Livestock Marketing: Futures Market & Hedging Basics

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Getting Started

- Futures contracts are legally binding agreements to buy and sell an actual commodity
- Governed by a futures exchange
Futures Explained

- A contract is an obligation to buy or sell a commodity based on a specific date, quality, and quantity at a negotiated price
  - Everything except price is nailed down in the contract by the futures exchange
- Similar to forward contracts
  - Superior auction, agreement with elevator
Why Futures

- Hedgers: desire to protect against an adverse price move
  - Hedgers own the actual commodity
  - Uses futures/forwards to protect against price risk
  - Usually will offset their position in the futures market and SIMULTANEOUSLY sell/buy the commodity in their local cash market

- Hedgers use futures to minimize price risk
  - lock in a price

- Hedging is not...
  - ... an effort to increase profits
  - ... an indicator of poor (or superior) management
Mechanics of Futures

- Keep in mind the transaction will not happen immediately
  - You are promising to buy or sell a commodity in the future
- Consider the reservation of a hotel room
- For futures hedging to work, cash and futures prices must move together
  - Not in lock-step, but similar
Cash & Futures Relationship

So long as cash & futures move together, then hedging with futures works.

Cash - Futures = Basis
Price vs Basis Risk

TX/OK Cash Live Cattle Price & Basis, 2002-2015, inflation adjusted
Show Me the Money

- Futures contracts are highly specified
- The total value of a futures contract is Price x Quantity
  - Example:
    - Live cattle futures size = 40,000 lbs ... Price = $1.15/pound
    - Contract Value = 40,000 x $1.15 = $46,000
- Futures are margin based >> Do not have to invest 100% of contract value
  - Typically 2% - 8% of value
  - Live cattle margin is currently $1,750/contract >> 3.8% of current value
- Margin = leverage (both good & bad)
Example w/o Hedging

- Consider times when no price risk management was used
- As prices increase or decrease, the value of your product fluctuates

So, for example, when management decision was made to background calves when prices were $1.50, then prices dropped to $1.30, the value of calves declined $0.20
Not Hedged vs Hedged

Feeder Calf Example: not hedged
Hedging w/ Futures

- Consider a futures hedge at the onset of your production phase.
- As the cash price increases or decreases, *since cash & futures move together*, then the value of the cash product is stabilized because of the hedge.
Example Hedge

In early October you buy cattle to winter graze. After grazing you will sell the cattle in early March at approximately 700 pounds. Would choose March feeder cattle futures contract to hedge. March futures contract price in October = $1.17 per pound. Based on information, you expect basis to be -$0.15 per pound. Your expected cash sell price is $1.17 - $0.15 = $1.02 per pound.
**Hedging Outcome:** Price Decrease

When you sell your cattle the cash price is $0.96 per pound and the March futures contract is $1.03 per pound.

- Actual basis = $0.96 - $1.03 = -$0.07
- Realized price = Cash price minus futures gains/losses
- $0.96 - ($1.17 - $1.03) = $1.10
Hedging Outcome: Price Increase

When you sell your cattle the cash price is $1.24 per pound and the March futures contract is $1.31 per pound.

- Actual basis = $1.24 - $1.31 = -$0.07
- Realized price = Cash price minus futures gains/losses
- $1.24 - ($1.17 - $1.31) = $1.10
Not Hedged vs Hedged

Feeder Calf Example: not-hedged vs hedged at $1.10
Futures: Beyond Hedging

- Futures markets are useful tools for more than just hedging
- Based on the relationship between futures and cash prices, futures prices can provide a forecast of cash market prices
- Using a futures market near the planned marketing time period and an estimate of basis, an expected cash price can be determined

- Remember:
  Cash - Futures = Basis … or … Futures + Basis = Cash
Basis Patterns in Oklahoma

Oklahoma 400-500 pound Steer Basis Patterns

- 2000-16 Olympic Avg
- Oly Avg - 1 Std.Dev.
- Oly Avg + 1 Std.Dev.
- 2012-16 Avg
- 2016
Additional Resources

- For more detailed information on topics discussed in this module:

  OCES bulletin AGEC-548

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  Managing for Today’s Cattle Business and Beyond: Futures Market Basic
  http://marketing.uwagec.org/MngTCMkt/FutMrkt.pdf

  Managing for Today’s Cattle Business and Beyond: Commodity Options as Price
  Insurance for Cattlemen
  http://marketing.uwagec.org/MngTCMkt/CommOpts.pdf

  Managing for Today’s Cattle Business and Beyond: Evaluating Forward Prices With
  Basis
  http://marketing.uwagec.org/MngTCMkt/EvalPric.pdf