

---

# Grain Marketing Principles & Tools

Cash Grain Basis, Forward Contracts,  
Marketing Loans, Futures & Options

---

Dr. Daniel M. O'Brien

Extension Agricultural Economist

K-State Research and Extension



# Types of Grain Marketing Tools

- Cash Grain Sales
- Forward Contracts
- Basis Contracts
- Hedge-to-Arrive (HTA) Contracts
- Minimum Price Contracts
- Average \$ Contracts
- Marketing Loans (FSA)
- Short Futures Hedges
- Buying Put Options
- Forward Contract & Buying Call Options
- Combinations of Buying Puts & Calls
- Price Later Contracts
- Over-the-Counter (OTC) Contracts

---

# Types of Forward Contracts

## Commitment for Future Sale & Delivery of Grain

### ■ Forward Cash Contracts

- Cash Price, quantity (bu.) & delivery date are set
  - *BOTH futures selling price & local cash basis are determined*

### ■ Basis Contract

- Local Basis, quantity (bu.) & delivery date are set

### ■ Hedge-to-Arrive (HTA) Contract

- Futures Price, quantity (bu.) & delivery date are set

### ■ Minimum Price Contract

- Minimum Cash \$, quantity (bu.) & delivery date are set
-

---

## 2011 U.S. National Average Loan Rates

- Corn \$1.95 /bu
- Grain Sorghum \$3.48 /cwt (\$1.95 /bu)
- Soybeans \$5.00 /bu
- Sunflower-Oil Type \$10.09 /cwt
- Wheat (HRW) \$2.94 /bu
- Canola \$10.09 /cwt
- Upland Cotton \$0.52 /lb

---

## 2011/12 Grain Marketing Loan Rates for Goshen County, Wyoming

- Corn \$2.05 /bu
- Grain Sorghum \$3.14 /cwt (\$1.76 /bu)
- Soybeans \$4.54 /bu
- Sunflower-Oil Type \$10.59 /cwt
- Wheat (HRW) \$2.85 /bu (HRS-W: \$2.99)
- Canola \$9.15 /cwt

---

## 2011/12 Grain Marketing Loan Rates for Laramie County, Wyoming

- Corn \$2.06 /bu
- Grain Sorghum \$3.28 /cwt (\$1.84 /bu)
- Soybeans \$4.54 /bu
- Sunflower-Oil Type \$10.65 /cwt
- Wheat (HRW) \$2.90 /bu (HRS-W: \$2.99)
- Canola \$8.93 /cwt

---

# Marketing Assistance Loans (USDA-FSA)

## ■ Grain Sale Cash Flow Coverage

- Provides grain producers with interim financing to meet cash flow needs without having to sell their commodities when market prices are typically at harvest-time lows

## ■ Marketing Loans are “Non-Recourse”

- The grain is pledged as loan collateral
- Producers have the option of delivering the grain to the Commodity Credit Corporation (CCC) as full payment for the loan at maturity
- Under some circumstances, producers may repay marketing loans at less than principal plus accrued interest and other charges

## ■ Alternative: Loan Deficiency Payment (LDP)

- In lieu of a marketing assistance loan, grain producers may be eligible for an LDP
-

---

# Hedging Prices by “Selling” Futures

- **“Short Hedges” Lock in Grain Futures \$s**
  - Removing futures price variation as a source of risk
    - Are taking a “short” or “sell” position in grain futures
      - *“Selling” KCBT July 2012 Wheat or CBOT DEC 2012 Corn*
    - Subject to “margin calls” to maintain equity or dollar value of the futures margin account
- **“Hedging” versus “Speculating” in Futures**
  - Hedges work if enough grain is produced & sold in the cash market to cover the futures market position
    - However, producers would be in a speculative position **IF** crop production < futures contract position



# Hedging With Futures

## ■ “Pricing” Hedges on Grain Production

1) (*Prehedge*) Analyze hedging opportunity

☐ *Futures less Basis less Brokers' fees*

2) (*Placing the Hedge*) Sell futures contract(s) nearest to the grain delivery period

☐ In a “**Short**” or “sell” futures position

3) (*Closing Out the Hedge Position*)

☐ Buy back futures contract(s)

☐ Sell cash grain (optional)



# Wheat Hedge Example (Cash Basis: \$0.40 under)

	Falling Wheat Futures (↓ \$1 /bu)			Rising Wheat Futures (↑ \$1 /bu)		
Transaction	Before Harvest	At Harvest	Total Payment Received	Before Harvest	At Harvest	Total Payment Received
<b><u>KCBT Futures</u></b>		\$ ↓			\$ ↑	
Futures Price	\$5.00	\$4.00		\$5.00	\$6.00	
Bu. Sold	10,000			10,000		
Bu. Bought						
Gain (Loss) /bu						
Total Gain (Loss)						
<b><u>Harvest Sales</u></b>						
Price @ Harvest						
Bu. Delivered						
Harvest Sales						
<b>Total Revenue</b>						

# Wheat Hedge Example (Cash Basis: \$0.40 under)<sub>2</sub>

	Falling Wheat Futures (↓ \$1 /bu)		
Transaction	Before Harvest	At Harvest	Total Payment Received
<b><u>KCBT Futures</u></b>		\$ ↓	
Futures Price	\$5.00	\$4.00	
Bu. Sold	10,000		
Bu. Bought		10,000	
Gain (Loss) /bu		+\$1.00	
Total Gain (Loss)		+\$10,000	+\$10,000
<b><u>Harvest Sales</u></b>			
Price @ Harvest			
Bu. Delivered			
Harvest Sales			
<b>Total Revenue</b>			

# Wheat Hedge Example (Cash Basis: \$0.40 under)<sub>3</sub>

	Falling Wheat Futures (↓ \$1 /bu)		
Transaction	Before Harvest	At Harvest	Total Payment Received
<b><u>KCBT Futures</u></b>		\$ ↓	
Futures Price	\$5.00	\$4.00	
Bu. Sold	10,000		
Bu. Bought		10,000	
Gain (Loss) /bu		+\$1.00	
Total Gain (Loss)		+\$10,000	+\$10,000
<b><u>Harvest Sales</u></b>			
Price @ Harvest		\$3.60	
Bu. Delivered		10,000	
Harvest Sales		+\$36,000	<u>+\$36,000</u>
<b>Total Revenue</b>			<b>\$46,000</b>

# Wheat Hedge Example (Cash Basis: \$0.40 under)<sup>4</sup>

Transaction	Rising Wheat Futures (↑ \$1 /bu)		
	Before Harvest	At Harvest	Total Payment Received
<b><u>KCBT Futures</u></b>		\$ ↑	
Futures Price	\$5.00	\$6.00	
Bu. Sold	10,000		
Bu. Bought		10,000	
Gain (Loss) /bu		(\$1.00)	
Total Gain (Loss)		(\$10,000)	(\$10,000)
<b><u>Harvest Sales</u></b>			
Price @ Harvest			
Bu. Delivered			
Harvest Sales			
Total Revenue			

# Wheat Hedge Example (Cash Basis: \$0.40 under)

	Rising Wheat Futures (↑ \$1 /bu)		
Transaction	Before Harvest	At Harvest	Total Payment Received
<b><u>KCBT Futures</u></b>		\$ ↑	
Futures Price	\$5.00	\$6.00	
Bu. Sold	10,000		
Bu. Bought		10,000	
Gain (Loss) /bu		(\$1.00)	
Total Gain (Loss)		(\$10,000)	(\$10,000)
<b><u>Harvest Sales</u></b>			
Price @ Harvest		\$5.60	
Bu. Delivered		10,000	
Harvest Sales		+\$56,000	<u>+\$56,000</u>
Total Revenue			<b>\$46,000</b>

# Wheat Hedge Example (Cash Basis: \$0.40 under)<sup>6</sup>

	Falling Wheat Futures (↓ \$1 /bu)			Rising Wheat Futures (↑ \$1 /bu)		
Transaction	Before Harvest	At Harvest	Total Payment Received	Before Harvest	At Harvest	Total Payment Received
<b><u>KCBT Futures</u></b>		\$ ↓			\$ ↑	
Futures Price	\$5.00	\$4.00		\$5.00	\$6.00	
Bu. Sold	10,000			10,000		
Bu. Bought		10,000			10,000	
Gain (Loss) /bu		+\$1.00			(\$1.00)	
Total Gain (Loss)		+\$10,000	+\$10,000		(\$10,000)	(\$10,000)
<b><u>Harvest Sales</u></b>						
Price @ Harvest		\$3.60			\$5.60	
Bu. Delivered		10,000			10,000	
Harvest Sales		+\$36,000	<u>+\$36,000</u>		+\$56,000	<u>+\$56,000</u>
Total Revenue			<b>\$46,000</b>			<b>\$46,000</b>

# Forward Contract Vs Futures Hedge

## ■ If Basis Projection is Accurate, then..

- Forward Contract \$ = Futures Hedge \$



## ■ Who Carries the Futures Account?

- **FC:** Elevator contacts broker & pays any margin calls
- **Hedge:** Producer works w. broker, pays margin calls

## ■ Delivery Commitment?

- **FC:** Delivery commitment of X bushels for \$X price
- **Hedge:** No delivery commitment to elevator



## ■ Basis Commitment?

- **FC:** Set cash basis / **Hedge:** Varying cash basis



---

# Buying Grain Put Options

## Setting Futures Price Floors by Buying Put Options

### ■ Why Buy Put Options?

- “Puts” provide protection from falling grain futures prices
- If grain producer-sellers buy put options, they are protecting themselves from falling grain futures prices
  - But, they are leaving themselves the opportunity to still benefit if grain futures prices should rise
- Similar to “Minimum Price Contracts”

### ■ Technical Definition of Put Options

- Puts provide “the right but not the obligation” to take “short” or “sell” positions in futures markets
    - Avoiding margin calls that are possible with “Short Hedges”
-

# Mechanics of Buying Grain Put Options

- **Strike Price = Grain Futures “Insurance” Level**
  - “In-the-Money” Put Strike Price > Futures Price
  - “At-the-Money” Put Strike Price = Futures Price
  - “Out of-the-Money” Put Strike Price < Futures Price
- **Put “Premium”  $\Rightarrow$  Cost of Buying Put Option**
- **Futures Price Floor with Put Options**
  - $\text{Strike Price}^{(\text{Put})} - \text{Premium}^{(\text{Put})} - \text{Brokers Fee}$
- **“Expected” Cash Price Floor with Put Options**
  - $\text{Strike Price}^{(\text{Put})} - \text{Premium}^{(\text{Put})} - \text{Brokers Fee} - \text{Basis}^{(\text{Est.})}$

# Wheat Put Option Example (Basis \$0.40 under)<sub>1</sub>

	Falling Wheat Futures (↓ \$1 /bu)			Rising Wheat Futures (↑ \$1 /bu)		
Transaction	Before Harvest	At Harvest	Payment Received	Before Harvest	At Harvest	Payment Received
<b><u>KCBT PUTS</u></b>		\$ ↓			\$ ↑	
Futures Price	\$5.00	\$4.00		\$5.00	\$6.00	
<b>PUT Strike Price</b>	<b>\$5.00</b>			<b>\$5.00</b>		
<b>PUT Premium</b> <small>s/bu</small>	<b>\$0.75</b>			<b>\$0.75</b>		
Qty. Bought (bu)	10,000			10,000		
Qty. Sold (bu)						
Gain (Loss) /bu						
Total Gain (Loss)						
<b><u>Harvest Sales</u></b>						
Price @ Harvest						
Bu. Delivered						
Harvest Sales						
<b>Total Revenue</b>						

# Wheat Put Option Example (Basis \$0.40 under)<sub>2</sub>

	Falling Wheat Futures (↓ \$1 /bu)		
Transaction	Before Harvest	At Harvest	Payment Received
<b><u>KCBT PUTS</u></b>		\$ ↓	
Futures Price	\$5.00	\$4.00	
<b>PUT Strike Price</b>	<b>\$5.00</b>	<b>\$5.00</b>	
<b>PUT Premium</b> <small>s/bu</small>	<b>\$0.75</b>	<b>\$1.00</b>	
Qty. Bought (bu)	10,000		
Qty. Sold (bu)		10,000	
Gain (Loss) /bu		+\$0.25	
Total Gain (Loss)		+\$2,500	+\$2,500
<b><u>Harvest Sales</u></b>			
Price @ Harvest			
Bu. Delivered			
Harvest Sales			
<b>Total Revenue</b>			

