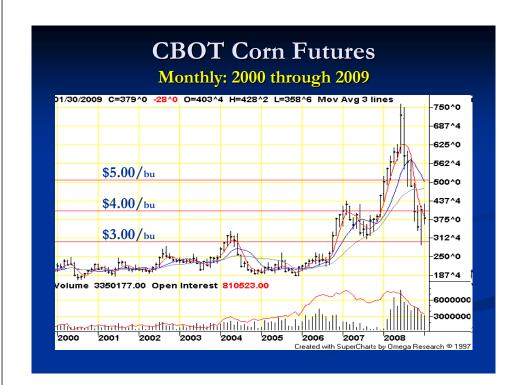
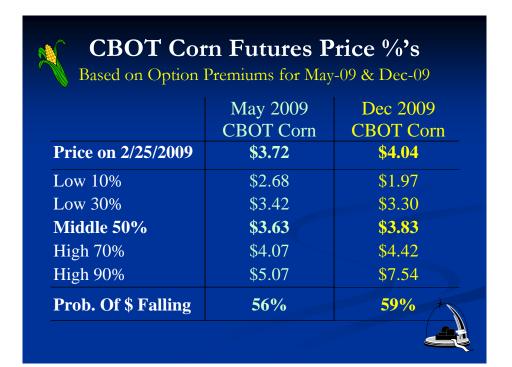
Performance of Hedges & Long Futures Positions in CBOT Corn

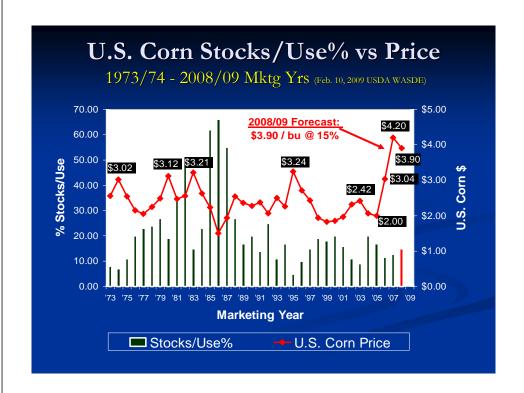
Goodland, Kansas

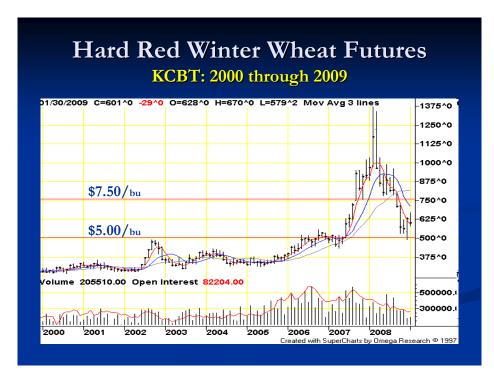
March 2, 2009

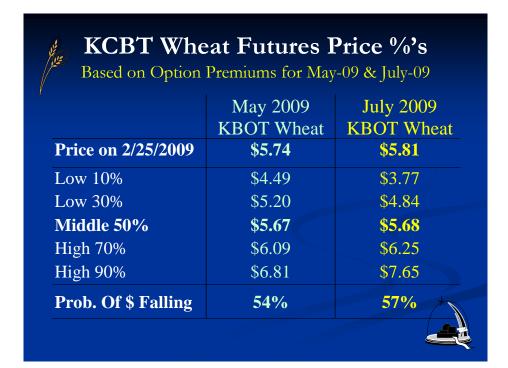
Daniel O'Brien, Extension Ag Economist K-State Research and Extension



