THE UNIVERSITY of TENNESSEE Extension

GRAIN MARKETING ALTERNATIVES

John Campbell

Area Farm Management Specialist

STEPS IN THE FORWARD PRICING PROCESS

1. Estimate production cost per unit (bu., lb., cwt.)
2. Determine what price the futures and options markets are offering
   a. Designate month(s) when production will be sold
   b. Select appropriate futures contracts months and options strike prices
   c. Adjust futures price for basis
   d. Deduct cost of hedging

STEPS IN THE FORWARD PRICING PROCESS

3. Evaluate the potential return from forward pricing with futures hedge or cash contract
4. Evaluate minimum selling prices versus cost of production

STEPS IN THE FORWARD PRICING PROCESS

5. Try to get some feel for the direction of the market in view of the potential return offered now
   a) If the return is excellent, consider establishing price floor regardless of outlook prospects
   b) If return is average or less, may evaluate probability of lower or higher prices and price risk encountered. Purchase of a put option may be most appropriate in this case
   c) Where is the price in relation to the historical price range?

STEPS IN THE FORWARD PRICING PROCESS

d) Is the major trend down?

e) Are prices near a seasonal high?

f) Is the price cycle turning down?

g) Is the futures price higher than cash?

BASIS

- The difference between a cash price of a commodity at a specific location and the futures price of that commodity for the nearby month.

CORN BASIS

- Oct. 1, 2007
  - Cash $3.47
  - Dec. futures 3.69
- Basis -0.22

- 1994-2003
  - Avg. -0.10
  - Best +0.30
  - Worst -0.23

- Feb. 25, 2008
  - Cash $5.28
  - Mar. futures 5.33
- Basis -0.05

- 1994-2003
  - Avg. +0.15
  - Best +0.25
  - Worst -0.07

SOYBEAN BASIS

- Nov. 1, 2007

Cash	$9.61
Dec. futures	9.91

- Basis -0.30

- 1993-2002
  - Avg. -0.18
  - Best -0.04
  - Worst -0.28

- Feb. 25, 2008

Cash	$14.00
Mar. futures	14.52

- Basis -0.52

- 1993-2002
  - Avg. -0.07
  - Best +0.05
  - Worst -0.20

FACTORS AFFECTING BASIS

- Location - Generally further from delivery point means higher basis
- Grade - Paid more for higher grade usually means smaller basis
- Marketing method - Any method resulting in a higher price makes basis smaller
- Date or time period - Critical particularly for non contract month
- Supply or demand within a particular area

Hedging in Futures Market

Advantages

- Increases market flexibility
- Marketing year can be up to 20 months
- Reduces price risk
- Basis gain can improve net price
- Basis more predictable than cash price

Disadvantages

- Original deposit plus margin money
- Basis risk
- Requires 1,000 or 5,000 bushel increments

Corn Specifications

- 5,000 Bushels No. 2 Yellow
- Daily Price Limit – 20 cents/bushel
- Initial and Maintenance Performance Bond (Margin) - $1,000
- 1,000 Bushel contracts also available

Soybean Specifications

- 5,000 Bushels No. 2 Yellow
- Daily Price Limit – 50 cents/bushel
- Initial and Maintenance Performance Bond (Margin) - $2,200
- 1,000 Bushel contracts also available

Hedger

- One who buys or sells futures contracts or options as an adjunct to commercial activity in the underlying commodity or asset. E.g., a backgrounder, a corn grower.

Speculator

- A person who buys or sells futures contracts solely in the hopes of profiting from the movement in price.

Soybean Futures Hedge

- November 08 Soybean Futures $12.80/bu.