# Wheat Put Option Example (Basis \$0.40 under)<sub>3</sub>

	Falling Wheat Futures (↓ \$1 /bu)		
Transaction	Before Harvest	At Harvest	Payment Received
<b><u>KCBT PUTS</u></b>		\$ ↓	
Futures Price	\$5.00	\$4.00	
<b>PUT Strike Price</b>	<b>\$5.00</b>	<b>\$5.00</b>	
<b>PUT Premium</b> <small>s/bu</small>	<b>\$0.75</b>	<b>\$1.00</b>	
Qty. Bought (bu)	10,000		
Qty. Sold (bu)		10,000	
Gain (Loss) /bu		+\$0.25	
Total Gain (Loss)		+\$2,500	+\$2,500
<b><u>Harvest Sales</u></b>			
Price @ Harvest		\$3.60	
Bu. Delivered		10,000	
Harvest Sales		+\$36,000	<u>+\$36,000</u>
<b>Total Revenue</b>			<b>\$38,500</b>

# Wheat Put Option Example (Basis \$0.40 under)<sup>4</sup>

	Rising Wheat Futures (↑ \$1 /bu)		
	Before Harvest	At Harvest	Payment Received
Transaction			
<b><u>KCBT PUTS</u></b>			
Futures Price	\$5.00	\$6.00	
<b>PUT Strike Price</b>	<b>\$5.00</b>	<b>\$5.00</b>	
<b>PUT Premium</b> <small>\$/bu</small>	<b>\$0.75</b>	<b>\$0.00</b>	
Qty. Bought (bu)	10,000		
Qty. Sold (bu)		10,000	
Gain (Loss) /bu		(\$0.75)	
Total Gain (Loss)		(\$7,500)	(\$7,500)
<b><u>Harvest Sales</u></b>			
Price @ Harvest			
Bu. Delivered			
Harvest Sales			
<b>Total Revenue</b>			

# Wheat Put Option Example (Basis \$0.40 under)

	Rising Wheat Futures (↑ \$1 /bu)		
Transaction	Before Harvest	At Harvest	Payment Received
<b><u>KCBT PUTS</u></b>		\$ ↑	
Futures Price	\$5.00	\$6.00	
<b>PUT Strike Price</b>	<b>\$5.00</b>	<b>\$5.00</b>	
<b>PUT Premium</b> <small>\$/bu</small>	<b>\$0.75</b>	<b>\$0.00</b>	
Qty. Bought (bu)	10,000		
Qty. Sold (bu)		10,000	
Gain (Loss) /bu		(\$0.75)	
Total Gain (Loss)		(\$7,500)	(\$7,500)
<b><u>Harvest Sales</u></b>			
Price @ Harvest		\$5.60	
Bu. Delivered		10,000	
Harvest Sales		+\$56,000	<u>+\$56,000</u>
<b>Total Revenue</b>			<b>\$48,500</b>

# Wheat Put Option Example (Basis \$0.40 under)<sup>6</sup>

	Falling Wheat Futures (↓ \$1 /bu)			Rising Wheat Futures (↑ \$1 /bu)		
Transaction	Before Harvest	At Harvest	Payment Received	Before Harvest	At Harvest	Payment Received
<b><u>KCBT PUTS</u></b>		\$ ↓			\$ ↑	
Futures Price	\$5.00	\$4.00		\$5.00	\$6.00	
<b>PUT Strike Price</b>	<b>\$5.00</b>	<b>\$5.00</b>		<b>\$5.00</b>	<b>\$5.00</b>	
<b>PUT Premium</b> <small>s/bu</small>	<b>\$0.75</b>	<b>\$1.00</b>		<b>\$0.75</b>	<b>\$0.00</b>	
Qty. Bought (bu)	10,000			10,000		
Qty. Sold (bu)		10,000			10,000	
Gain (Loss) /bu		+\$0.25			(\$0.75)	
Total Gain (Loss)		+\$2,500	+\$2,500		(\$7,500)	(\$7,500)
<b><u>Harvest Sales</u></b>						
Price @ Harvest		\$3.60			\$5.60	
Bu. Delivered		10,000			10,000	
Harvest Sales		+\$36,000	<u>+\$36,000</u>		+\$56,000	<u>+\$56,000</u>
<b>Total Revenue</b>			<b>\$38,500</b>			<b>\$48,500</b>



---

# Sell Cash + Buying Grain Call Options

Being in Position to Gain from Later Futures \$ Increases

## ■ Why Buy Call Options?

- “Calls” provide protection from rising grain futures prices
- If grain producer-sellers buy call options after Forward Contracting grain, they are positioning themselves to gain grain futures prices rise later on
- Similar to post-harvest “Minimum Price Contracts”

## ■ Technical Definition of Call Options

- Calls provide “the right but not the obligation” to take “long” or “buy” positions in futures markets
  - Avoiding the margin calls possible from “buying futures”

# Mechanics of Forward Contracts + Buying Grain Call Options

## ■ Strike Price (SP)

- “In-the-Money” Call Strike Price < Futures Price
- “At-the-Money” Call Strike Price = Futures Price
- “Out of-the-Money” Call Strike Price > Futures Price

## ■ Call “Premium” $\Rightarrow$ Cost of Buying Call Option

## ■ Futures Price Rise Coverage with Call Options

- Gains Above:  $SP^{(Call)} + Premium^{(Call)} + Brokers\ Fee$

## ■ Minimum \$ With Fwd Contract + Buying Calls

- Forward Contract \$ –  $Premium^{(Call)}$  – Brokers Fee

# Wheat FWD Contract + Call Option <sup>1</sup>

	Falling Wheat Futures (↓ \$1 /bu)			Rising Wheat Futures (↑ \$1 /bu)		
Transaction	Before Harvest	At Harvest	Payment Received	Before Harvest	At Harvest	Payment Received
<b><u>KCBT PUTS</u></b>		\$ ↓			\$ ↑	
Futures Price	\$5.00	\$4.00		\$5.00	\$6.00	
<b>Call Strike Price</b>	<b>\$5.00</b>			<b>\$5.00</b>	<b>\$5.00</b>	
<b>Call Premium</b> <small>s/bu</small>	<b>\$0.65</b>			<b>\$0.65</b>	<b>\$1.00</b>	
Qty. Bought (bu)	10,000			10,000		
Qty. Sold (bu)						
Gain (Loss) /bu						
Total Gain (Loss)						
<b><u>Harvest Sales</u></b>						
<b>FC\$ @ Harvest</b>		<b>\$4.60</b>			<b>\$4.60</b>	
Bu. Delivered		10,000			10,000	
Harvest Sales		+\$46,000	<u>+\$46,000</u>		+\$46,000	<u>+\$46,000</u>
<b>Total Revenue</b>						

# Wheat FWD Contract + Call Option <sup>2</sup>

	Falling Wheat Futures (↓ \$1 /bu)		
Transaction	Before Harvest	At Harvest	Payment Received
<b><u>KCBT PUTS</u></b>		\$ ↓	
Futures Price	\$5.00	\$4.00	
<b>Call Strike Price</b>	<b>\$5.00</b>	<b>\$5.00</b>	
<b>Call Premium</b> <small>s/bu</small>	<b>\$0.65</b>	<b>\$0.00</b>	
Qty. Bought (bu)	10,000		
Qty. Sold (bu)		10,000	
Gain (Loss) /bu		(\$0.65)	
Total Gain (Loss)		(\$6,500)	(\$6,500)
<b><u>Harvest Sales</u></b>			
FC\$ @ Harvest		\$4.60	
Bu. Delivered		10,000	
Harvest Sales		+\$46,000	<u>+\$46,000</u>
<b>Total Revenue</b>			<b>\$39,500</b>

# Wheat FWD Contract + Call Option <sup>3</sup>

	Rising Wheat Futures (↑ \$1 /bu)		
	Before Harvest	At Harvest	Payment Received
Transaction			
<b><u>KCBT PUTS</u></b>			
Futures Price	\$5.00	\$6.00	
<b>Call Strike Price</b>	<b>\$5.00</b>	<b>\$5.00</b>	
<b>Call Premium</b> <small>\$/bu</small>	<b>\$0.65</b>	<b>\$1.00</b>	
Qty. Bought (bu)	10,000		
Qty. Sold (bu)		10,000	
Gain (Loss) /bu		+\$0.35	
Total Gain (Loss)		+\$3,500	+\$3,500
<b><u>Harvest Sales</u></b>			
FC\$ @ Harvest		\$4.60	
Bu. Delivered		10,000	
Harvest Sales		+\$46,000	<u>+\$46,000</u>
<b>Total Revenue</b>			<b>\$49,500</b>

# Wheat FWD Contract + Call Option <sup>4</sup>

	Falling Wheat Futures (↓ \$1 /bu)			Rising Wheat Futures (↑ \$1 /bu)		
Transaction	Before Harvest	At Harvest	Payment Received	Before Harvest	At Harvest	Payment Received
<b><u>KCBT PUTS</u></b>		\$ ↓			\$ ↑	
Futures Price	\$5.00	\$4.00		\$5.00	\$6.00	
<b>Call Strike Price</b>	<b>\$5.00</b>	<b>\$5.00</b>		<b>\$5.00</b>	<b>\$5.00</b>	
<b>Call Premium</b> <small>s/bu</small>	<b>\$0.65</b>	<b>\$0.00</b>		<b>\$0.65</b>	<b>\$1.00</b>	
Qty. Bought (bu)	10,000			10,000		
Qty. Sold (bu)		10,000			10,000	
Gain (Loss) /bu		(\$0.65)			+\$0.35	
Total Gain (Loss)		(\$6,500)	(\$6,500)		+\$3,500	+\$3,500
<b><u>Harvest Sales</u></b>						
FC\$ @ Harvest		\$4.60			\$4.60	
Bu. Delivered		10,000			10,000	
Harvest Sales		+\$46,000	<u>+\$46,000</u>		+\$46,000	<u>+\$46,000</u>
<b>Total Revenue</b>			<b>\$39,500</b>			<b>\$49,500</b>

---

# Wheat Marketing Strategy Results

*Comparing:*

A. Harvest Cash Sales

B. Preharvest Hedges

C. Preharvest Forward Contracts

D. Preharvest Put Options

E. Preharvest Forward Contract + Buy Call Options

# Wheat Forward Pricing Results <sup>1</sup>

Futures Trends	Cash Sale*	Short Hedge*	Forward Contract	Buy Put Option - Price Floor*	Forward Contract + Buy Call
<b>Falling Futures</b>  (\$5.00 ⇒ \$4.00 /bu)	<b>\$3.60</b> <b>Worst</b>	<b>\$4.60</b> <b>Best (tied)</b>	<b>\$4.60</b> <b>Best (tied)</b>	<b>\$3.85</b> <b>≈ Middle</b>	<b>\$3.95</b> <b>≈ Middle</b>

\*\* Subject to basis risk, i.e., Cash basis > or < than \$0.40 under futures



# Wheat Forward Pricing Results <sup>2</sup>

Futures Trends	Cash Sale*	Short Hedge*	Forward Contract	Buy Put Option - Price Floor*	Forward Contract + Buy Call
<b>Falling Futures</b>  (\$5.00 ⇒ \$4.00 /bu)	<b>\$3.60</b> <b>Worst</b>	<b>\$4.60</b> <b>Best (tied)</b>	<b>\$4.60</b> <b>Best (tied)</b>	<b>\$3.85</b> <b>≈ Middle</b>	<b>\$3.95</b> <b>≈ Middle</b>
<b>Unchanged Futures</b> (\$5.00 ⇒ \$5.00 /bu)	<b>\$4.60</b> <b>Best (tied)</b>	<b>\$4.60</b> <b>Best (tied)</b>	<b>\$4.60</b> <b>Best (tied)</b>	<b>\$3.85</b> <b>Worst</b>	<b>\$3.95</b> <b>2<sup>nd</sup> Worst</b>