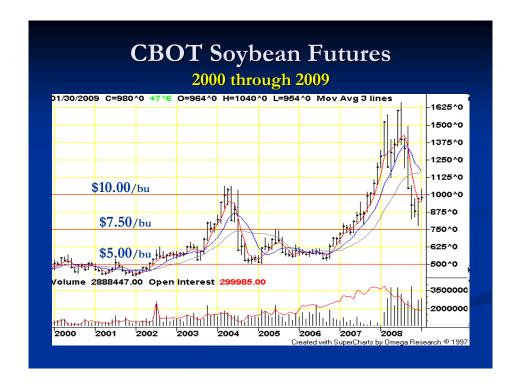








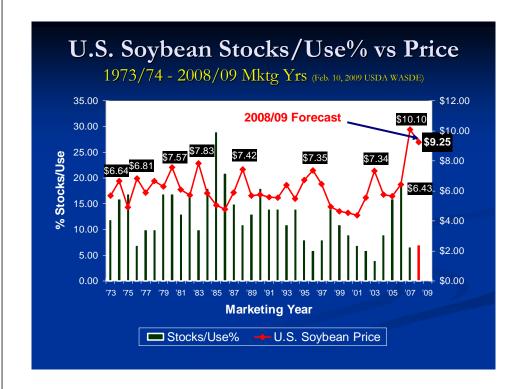




CBOT Soybean Futures Price %'s

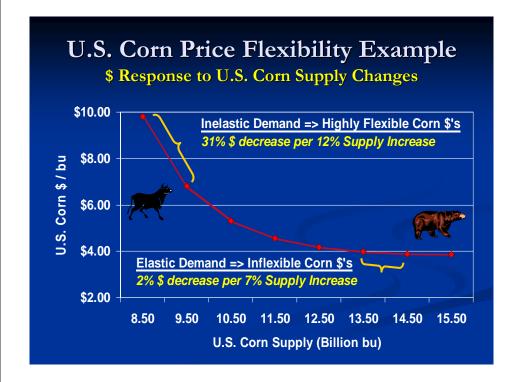
Based on Option Premiums for May-09 & Nov-09

Price on 2/25/2009	May 2009 CBOT Soyb. \$8.80	Nov 2009 CBOT Soyb. \$8.38
Low 10%	\$7.11	\$5.60
Low 30%	\$8.07	\$6.99
Middle 50%	\$8.73	\$8.08
High 70%	\$9.35	\$9.69
High 90%	\$10.48	\$16.33
Prob. Of \$ Falling	52%	55%



Persistant Inelastic Demand Agricultural & Other Commodities

- Many Ag Commodities are produced on <u>Inelastic</u> parts of their Demand Curves
 - Supply is often constrained by policies, competition for limited resources, etc.
- Inelastic Price Revenue Relationship
 - As Price ①, Revenue ①
 - As Price ♥, Revenue ♥
- Examples: U.S. Grains, Livestock & Energy



What Determines Price Elasticity?

- **Elastic Demand** (%Δ Q_{Demand} > %Δ Price)
 - Many close *substitutes*
 - Longer adjustment period
 - Commodity is a <u>large</u> expense item





- Inelastic Demand (%Δ Q_{Demand} < %Δ Price)
 - <u>Few</u> acceptable *substitutes*
 - Shorter adjustment period
 - Commodity is a <u>smaller</u> expense item



Implications of Inelastic Demand

- Record High-Low Price Swings (Volatility)
 - Low Stocks/Use "pushed" grain markets into the Inelastic, highly Flexible regions of market demand



- \blacksquare P_{Grains} responded to their own \mathfrak{C} other grain's tight S/D prospects
- Fall 2008: Small--moderate ① Supply & Demand has helped cause a large U in grain prices





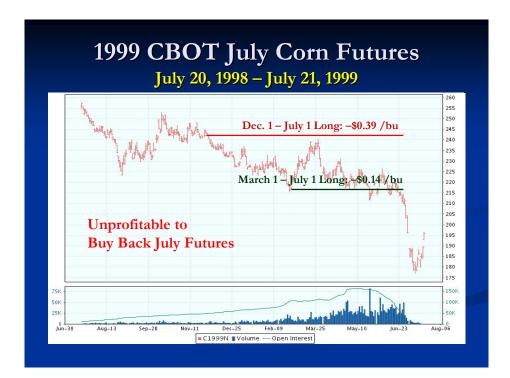
Performance of Corn Futures Pricing Strategies 1998-2008

