

*MARKETING MODULE - MAST Program*

***Livestock Futures & Options  
Markets and Hedging Overview***

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**Module: Marketing**

- **Session: Livestock Futures & Options  
Markets and Hedging Overview**
- *Purpose: Overview livestock futures and options markets, demonstrate hedging concepts, and increase overall familiarity with price risk management options for livestock industry decision makers.*



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**Livestock Market Risks**

- Market Risk = Uncertainty of prices at market time
  - Driven by shifts in underlying supply and/or demand factors
  - Beyond the ability of individual producers or operations to influence
- HOWEVER – Market risk can be managed



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### Function of Futures Markets

- Price Discovery
  - All available information about supply, demand, and broader factors influencing the commodity in question are reflected in current futures market prices (AKA Efficient Market Hypothesis)
- Price Risk Allocation
  - Facilitates shifting of risk between market participants



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### Futures Market Language

- Cash Market – Marketplace for physical commodity transactions (i.e. auctions)
- Futures Contract – Standardized agreement to buy or sell livestock at a date in the future
  - Specifies commodity, quantity, quality
  - Does NOT specify price which is determined iteratively by market participants



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### Futures Market Language

- Long Position – Purchasing futures contract
  - Example: Feedlot producer will buy feeder cattle in the future and wants to guard against price increases - purchases a FC contract
- Short Position – Selling futures contract
  - Example: Feedlot producer will sell fed steers in the future and wants to guard against price declines – sells a LC futures contract



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### Futures Market Language

- Hedging – Taking a futures market position that is opposite of an underlying position in cash or spot markets
- Long Hedge – Using a long futures position to balance a short cash position
- Short Hedge – Using a short futures position to balance a long cash position



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### Basis

- Basis = Cash Price – Futures Price
  - Facilitates forecasting geographically varying cash prices
    - Historical basis levels coupled with current futures implied prices for a date in the future...
  - If hedging with futures contracts, one still faces basis risks



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### Basis Example: Lean Hogs

- Cash price today is \$80/cwt
- Nearby futures market price is \$83/cwt
  - Current Basis =  $\$80 - \$83 = -\$3$



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### Forecasting Basis

- Track your own historical basis
- Use public sources of historical levels
  - AgManager.info
  - Beefbasis.com
- Current “rules of thumb” (KS study)
  - 3 YR avg. for feeder cattle; 4 YR for fed cattle




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### Short Hedge Example

(Feedlot operator facing fed cattle price risk – Sales Price Risk)

- 3 STEPS @ 2 POINTS IN TIME
  - PRIOR to PHYSICAL MARKETING (APRIL)
    - Sell futures contract for fed cattle
  - WHEN FED CATTLE READY FOR MARKET (OCT)
    - Buy back fed cattle futures contract &
    - Sell fed cattle in cash (spot) market
- Locks in price but not basis




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### Short Hedge Example

(Feedlot operator facing fed cattle price risk – Sales Price Risk)

- April
  - Sells OCT Fed Cattle Futures Contract @ \$100/cwt
  - Expects basis in OCT to be -\$2/cwt
- October
  - Buys OCT Fed Cattle Futures Contract @ \$95/cwt
  - Sells Fed Cattle on cash market for \$93/cwt
    - Note basis was in line with expectations (-\$2/cwt)
- Net Price Received = \$98/cwt (ignores transaction costs)
  - Cash market = \$93/cwt +
  - Futures market gain = \$5/cwt




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### Long Hedge Example

(Feedlot operator facing feeder cattle price risk – Purchase Price Risk)

- 3 STEPS @ 2 POINTS IN TIME
  - PRIOR to PHYSICAL PURCHASE (OCT)
    - Buy futures contract for feeder cattle
  - WHEN FEEDER CATTLE READY FOR PURCHASE (JAN)
    - Sell back feeder cattle futures contract &
    - Buy feeder cattle in cash (spot) market
- Locks in price but not basis




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### Long Hedge Example

(Feedlot operator facing feeder cattle price risk – Purchase Price Risk)

- October
  - Buy JAN Feeder Cattle Futures Contract @ \$110/cwt
  - Expects basis in JAN to be -\$5/cwt
- January
  - Sells JAN Feeder Cattle Futures Contract @ \$115/cwt
  - Buys Feeder Cattle on cash market for \$110/cwt
    - Note basis was in line with expectations (-\$5/cwt)
- Net Price Paid = \$105/cwt (ignores transaction costs)
  - Cash market = \$110/cwt &
  - Futures market gain = \$5/cwt




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### Other Considerations

- Margin money necessary for futures market hedging
  - Can create notable cash flow problems; even if “the right hedging decision” was made...
- Options on futures contracts
  - Put option: right to sell at a predetermined price
  - Call option: right to buy at a predetermined price




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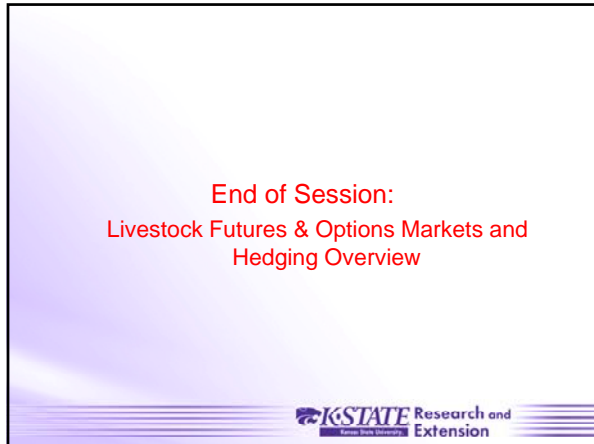
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