\*\* Subject to basis risk, i.e., Cash basis > or < than \$0.40 under futures

# Wheat Forward Pricing Results <sup>3</sup>

Futures Trends	Cash Sale*	Short Hedge*	Forward Contract	Buy Put Option - Price Floor*	Forward Contract + Buy Call
<b>Falling Futures</b>  (\$5.00 ⇒ \$4.00 /bu)	<b>\$3.60</b> <b>Worst</b>	<b>\$4.60</b> <b>Best</b> (tied)	<b>\$4.60</b> <b>Best</b> (tied)	<b>\$3.85</b> <b>≈ Middle</b>	<b>\$3.95</b> <b>≈ Middle</b>
<b>Unchanged Futures</b> (\$5.00 ⇒ \$5.00 /bu)	<b>\$4.60</b> <b>Best</b> (tied)	<b>\$4.60</b> <b>Best</b> (tied)	<b>\$4.60</b> <b>Best</b> (tied)	<b>\$3.85</b> <b>Worst</b>	<b>\$3.95</b> <b>2<sup>nd</sup> Worst</b>
<b>Rising Futures</b>  (\$5.00 ⇒ \$6.00 /bu)	<b>\$5.60</b> <b>Best</b>	<b>\$4.60</b> <b>Worst</b> (tied)	<b>\$4.60</b> <b>Worst</b> (tied)	<b>\$4.85</b> <b>≈ Middle</b>	<b>\$4.95</b> <b>≈ Middle</b>

\*\* Subject to basis risk, i.e., Cash basis > or < than \$0.40 under futures

# Price Trend Effects

## On Cash Sales & Forward Contracts



<b>Pricing Alternatives</b>	<b>Falling Futures</b>	<b>Rising Futures</b>	<b>Wider Basis</b>	<b>Narrower Basis</b>
Cash Market Sales	(-)	(+)	(-)	(+)
Forward Cash Contract	None	None	None	None
Basis Contract	(-)	(+)	None	None
Hedge-to-Arrive (HTA)	None	None	(-)	(+)
Minimum Price Contract	None	(+)	None	None
Marketing Loans (FSA)	None	(+)	(-)	(+)

# Price Trend Effects

## On Futures, Options & Marketing Loans



<b>Pricing Alternatives</b>	<b>Falling Futures</b>	<b>Rising Futures</b>	<b>Wider Basis</b>	<b>Narrower Basis</b>
Short Futures Hedge	None	None	(-)	(+)
Buy Put Options	None	(+)	(-)	(+)
Sell Cash & Buy Calls	None	(+)	None	None
Marketing Loans	None	(+)	(-)	(+)

# Risk Exposure of Marketing Tools

## A. Options Volatility Risk

- Risk that option premiums will not change 1-for-1 with cash/futures as the price level changes

## B. Production Risk if Pre-harvest Pricing

- Risk of being unable to deliver grain to fulfill a contract



## C. Counter Party Risk

- Risk that a buyer or broker wont fulfill their contract obligations



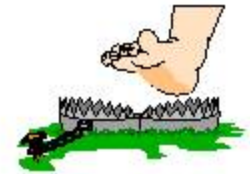
## D. Control Risk

- Risk of market actions getting “out of control” before corrective actions can be taken by the seller (limit moves, etc.)



# Areas of Risk Exposure

## For Cash Sales & Forward Contracts



<b>Pricing Alternatives</b>	<b>Options Volatility</b>	<b>Prodn. Risk if Prehvst.</b>	<b>Counter Party Risk</b>	<b>Control Risk</b>
Cash Market Sales	---	---	---	Yes
Forward Cash Contract	---	Yes	Yes	---
Basis Contract	---	Yes	Yes	Yes
Hedge-to-Arrive (HTA)	---	Yes	Yes	Yes
Minimum Price Contract	Yes	Yes	Yes	Yes
Price Later Contract	---	---	Yes	Yes

# Areas of Risk Exposure

## For Futures, Options & Marketing Loans



<b>Pricing Alternatives</b>	<b>Options Volatility</b>	<b>Prodn. Risk if Prehvst.</b>	<b>Counter Party Risk</b>	<b>Control Risk</b>
Short Futures Hedge	---	Yes	Yes**	Yes
Buy Put Options	Yes	Yes	Yes**	Yes
Sell Cash & Buy Calls	Yes	---	Yes**	Yes
Marketing Loans	---	---	---	Yes

“\*\*”: Risk of equity in Margin accounts being “lost”, i.e., “MF Global situation”

# Grain Forward Pricing Decisions

## ■ How Much to Forward Contract or Hedge?

### □ For Pre-Harvest Pricing:

- Max of 50%-75% of expected production (*average yields*)
  - *If have a short crop, use Crop Insurance Coverage revenues to help fill Forward Contract obligations*
- **Recommended**: A disciplined grain marketing plan

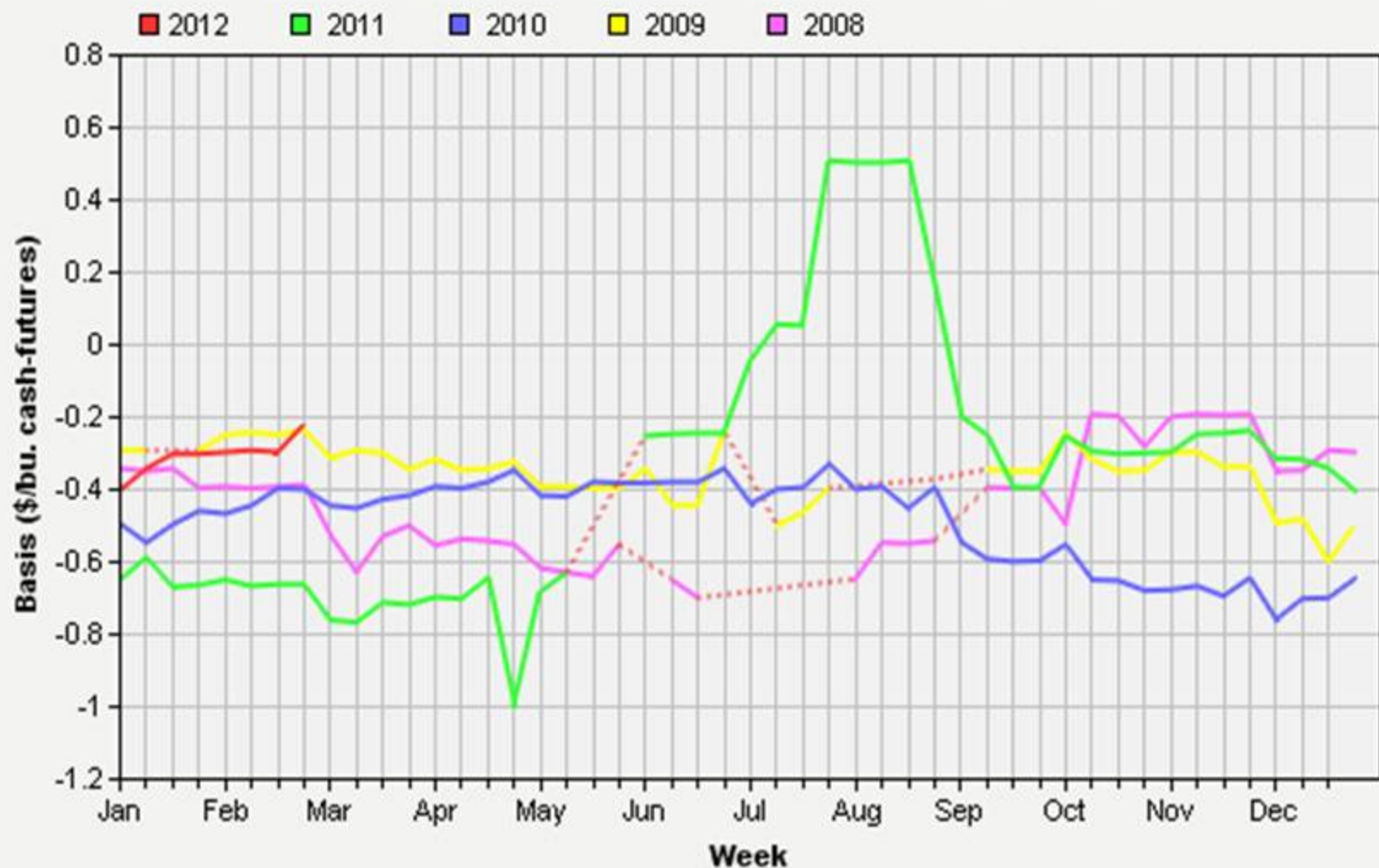
## ■ What Time Period to Set Grain Delivery In?

- Examine Harvest vs Post Harvest Basis, Storage Returns, & Grain Delivery Opportunities
- Timing of cash flow needs





**Basis Information: LYMAN, NE - Corn**  
K-State Dept of Agricultural Economics, [www.AgManager.info](http://www.AgManager.info)



Torrington, Wyoming located 15 miles from Lyman, NE

*Basis Information: KIMBALL, NE - Corn*  
*K-State Dept of Agricultural Economics, www.AgManager.info*



Pine Bluffs, Wyoming located 23 miles from Kimball, NE

*Basis Information: GERING, NE - Hard Red Winter Wheat*  
*K-State Dept of Agricultural Economics, [www.AgManager.info](http://www.AgManager.info)*



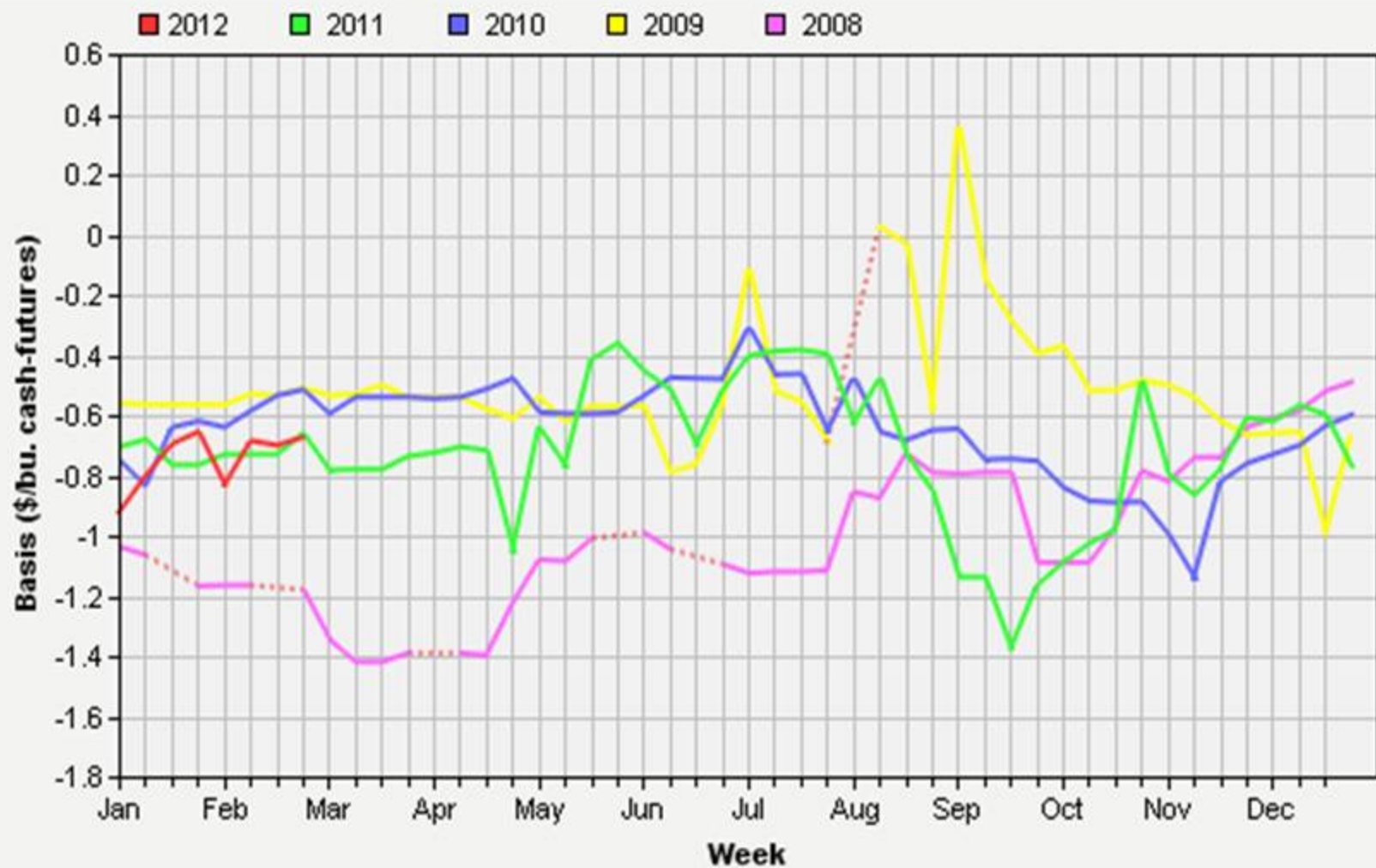
Torrington, Wyoming located 37 miles from Gering, NE