- Hedges ("Short" or "Sell" positions)
- Sell Cash + Buy Futures ("Long" Positions)

Corn Futures Pricing: 1998/1999

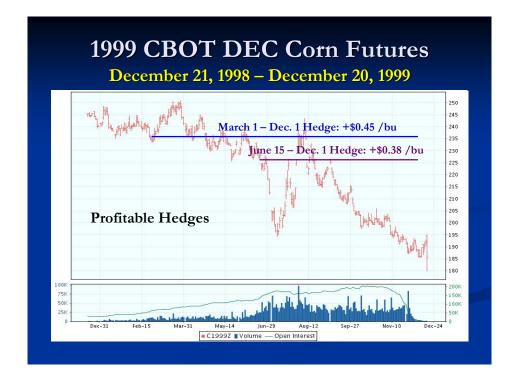
- Hedging CBOT DEC 1998 Corn Futures
 - Sell March 2, '98 Buy back Dec. 1, '98 (+\$0.64⁷⁵ /bu)
 - Sell June 15, '98 Buy back Dec. 1, '98 (+\$0.24 /bu)
- Buying CBOT JULY 1999 Corn Futures
 - Buy Dec. 1, '98 Sell back July 1, '99 (–\$0.39 /bu)
 - Buy March 1, '99 Sell back July 1, '99 (–\$0.14 /bu)

1998 CBOT DEC Corn Futures December 22, 1997 – December 21, 1998 March 2 – Dec. 1 Hedge: +\$0.65 /bu June 15 – Dec. 1 Hedge: +\$0.24 /bu Profitable Hedges Profitable Hedges Profitable Hedges | Dec. 21 | Dec. 22 | Dec. 24 | Dec. 25 | Dec. 25 | Dec. 25 | Dec. 25 | Dec. 26 | Dec. 25 | Dec. 26 | Dec. 27 |



Corn Futures Pricing: 1999/2000

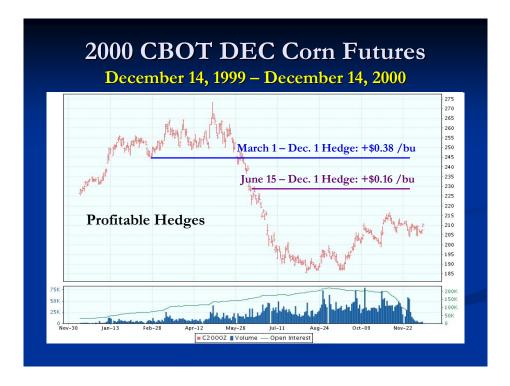
- Hedging CBOT DEC 1999 Corn Futures
 - Sell March 1, '99 Buy back Dec. 1, '99 (+\$0.44⁷⁵/bu)
 - Sell June 15, '99 Buy back Dec. 1, '99 (+\$0.38 /bu)
- **■** Buying CBOT JULY 2000 Corn Futures
 - Buy Dec. 1, '99 Sell back July 3, '00 (–\$0.33⁵⁰ /bu)
 - Buy March 1, '00 Sell back July 3, '00 (–\$0.49 /bu)

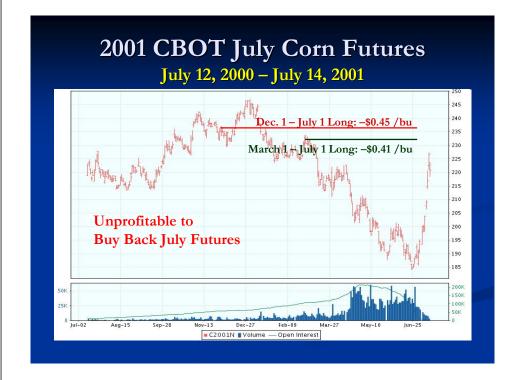


2000 CBOT July Corn Futures July 14, 1999 – July 14, 2000 March 1 – July 3 Long: –\$0.49 /bu 235 230 225 Dec. 1 – July 3 Long: -\$0.33 /bu 220 215 210 205 Unprofitable to 200 195 **Buy Back July Futures** 190 185 180 ■ C2000N ■ Volume

