



Wealth Management
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Commodity Futures Specialists

Hedging livestock with futures

It is crucial to understand the importance of the “basis” in hedging livestock through forward pricing. The amount by which the local cash market differs from futures price on any given trading day is called the basis.

A couple of the fundamental relationships between cash and futures prices must hold for the futures markets to make hedging to be meaningful. From one day to the next, cash and futures prices may move in opposite direction; but over time, they must move in the same direction. Secondly, in the expiration month, the price of that futures contract and the cash market at the futures delivery points must come in reasonably close together by a fairly predictable amount. Many factors affect the basis – such as cash market location, grade, average weight, dressing percentage, etc.

With the above in mind, when the livestock producer or feeder makes the initial decision to hedge, it is unclear precisely what the basis will be when the hedge is lifted. That is why the hedger needs to estimate the basis, which is easier to gauge than predicting the absolute cash prices months into the future. Basis is easier to estimate by examining the basis pattern in the past.

A case study

A feedlot manager, in July, plans to purchase 200 head of feeder cattle to be placed in the feedlot in October. With signs of higher prices ahead, he decides to lock in the purchase price by buying three October Feeder Cattle futures contracts at \$105/cwt. Based on the historical data in the area, he expects the basis in October to be \$1 under. With the data, he calculates his purchasing price in October to be (futures price of \$95 minus the anticipated basis of \$1 under) \$104.00.

The following are a few scenarios on how the hedge might perform:

Actual basis turns out as anticipated

In October, futures price has risen to \$108, and cash price at \$107; the basis is exactly \$1 under. He closes out the futures position at \$108 and buys the feeder cattle in the cash market at \$107.

Gain in futures: $(\$108 - \$105) = \$3$

Net purchase price: $(\$107 - \$3) = \$104$

(in line with the anticipated purchase price of \$104)

Actual basis is weaker than expected

In October, futures price has risen to \$108, but basis comes in at \$3 under instead of the anticipated \$1 under, at a cash price of \$105. John closes out the futures position at \$108 and buys the feeder cattle in the cash market at \$109.

Gain in futures: $(\$108 - \$105) = \$3$

Net purchase price: $(\$105 - \$3) = \$102$

(versus the anticipated purchase price of \$104)

Actual basis is stronger than expected

In October, the futures price has risen to \$108, but basis comes in at \$1 over instead of the anticipated \$1 under. John closes out the futures position at \$108 and buys the feeder cattle in the cash market at \$109.

Gain in futures: $(\$108 - \$105) = \$3$

Net purchase price: $(\$109 - \$3) = \$106$

(versus the anticipated purchase price of \$104)

The example shows that the difference in net purchase price is due to the variation in basis. Therefore, it is crucial to forecast the basis as best as possible to estimate the net purchase price before implementing a hedge.

For more information about livestock hedging, or commodity/financial futures, please contact us.