**Basis Information: DIX, NE - Hard Red Winter Wheat**  
K-State Dept of Agricultural Economics, [www.AgManager.info](http://www.AgManager.info)



Pine Bluffs, Wyoming located 33 miles from Dix, Nebraska

**Basis Information: NORTH PLATTE, NE - Soybeans**  
K-State Dept of Agricultural Economics, [www.AgManager.info](http://www.AgManager.info)



---

**ADVANCED  
GRAIN MARKETING TOPICS  
&  
SUPPLEMENTAL  
INFORMATION**

---

# Futures Margins

## ☑ Initial Margin Deposit:

- ◆ Required up front, good faith deposit by exchanges

## ☑ Margin Account

- ◆ Losses/gains in futures position reflected here
- ◆ Minimum required margin account balance

## ☑ Margin Deposit

- ◆ Additional money required when margin account falls below minimum balance due to losses in futures position

# Corn Futures Margin Deposit Example

Sell 10,000 bu July CBOT Wheat @ \$5.00/bu on 2/1/2012

## Prices Trend Down \$1

2/1: Sell \$5.00 July Wheat

Initial Deposit = \$1,500

Minimum Deposit = \$1,000

7/1: July Wheat @ \$4.00

Loss in Futures (\$10,000)

Account balance (\$8,500)

Margin Call +\$9,500

New Account balance = \$1,000

## Prices Trend Up \$1

2/1: Sell \$5.00 July Wheat

Initial Deposit = \$1,500

Minimum Deposit = \$1,000

7/1: July Wheat @ \$6.00

Gain in Futures +\$10,000

Account balance +\$11,500

Margin Call = \$ 0

New Account balance = \$11,500





# Monthly Corn Continuous Price Chart

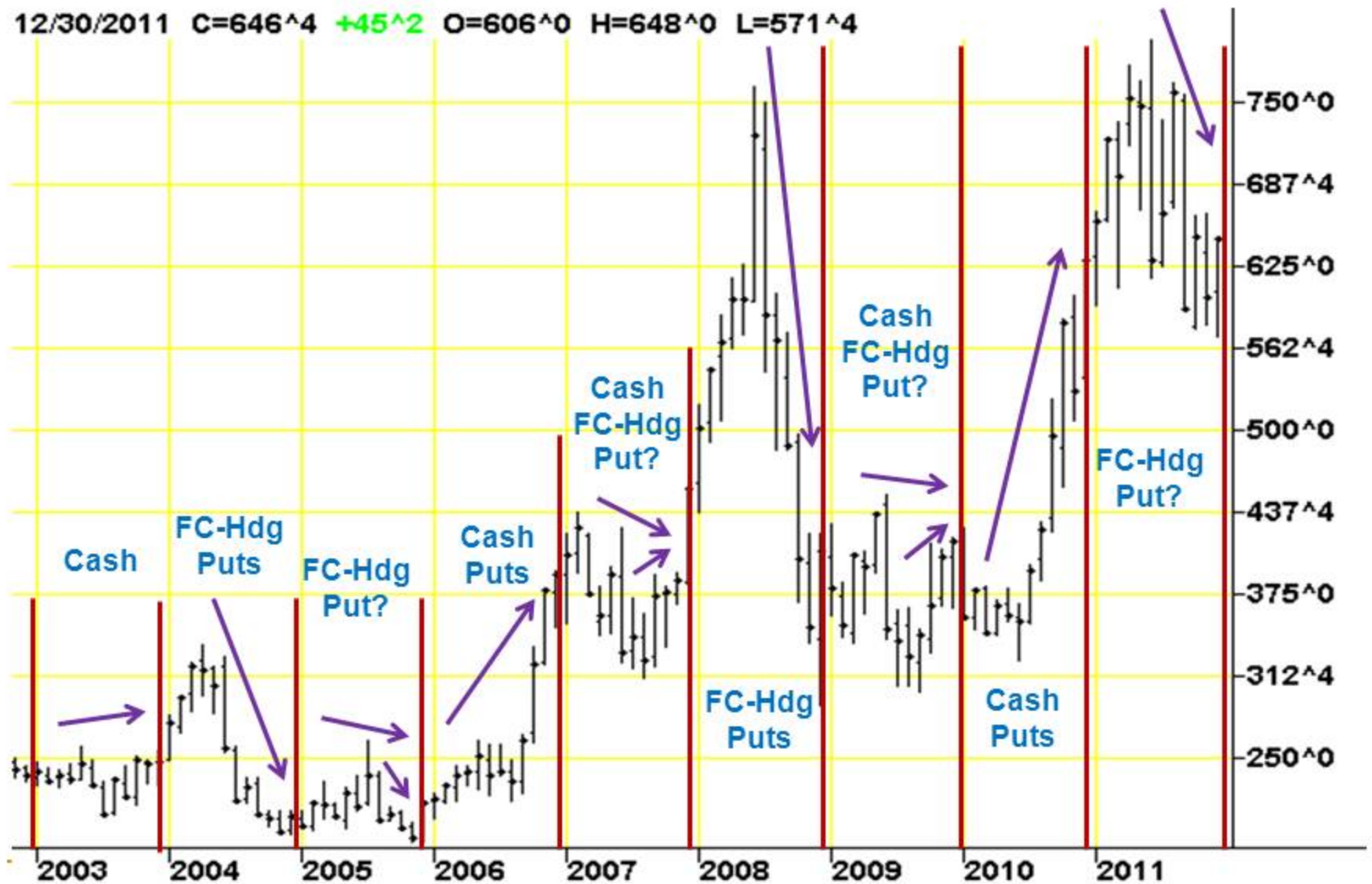
12/30/2011 C=646<sup>4</sup> +45<sup>2</sup> O=606<sup>0</sup> H=648<sup>0</sup> L=571<sup>4</sup>



Created with SuperCharts by Omega Research © 1997

# Monthly Corn Continuous Price Chart

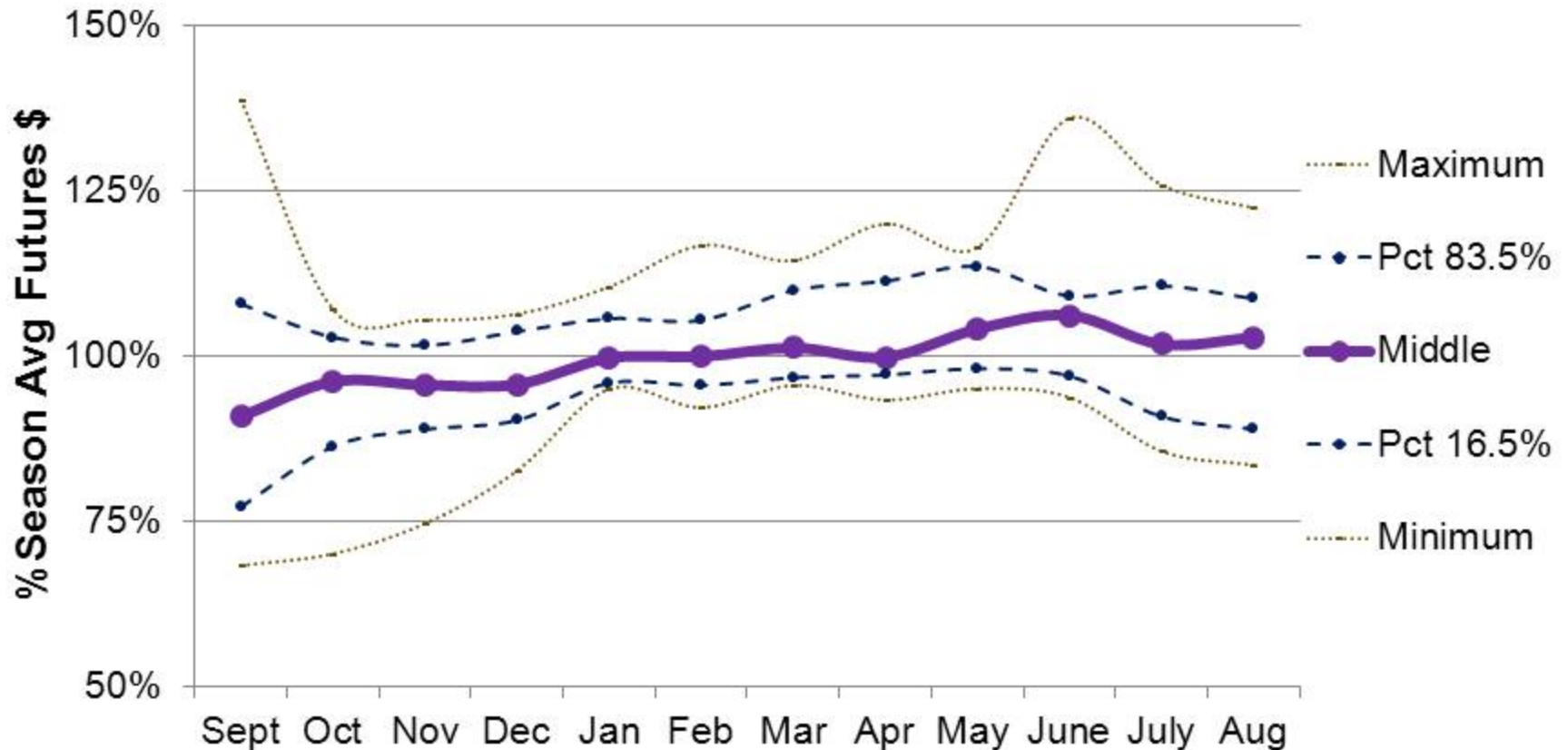
12/30/2011 C=646<sup>4</sup> +45<sup>2</sup> O=606<sup>0</sup> H=648<sup>0</sup> L=571<sup>4</sup>