Corn Futures Pricing: 2000/2001

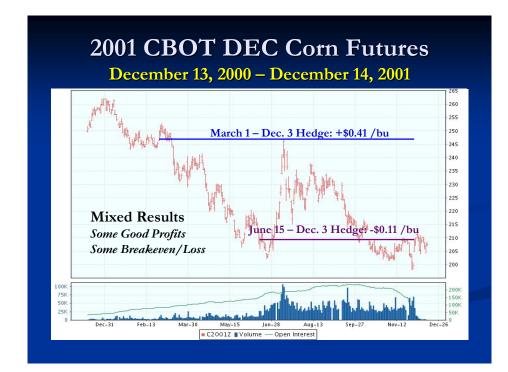
- Hedging CBOT DEC 2000 Corn Futures
 - Sell March 1, '00 Buy back Dec. 1, '00 (+\$0.38⁵⁰ /bu)
 - Sell June 15, '00 Buy back Dec. 1, '00 (+\$0.15⁷⁵/bu)
- Buying CBOT JULY 2001 Corn Futures
 - Buy Dec. 1, '98 Sell back July 1, '99 (–\$0.45⁵⁰ /bu)
 - Buy March 1, '99 Sell back July 1, '99 (–\$0.41²⁵ /bu)

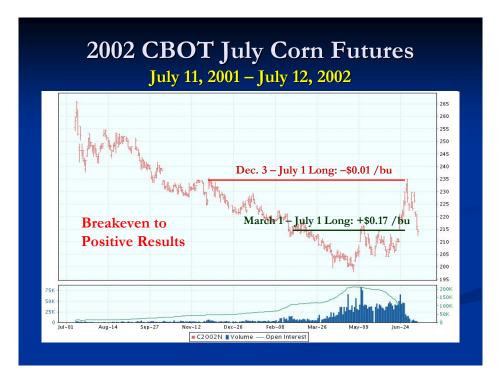




Corn Futures Pricing: 2001/2002

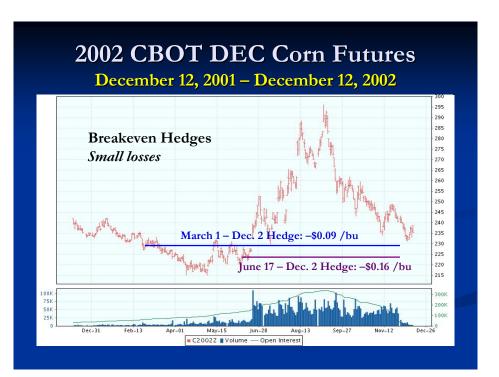
- Hedging CBOT DEC 2001 Corn Futures
 - Sell March 1, '01 Buy back Dec. 3, '01 (+\$0.41²⁵ /bu)
 - Sell June 15, '01 Buy back Dec. 3, '01 (–\$0.00⁵⁰ /bu)
- Buying CBOT JULY 2002 Corn Futures
 - Buy Dec. 3, '01 Sell back July 1, '02 (–\$0.01²⁵ /bu)
 - Buy March 1, '02 Sell back July 1, '02 (+\$0.17²⁵/bu)

