
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

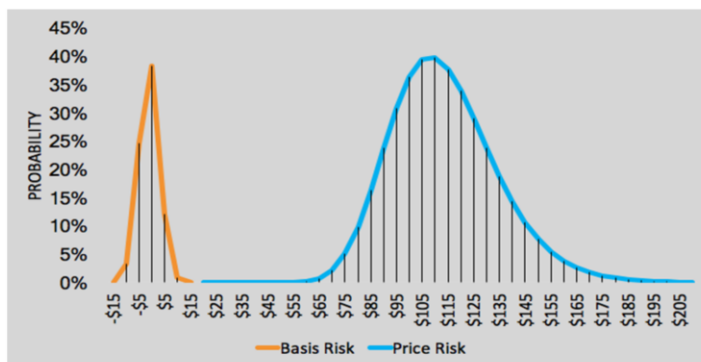


So long as cash & futures move together, then hedging with futures works

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)



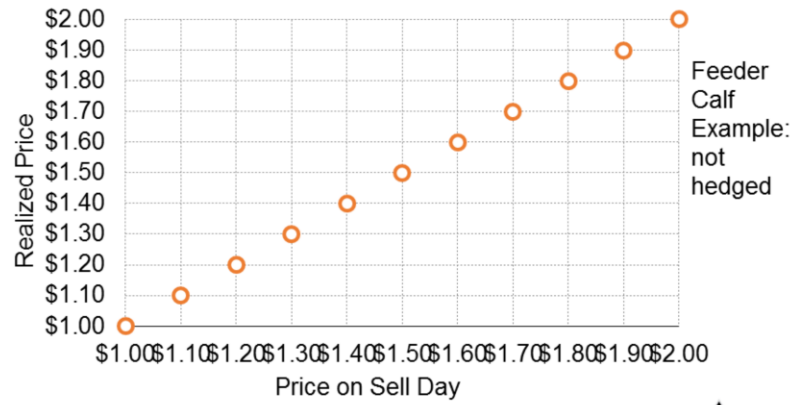
Example w/o Hedging

- 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



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



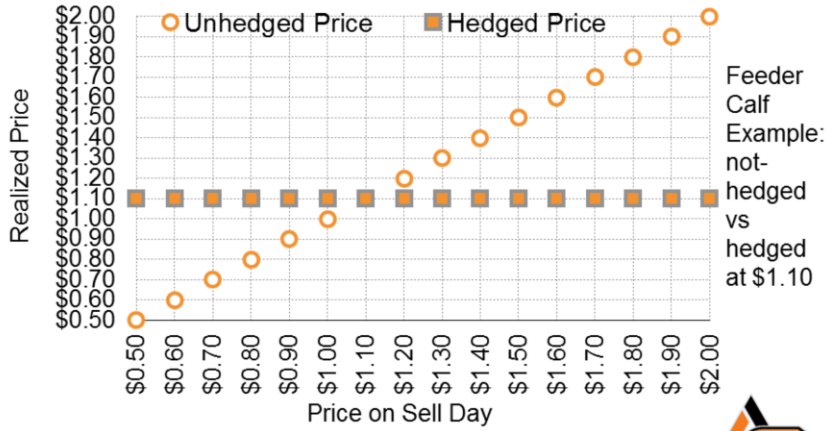
Hedging Outcome: Price Increase

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

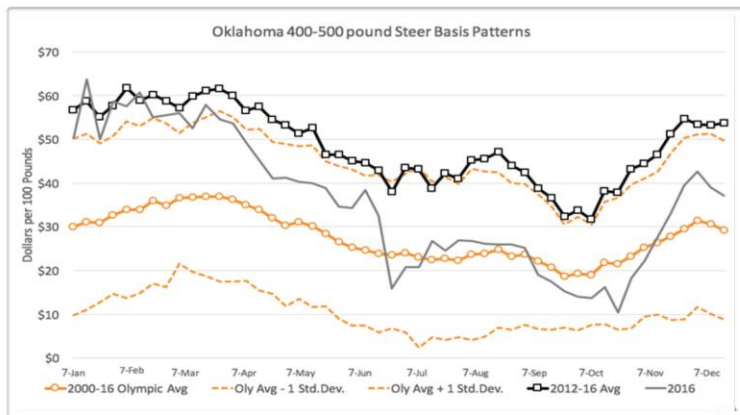
- Futures markets are useful tools for more than just hedging
- Based on the relationship between futures and cash prices, futures prices can provide a forecast of cash market prices
- Using a futures market near the planned marketing time period and an estimate of basis, an expected cash price can be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

- Remember:

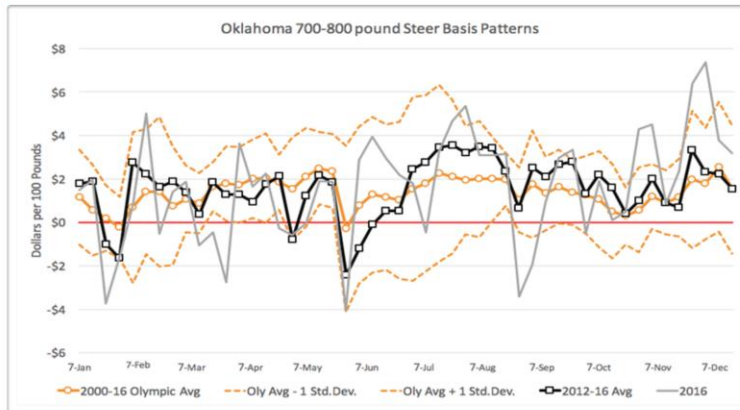
Cash - Futures = Basis ... or ... Futures + Basis = Cash



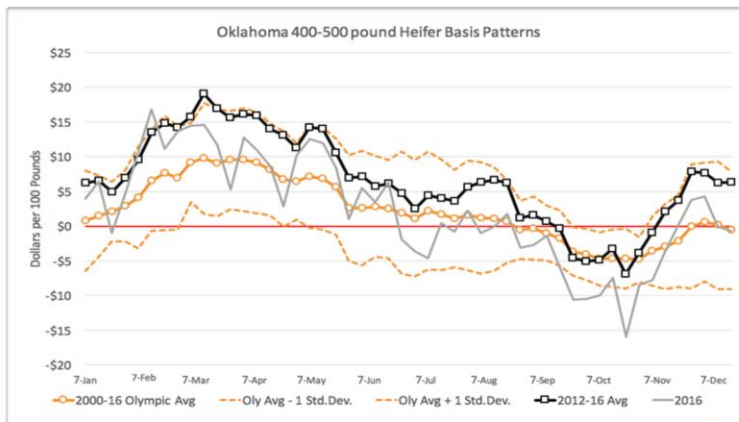
Basis Patterns in Oklahoma



Basis Patterns in Oklahoma



Basis Patterns in Oklahoma



Additional Resources

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

OCES bulletin AGEC-548

<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-1726/AGEC-548web.pdf>

OCES bulletin AGEC-549

<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-1766/AGEC-549web.pdf>

Managing for Today's Cattle Business and Beyond: Futures Market Basic

<http://marketing.uwagec.org/MngTCMkt/FutrMrkt.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>