Created with SuperCharts by Omega Research © 1997

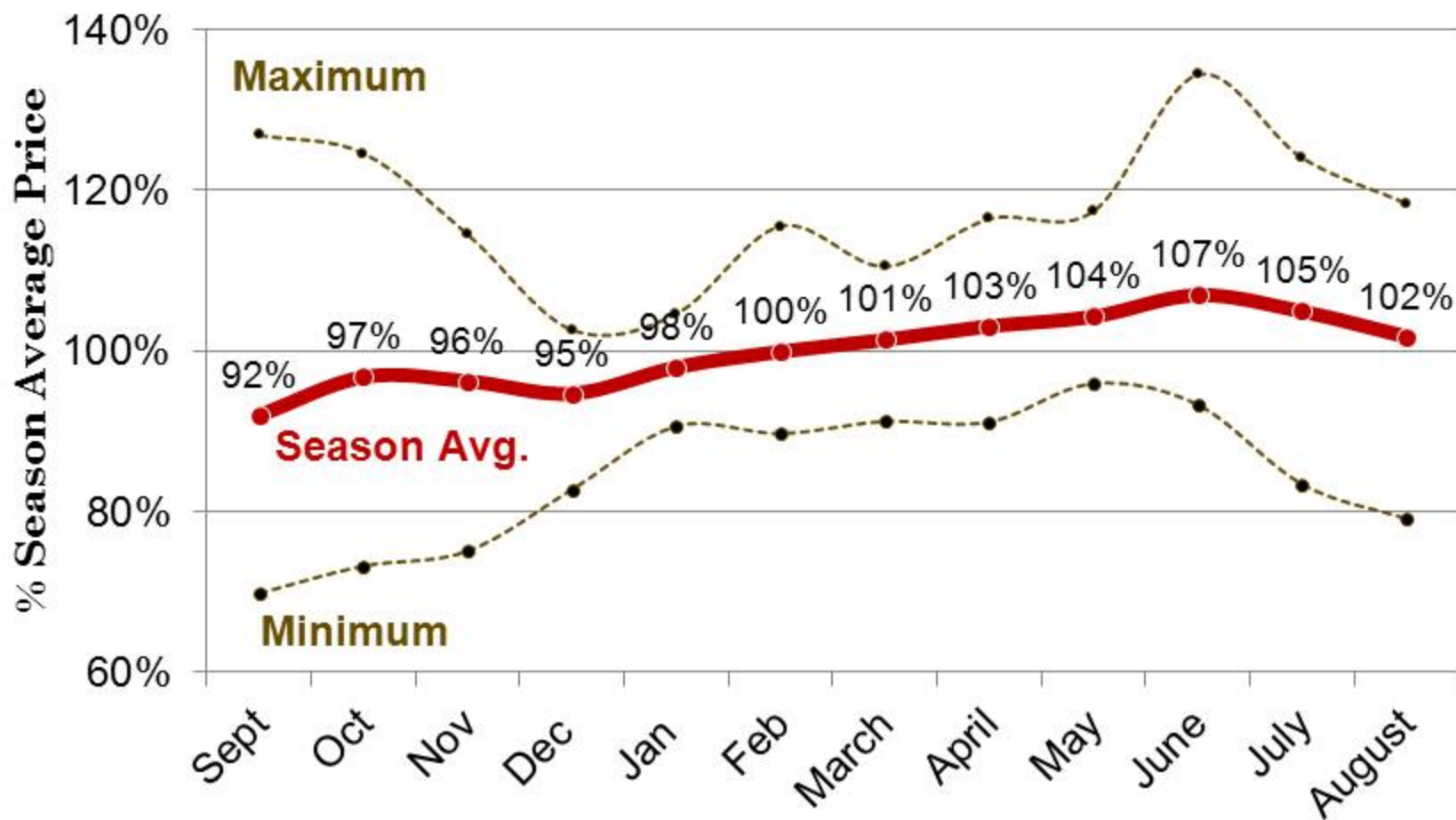
# Corn Futures Seasonal Trends

CBOT Corn (MY 2000/01 – MY 2009/10)



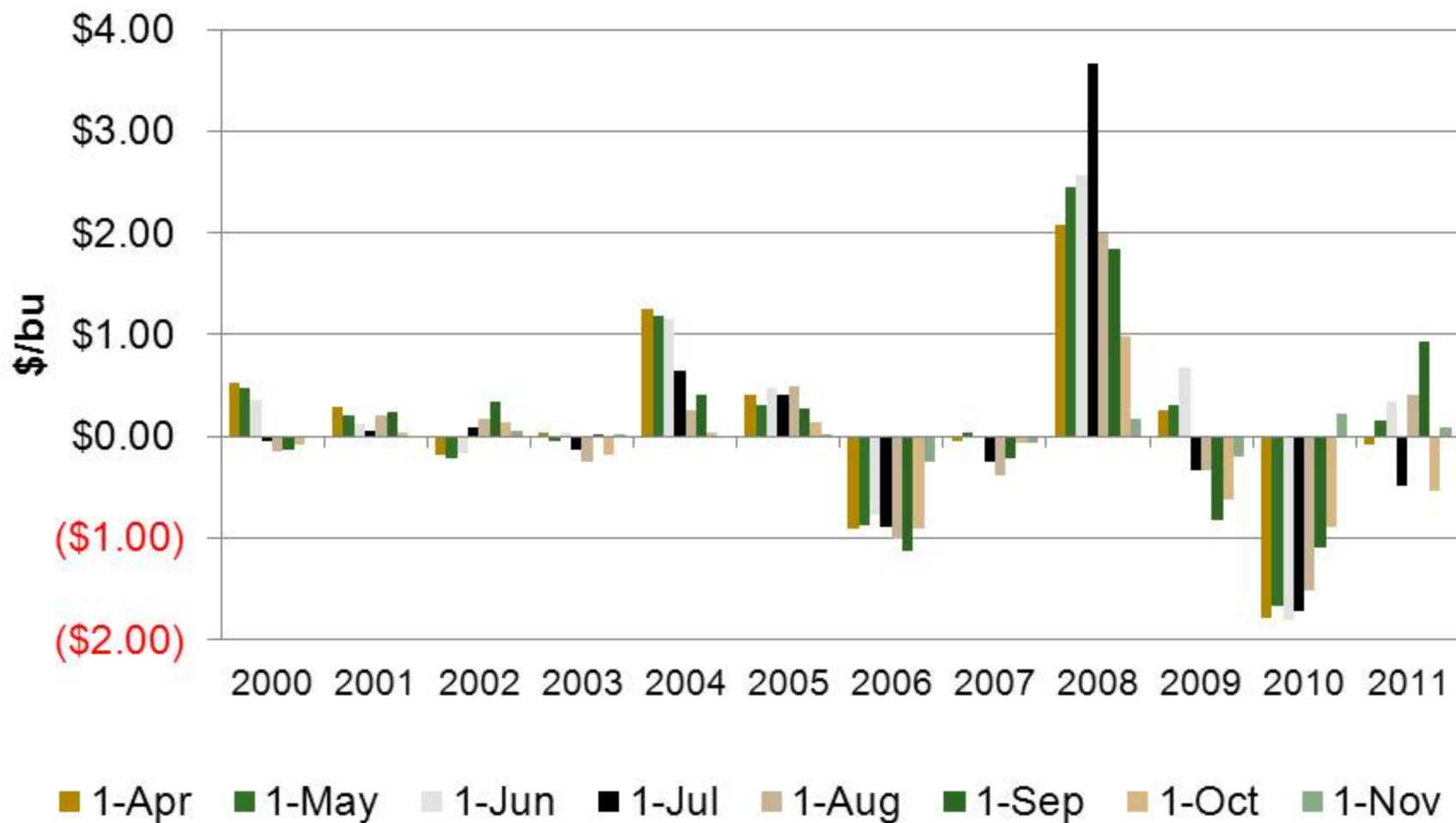
# Kansas Corn Seasonal \$ Index

Marketing Years: 2001/02 thru 2010/11



# Returns from Corn Futures Short Hedges

Sell Dec Corn @ start of each month – Close position on Nov. 15<sup>th</sup>



# Average Corn Short Hedge Returns

Sell Dec Corn @ start of each month – Close position on Nov. 15<sup>th</sup>



# CBOT Corn Preharvest Strategies

Weekly Continuous Chart: December 2010 – January 27, 2012

01/27/2012 C=641<sup>6</sup> +30<sup>2</sup> O=620<sup>0</sup> H=645<sup>4</sup> L=612<sup>0</sup>



Created with SuperCharts by Omega Research © 1997



# Monthly KC Wheat Continuous \$ Chart

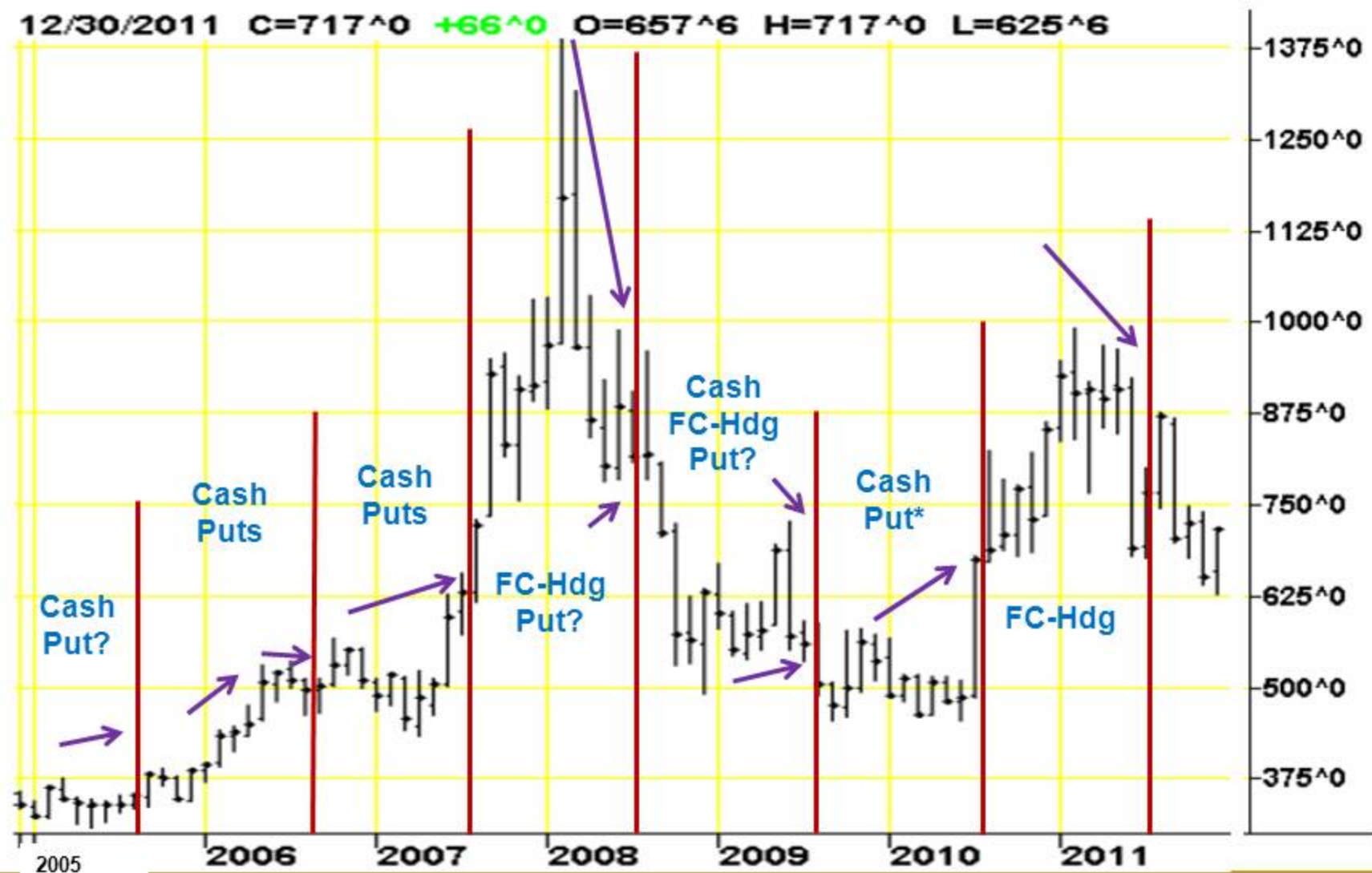
12/30/2011 C=717^0 +66^0 O=657^6 H=717^0 L=625^6