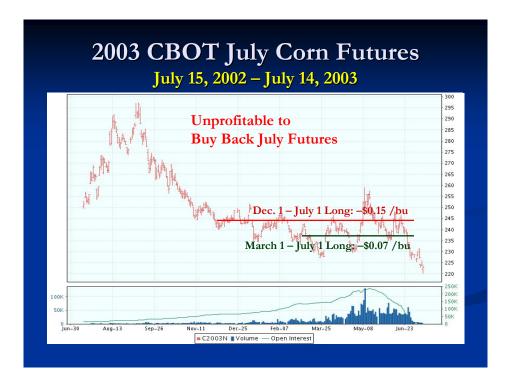




Corn Futures Pricing: 2002/2003

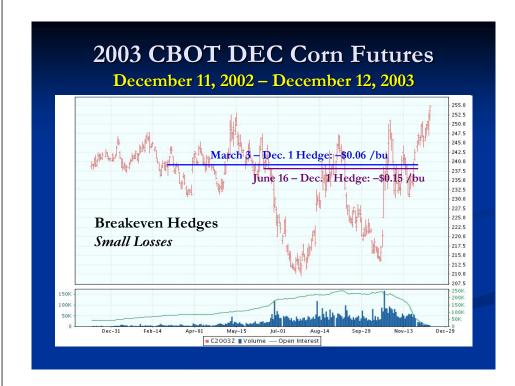
- Hedging CBOT DEC 2002 Corn Futures
 - Sell March 1, '02 Buy back Dec. 2, '02 (–\$0.08⁷⁵ /bu)
 - Sell June 17, '02 Buy back Dec. 2, '02 (–\$0.15⁷⁵ /bu)
- Buying CBOT JULY 2003 Corn Futures
 - Buy Dec. 2, '02 Sell back July 1, '03 (–\$0.15 /bu)
 - Buy March 3, '03 Sell back July 1, '03 (–\$0.07²⁵ /bu)





Corn Futures Pricing: 2003/2004

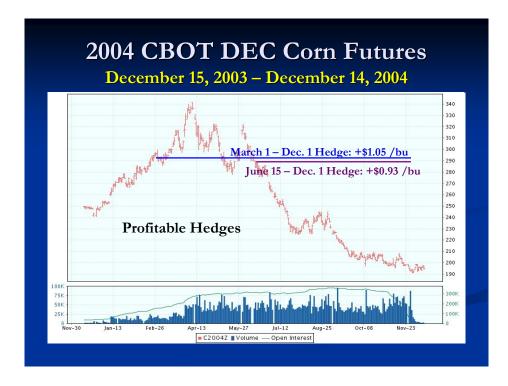
- Hedging CBOT DEC 2003 Corn Futures
 - Sell March 3, '03 Buy back Dec. 1, '03 (–\$0.06²⁵ /bu)
 - Sell June 16, '03 Buy back Dec. 1, '03 (–\$0.05²⁵/bu)
- Buying CBOT JULY 2004 Corn Futures
 - Buy Dec. 1, '03 Sell back July 1, '04 (+\$0.01⁵⁰ /bu)
 - Buy March 1, '04 Sell back July 1, '04 (–\$0.51⁵⁰ /bu)

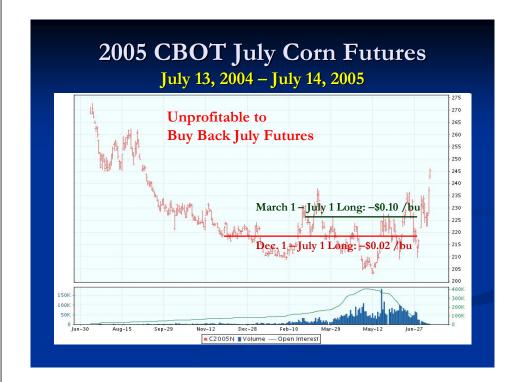


2004 CBOT July Corn Futures July 14, 2003 – July 14, 2004 Mixed Results Breakeven to Losses Buying Back July Futures Dec. 1 – July 1 Long: +\$0.01 /bu Jun-30 Aug-13 Sep-26 Nov-11 Dec. 25 Feb-09 Mar-24 May-07 Jun-22 Dec. 1 – July 1 Long: +\$0.01 /bu Jun-20 Results Results Breakeven to Losses July Futures July 1 Long: +\$0.01 /bu Jun-20 J