- Sell futures contract : 12.80
  Commission (bu) - 0.03
  Estimated Basis - 0.30

- Hedged Price 12.47

Basis Steady

If Market Rises

- November Futures 13.25

- Buy Contract -13.25
  Sold contract 12.80
  Commission - 0.03
  Futures loss - 0.48

- Sold cash beans 12.95
  Futures loss - 0.48
  Realized Price 12.47

If Market Falls

- November Futures 12.00

- Buy Contract -12.00
  Sold contract 12.80
  Commission - 0.03
  Futures gain 0.77

- Sold cash beans 11.70
  Futures gain + 0.77
  Realized Price 12.47

Basis Widens

If Market Rises

- November Futures 13.25

- Buy Contract -13.25
  Sold contract 12.80
  Commission - 0.03
  Futures loss - 0.48

- Sold cash beans 12.85
  Futures loss - 0.48
  Realized Price 12.37

If Market Falls

- November Futures 12.00

- Buy Contract -12.00
  Sold contract 12.80
  Commission - 0.03
  Futures gain 0.77

- Sold cash beans 11.60
  Futures gain + 0.77
  Realized Price 12.37

Basis Narrows

If Market Rises

- November Futures 13.25

- Buy Contract -13.25
  Sold contract 12.80
  Commission - 0.03
  Futures loss - 0.48

- Sold cash beans 13.05
  Futures loss - 0.48
  Realized Price 12.57

If Market Falls

- November Futures 12.00

- Buy Contract -12.00
  Sold contract 12.80
  Commission - 0.03
  Futures gain 0.77

- Sold cash beans 11.80
  Futures gain + 0.77
  Realized Price 12.57

Performance Bond (Margin)

- Funds that must be deposited with the broker for each futures contract as a guarantee of fulfillment of the contract. Also, called margin.

Margin Example

Day	Action	Price	Value	Balance	Call
1	Sell	12.00	60,000	2,200	0
2	Close	12.10	60,500	1,700	500
10	Close	12.25	61,250	1,450	750
60	Close	12.05	60,250	3,200	0
90	Close	11.80	59,000	4,450	0
120	Close	12.25	61,250	2,200	0
150	Buy	12.10	60,500	2,950	0

Paid in $3,450; Ending Balance $2,950; Cash Loss $500

Using Options

Advantages

- Can set a minimum selling price.
- Can benefit from price increases.
- No margin calls.

Disadvantages

- Premiums may make options less profitable than hedging.
- Basis risk.
- Requires 1,000 or 5,000 bushel increments.

Put Option

- A contract which gives the purchaser the right to sell the underlying futures contract at an agreed upon price (the strike or exercise price) any time from purchase through a specified date in the future (the expiration date). The seller or grantor of a put option has the obligation to buy the underlying futures contract at the agreed upon strike price at any time through the expiration date.

Call Option

- A contract which gives the purchaser the right (but not the obligation) to buy the underlying futures contract at an agreed price (the strike or exercise price) any time from purchase through a specified date in the future (the expiration date). The seller or writer of a call option has the obligation to sell the underlying futures contract at the agreed upon strike price at any time through the expiration date.

Option Buyer

- The buyer or holder of an option can choose to exercise his right and take a futures position, although the buyer nearly always sells it back into the market if it has value. A producer who wants to hedge either production or purchases would typically be an option buyer. For every option buyer there is an option seller.

Strike Price (or Exercise Price)

- The price at which the buyer of the option may buy (in the case of a call) or sell (in the case of a put) the underlying futures contract. The option seller is obligated to take the other side of the futures transaction at the exercise price. Strike prices will be set by exchanges at predetermined intervals.

Soybeans
Put Option

- November 08 Soybean Futures $12.80/bu.

Strike Price	Premium
$10.00	$0.24
11.00	0.50
12.00	0.88
12.80	1.27

Soybeans
Floor Price Calculation

- Strike Price 12.80
  Premium -1.27
  Commission -0.03
  Basis -0.30

- Estimated Floor Price 11.20

Soybeans
Expected Results - $12.80 Put

If Market Rises

- November Futures 13.50
- Option expires worthless

- Sold cash beans 13.20
  Option cost - 1.30
  Realized Price 11.90

If Market Falls

- November Futures 10.50
- Sell option 2.30

- Sold cash beans 10.20
  Option cost - 1.30
  Option gain + 2.30
  Realized Price 11.20