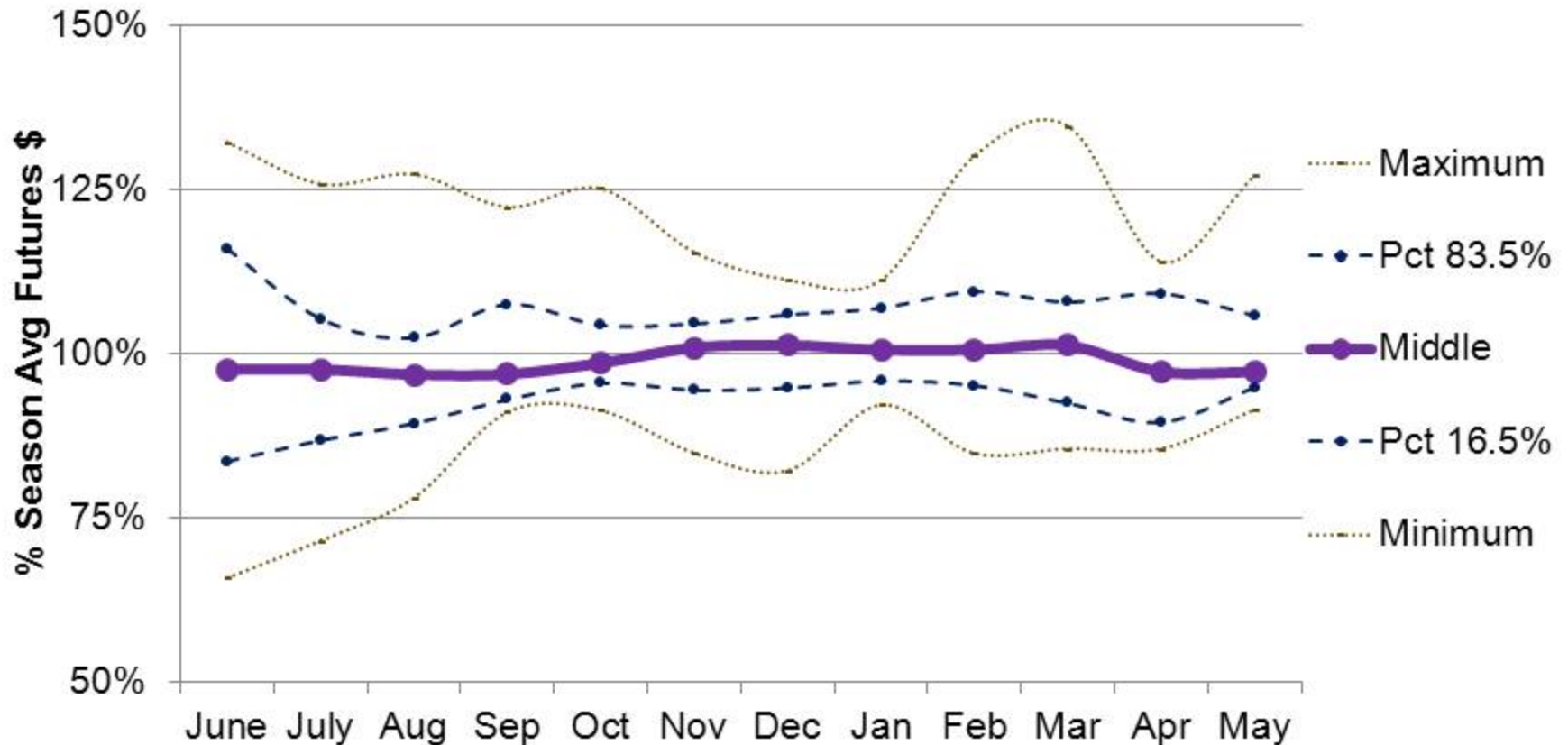
# Monthly KC Wheat Continuous \$ Chart

12/30/2011 C=717^0 +66^0 O=657^6 H=717^0 L=625^6



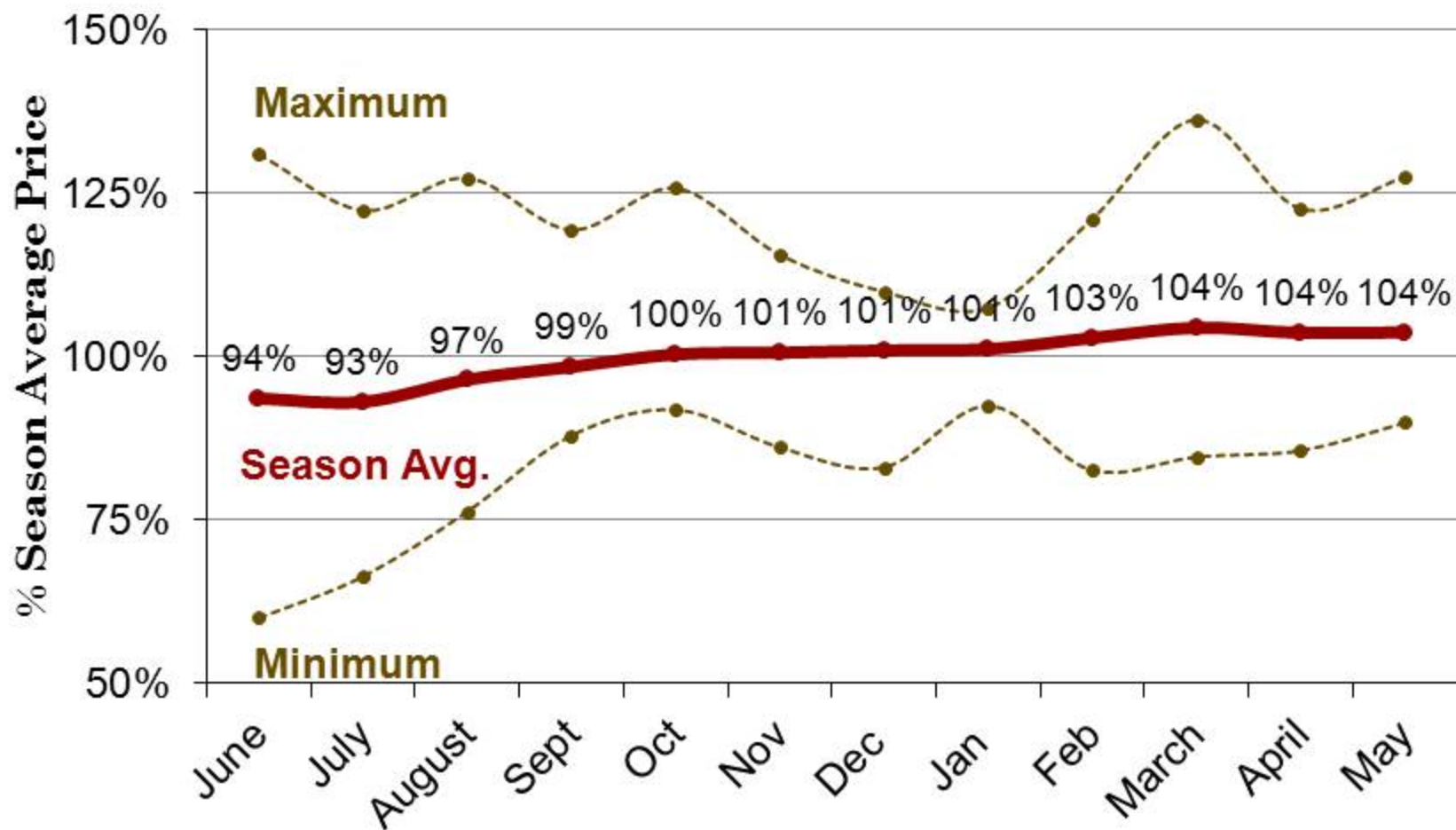
# Wheat Futures Seasonal Trends

KCBT Wheat (MY 2000/01 – MY 2009/10)