Corn Futures Pricing: 2004/2005

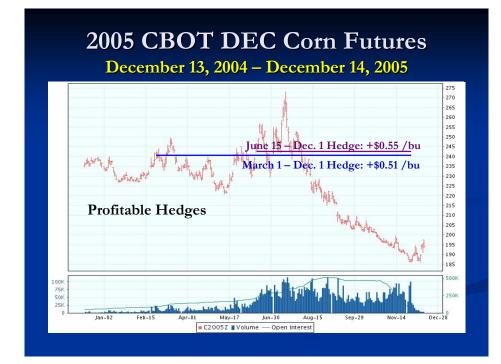
- Hedging CBOT DEC 2004 Corn Futures
 - Sell March 1, '04 Buy back Dec. 1, '04 (+\$1.05 /bu)
 - Sell June 15, '04 Buy back Dec. 1, '04 (+\$0.92⁷⁵/bu)
- Buying CBOT JULY 2005 Corn Futures
 - Buy Dec. 1, '04 Sell back July 1, '05 (-\$0.02 /bu)
 - Buy March 1, '05 Sell back July 1, '05 (–\$0.10²⁵ /bu)





Corn Futures Pricing: 2005/2006

- Hedging CBOT DEC 2005 Corn Futures
 - Sell March 1, '05 Buy back Dec. 1, '05 (+\$0.50⁷⁵ /bu)
 - Sell June 15, '05 Buy back Dec. 1, '05 (+\$0.55\(\frac{25}{25}\) /bu)
- Buying CBOT JULY 2006 Corn Futures
 - Buy Dec. 1, '05 Sell back July 3, '06 (+\$0.15²⁵ /bu)
 - Buy March 1, '06 Sell back July 3, '06 (–\$0.09 /bu)

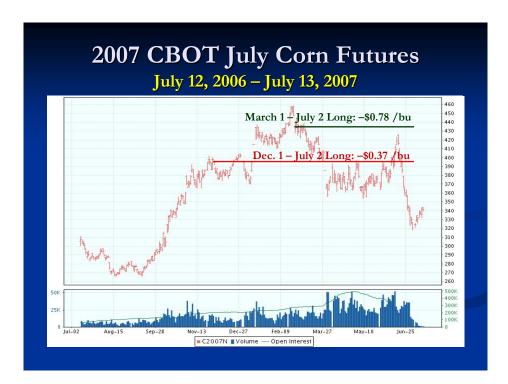


2006 CBOT July Corn Futures July 13, 2005 – July 14, 2006 Mixed Results Both Losses & Positive Results March 1 – July 3 Long: +\$0.09 / bu Positive Results Dec. 1 – July 3 Long: +\$0.15 / bu Jun-30 Aug-15 Sep-29 Nov-14 Dec-28 Feb-12 Mai-29 May-12 Jun-27 May-12 Jun-27

Corn Futures Pricing: 2006/2007

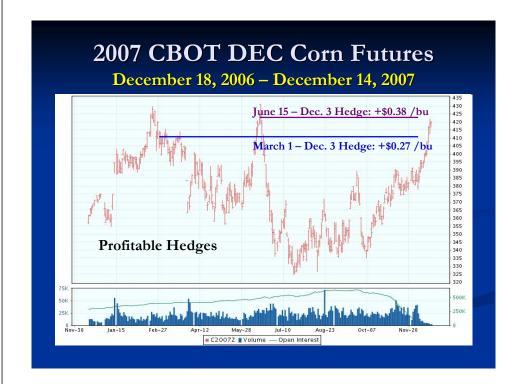
- Hedging CBOT DEC 2006 Corn Futures
 - Sell March 1, '06 Buy back Dec. 1, '06 (–\$0.50⁷⁵ /bu)
 - Sell June 15, '06 Buy back Dec. 1, '06 (–\$0.55²⁵ /bu)
- Buying CBOT JULY 2007 Corn Futures
 - Buy Dec. 1, '06 Sell back July 2, '07 (–\$0.37 /bu)
 - Buy March 1, '99 Sell back July 2, '07 (-\$0.78⁵⁰ /bu)





Corn Futures Pricing: 2007/2008

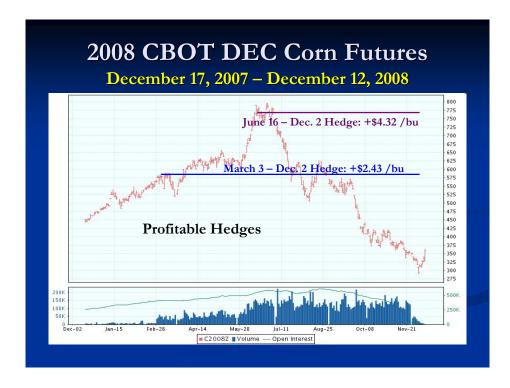
- Hedging CBOT DEC 2007 Corn Futures
 - Sell March 1, '07 Buy back Dec. 3, '07 (+\$0.27\(\frac{25}{25}\) /bu)
 - Sell June 15, '07 Buy back Dec. 3, '07 (+\$0.38\(\frac{25}{25}\) /bu)
- Buying CBOT JULY 2008 Corn Futures
 - Buy Dec. 1, '07 Sell back July 1, '08 (+\$2.96⁵⁰ /bu)
 - Buy March 3, '07 Sell back July 1, '08 (+\$1.41²⁵/bu)

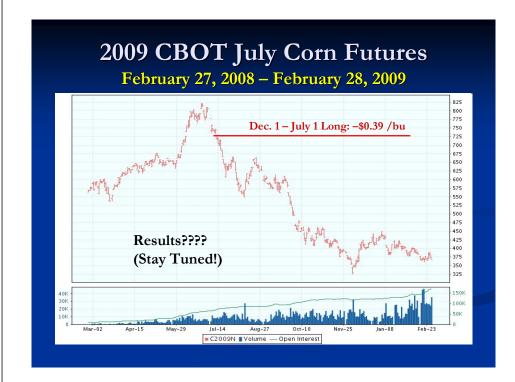


2008 CBOT July Corn Futures July 16, 2007 – July 14, 2008 Profitable to 725 700 **Buy Back July Futures** 675 650 625 March 3 – July 1 Long: +\$1,41 / bu 475 450 Dec. 3 - July 1 Long: +\$2.96 /bu 425 400 375 150K 100K ■ C2008N ■ Volume

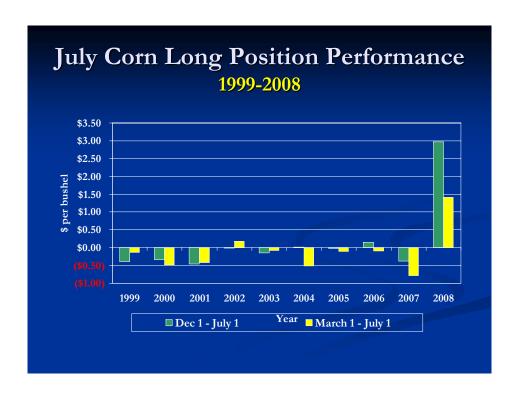
Corn Futures Pricing: 2008/2009

- Hedging CBOT DEC 2008 Corn Futures
 - Sell March 3, '08 Buy back Dec. 2, '08 (+\$2.43⁵⁰ /bu)
 - Sell June 16, '08 Buy back Dec. 2, '08 (+\$4.32⁵⁰ /bu)
- Buying CBOT JULY 2009 Corn Futures
 - Buy Dec. 1, '08 (\$3.70⁷⁵)— Sell back July 1, '09 ?????
 - Buy March 1, '09 (≈\$3.55)— Sell back July 1, '09 ?????









Questions??? Daniel M. O'Brien, Ph.D. K-State Extension Agricultural Economics: www.AgManager.info