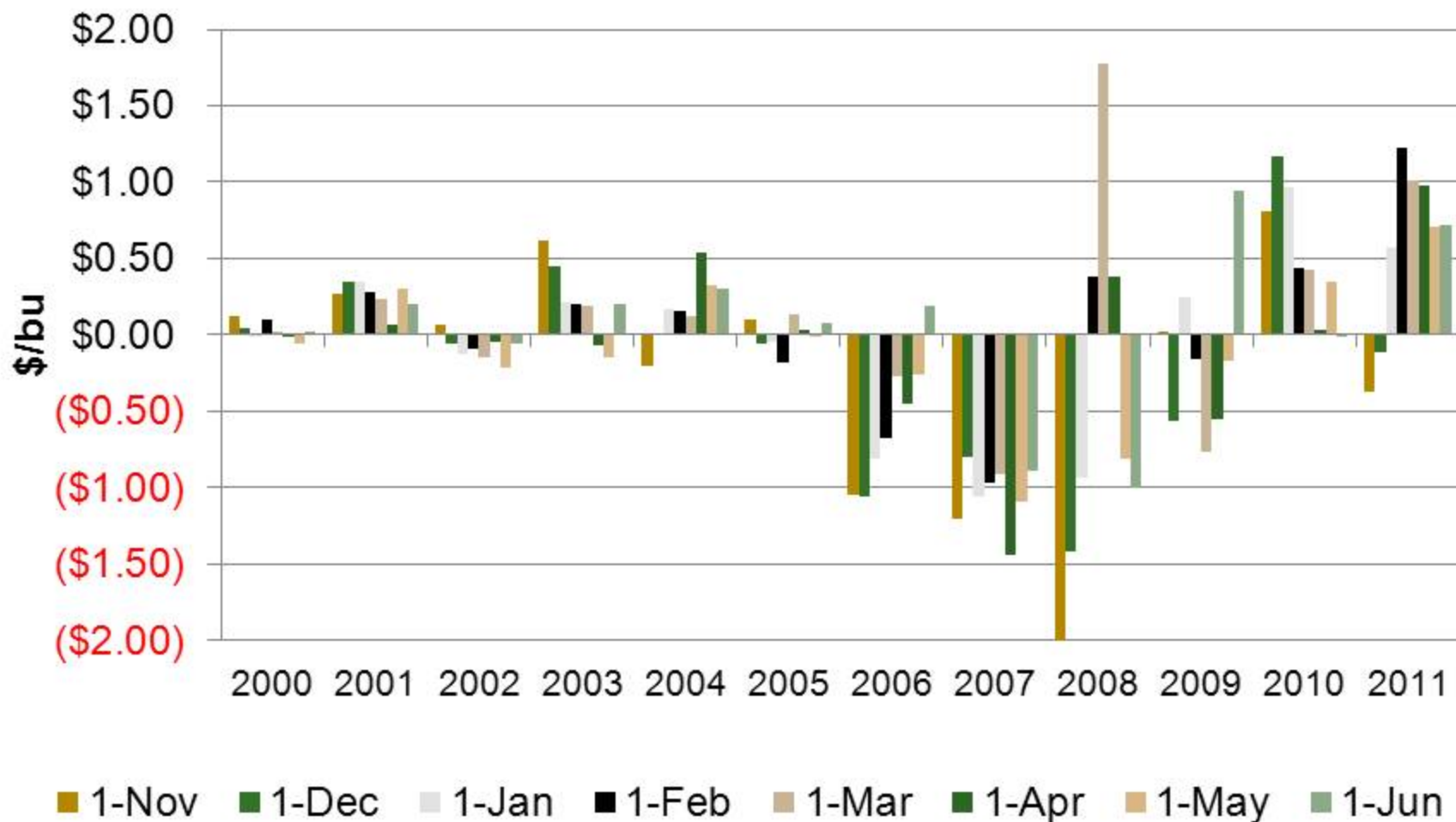
# Kansas Cash Wheat Seasonal \$ Index

Marketing Years 2001/02 through 2010/11



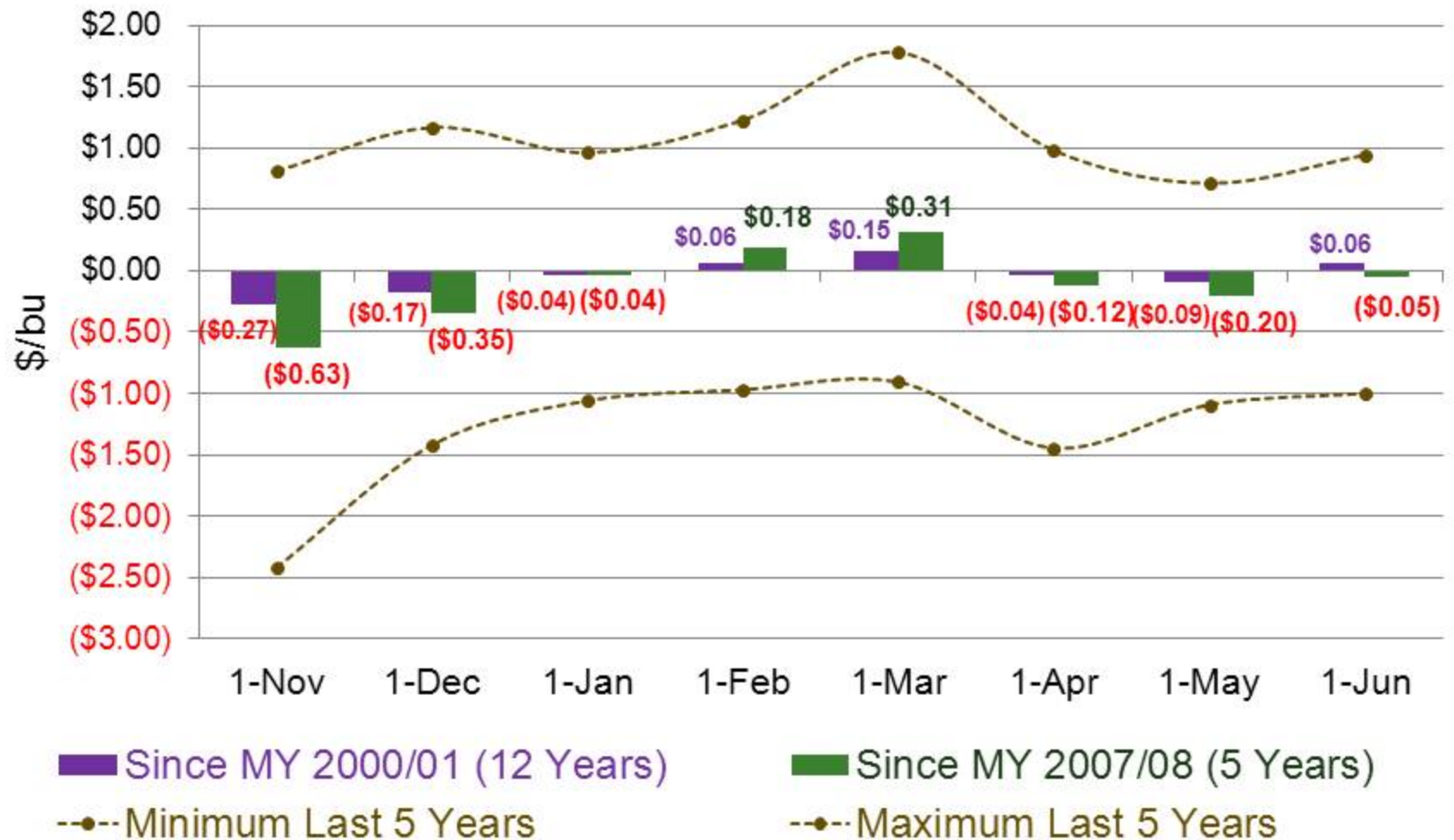
# Returns from KC Wheat Short Hedges

Sell July Wheat @ start of each month – Close position on June 15<sup>th</sup>



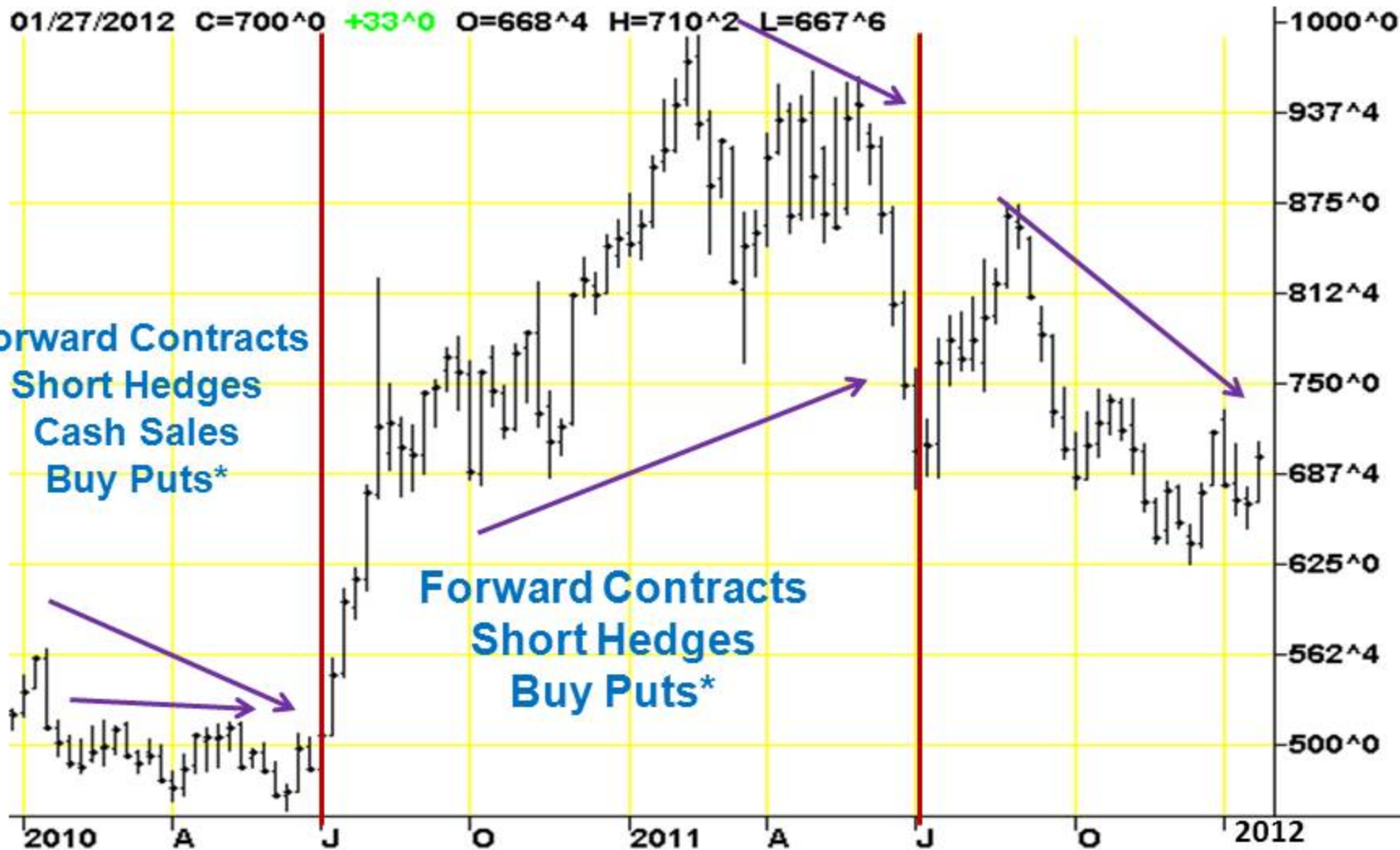
# Average KC Wheat Short Hedge Returns

Sell July Wheat @ start of each month – Close position on June 15<sup>th</sup>



# KCBT Wheat Preharvest Strategies

Weekly Continuous Chart: December 2010 – January 27, 2012



Created with SuperCharts by Omega Research © 1997

# Monthly Soybeans Continuous \$ Chart

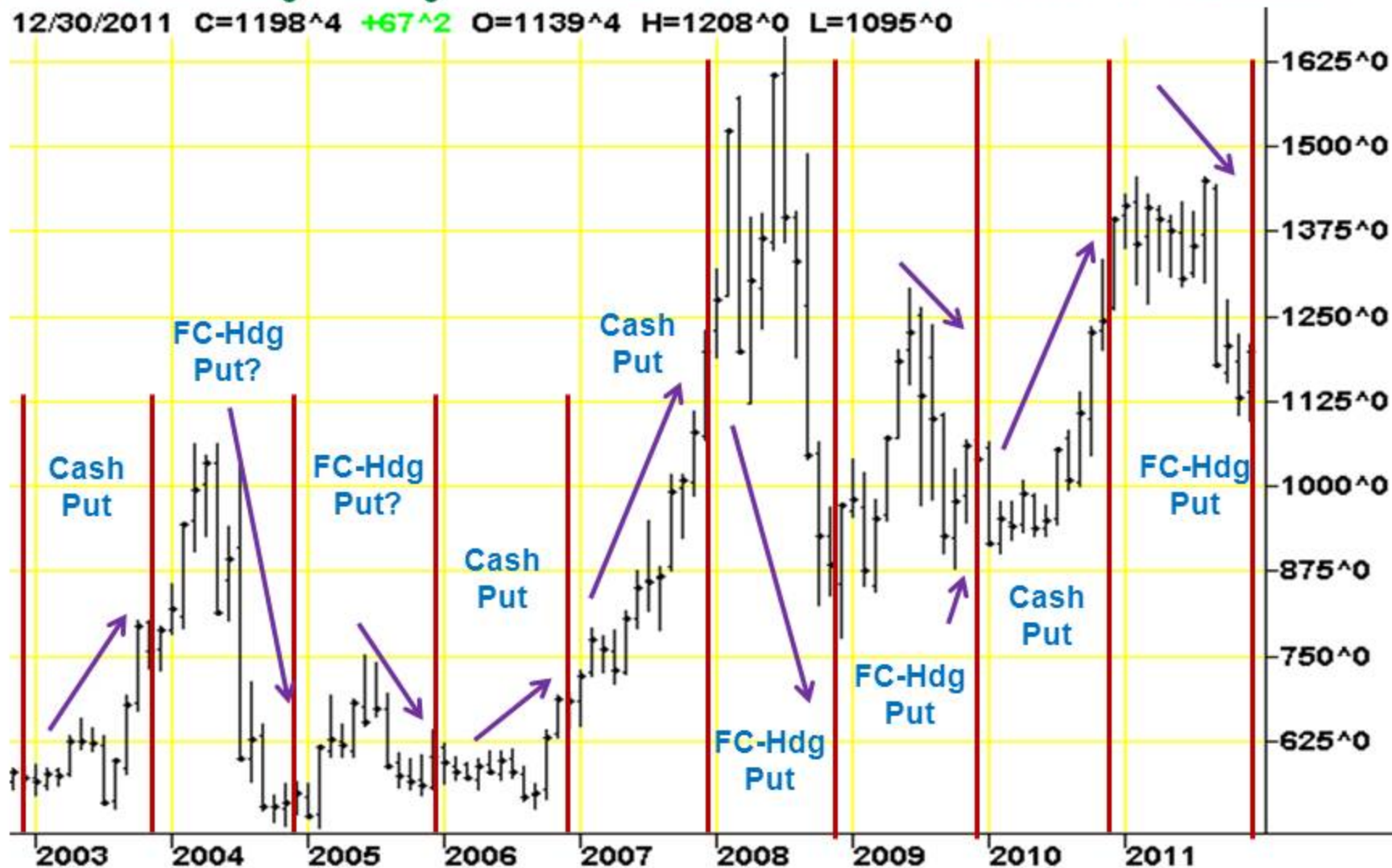
12/30/2011 C=1198<sup>4</sup> +67<sup>2</sup> O=1139<sup>4</sup> H=1208<sup>0</sup> L=1095<sup>0</sup>



Created with SuperCharts by Omega Research © 1997

# Monthly Soybeans Continuous \$ Chart

12/30/2011 C=1198<sup>^</sup>4 +67<sup>^</sup>2 O=1139<sup>^</sup>4 H=1208<sup>^</sup>0 L=1095<sup>^</sup>0

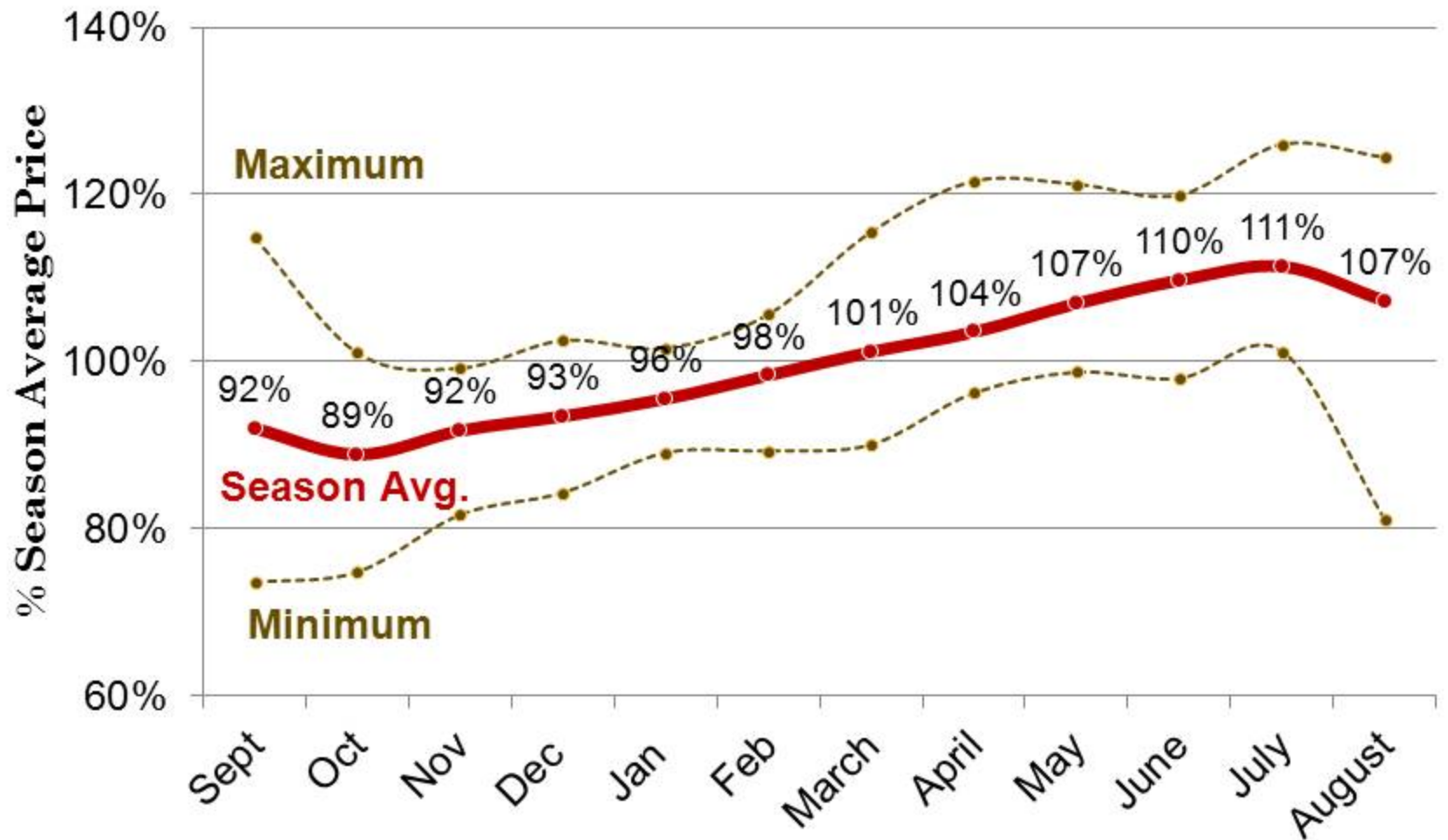


Created with SuperCharts by Omega Research © 1997



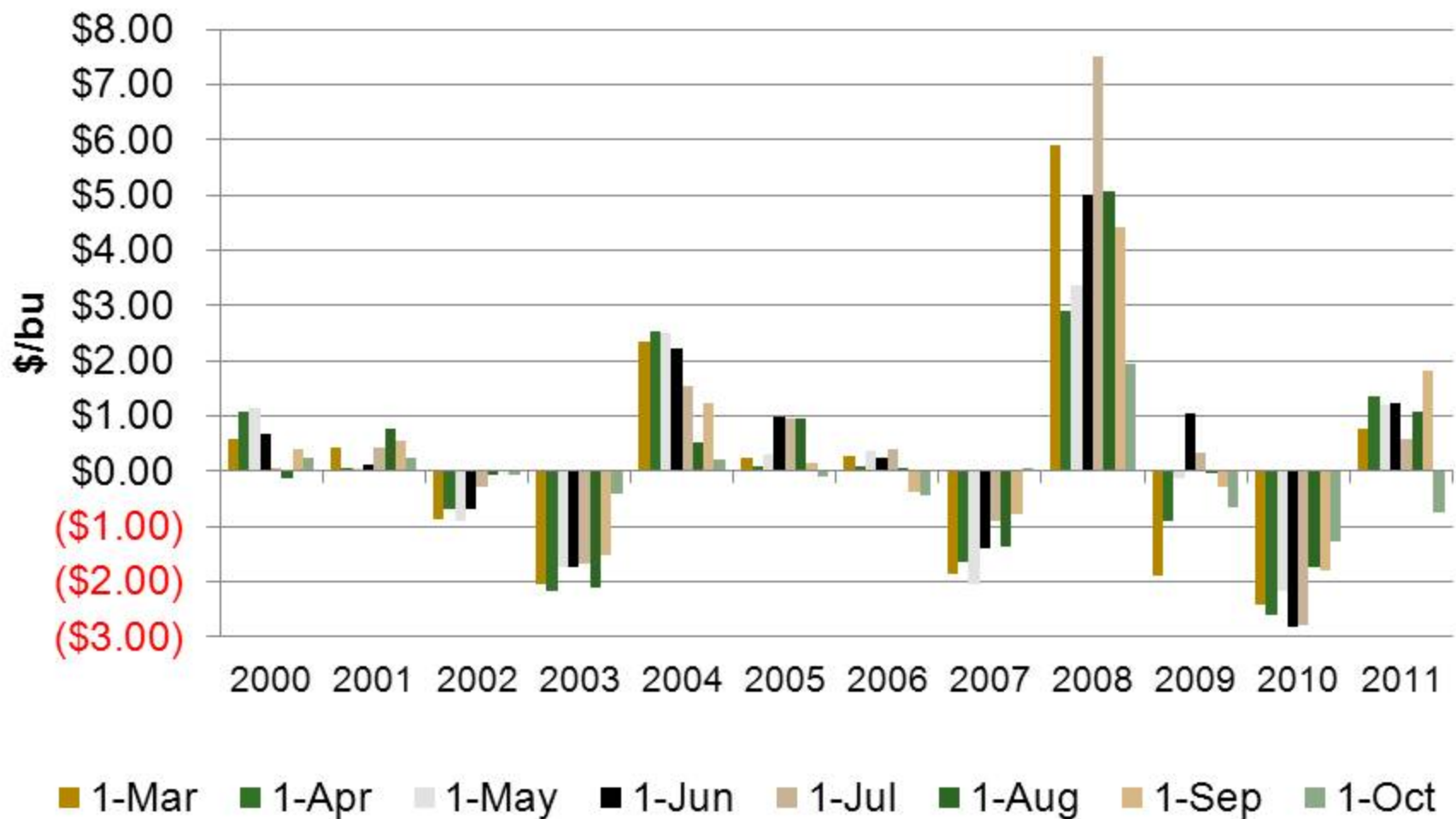
# Kansas Soybean Seasonal \$ Index

Marketing Years 2001/02 through 2010/11



# Returns on Soybean Futures Short Hedges

Sell NOV @ start of each month – Close position on October 15<sup>th</sup>



# Average Soybean Short Hedge Returns

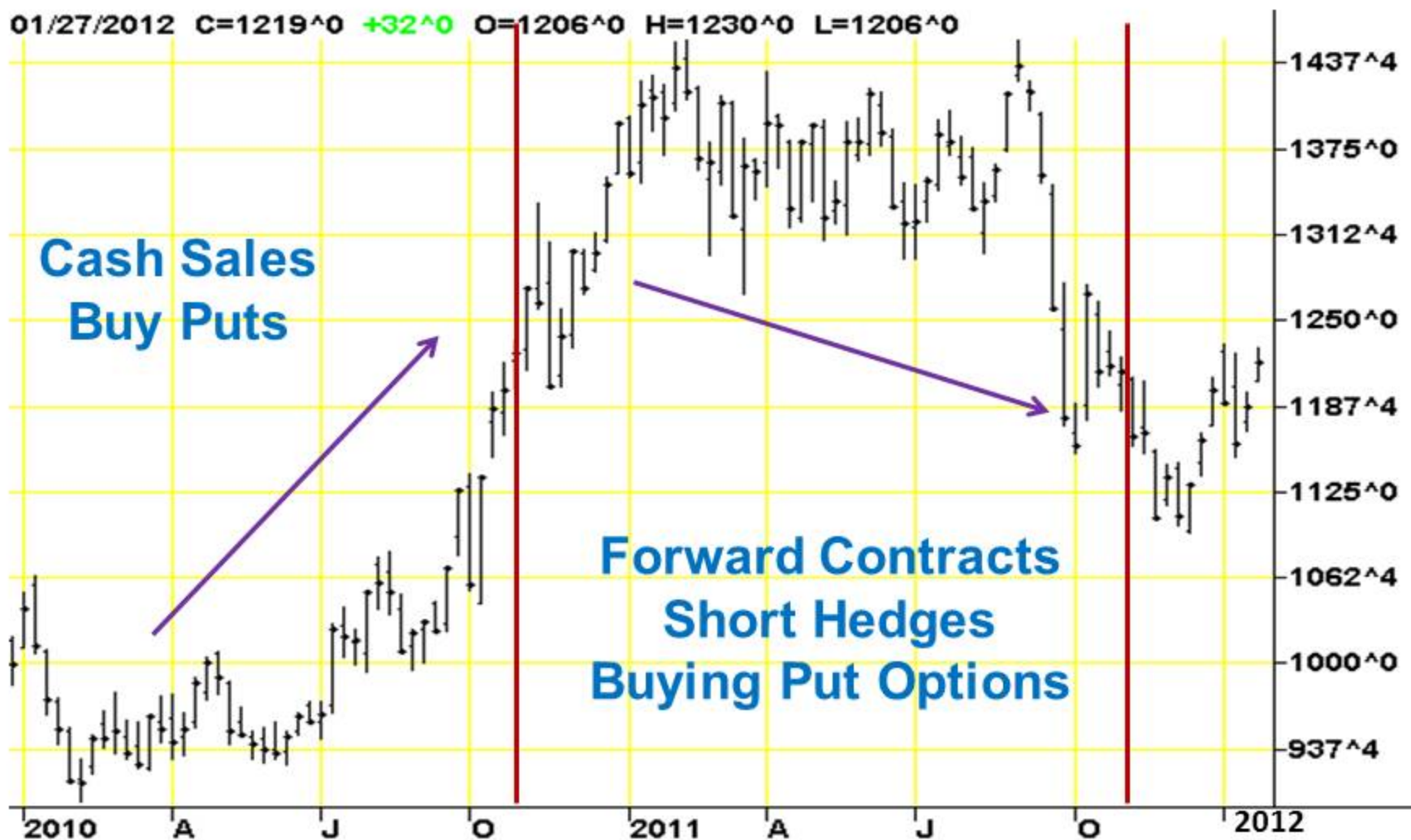
Sell NOV @ start of each month – Close position on October 15<sup>th</sup>



# CBOT Soybean Futures

Weekly Continuous Chart: December 2010 – January 27, 2012

01/27/2012 C=1219^0 +32^0 O=1206^0 H=1230^0 L=1206^0



Created with SuperCharts by Omega Research © 1997

## Questions or Comments?

K-State Research and Extension  
Extension Agricultural Economics  
Website:

[www.Agmanager.Info](http://www.Agmanager.Info)



**KANSAS STATE**  
UNIVERSITY

Department of Agricultural Economics