

11-15-2019

Basis key to hedging success

Lee Schulz

Iowa State University, lschulz@iastate.edu

Follow this and additional works at: https://lib.dr.iastate.edu/econ_las_pubs



Part of the [Agricultural and Resource Economics Commons](#), [Agricultural Education Commons](#), and the [University Extension Commons](#)

The complete bibliographic information for this item can be found at https://lib.dr.iastate.edu/econ_las_pubs/725. For information on how to cite this item, please visit <http://lib.dr.iastate.edu/howtocite.html>.

This Article is brought to you for free and open access by the Economics at Iowa State University Digital Repository. It has been accepted for inclusion in Economics Publications by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.

Basis key to hedging success

Abstract

Livestock Outlook: Understand how fed cattle risk management tools work.

Disciplines

Agricultural and Resource Economics | Agricultural Education | Agriculture | University Extension

Comments

This article is published as Schulz, Lee. Basis key to hedging success. *Wallaces Farmer*, November 15, 2019. Posted with permission.

WallacesFarmer.



KEY TO HEDGING: The more accurately you can predict what the basis will be when you lift the hedge, the closer your actual price will be to your expected net cash price.

Basis key to hedging success

Livestock Outlook: Understand how fed cattle risk management tools work.

Lee Schulz | Nov 15, 2019

Producers often ask, “Which price risk management strategy is the best?” Not surprisingly, no one strategy works better than others all the time. Only price action between when you enter a strategy and when you sell cash cattle will tell what would have worked best each time.

Each pricing strategy has its own advantages and disadvantages, with varying degrees of risk and reward. The goal with any marketing plan should be to minimize risk by reducing losses and boosting the probability of a profit.

Twice, I have administered surveys to feedlot operators asking about their use of price risk management tools for marketing fed cattle. A 2014 survey of Iowa feedlot operators found 12.6% use forward contracts, 10.4% use futures, 4.5% use options, and less than 1% use livestock risk protection (LRP) or livestock gross margin (LGM) insurance.

A 2017 national survey of producers in the major cattle feeding states, including Iowa, found 18.7% use forward contracts, 17.5% use futures, 7.4% use options, and again a very small percentage use price or margin insurance. Some producers may use more than one strategy. Apparently, many do not use any.

Surveys, like these, help identify trends and call attention to various price risk management choices. Going further and explaining the nuts-and-bolts surrounding how a particular strategy has worked can empower producers to consider and increasingly use price risk management tools available to them. For simplicity, let's consider two strategies: the cash market vs. a short futures hedge.

Selling futures to hedge

Some view the cash market as the default strategy of doing nothing. That's not the case. Choosing the cash market is your best choice if the market goes up. On the flip side, if the market goes down, you stand the biggest risk, making cash sale the least desirable choice. If you strictly use the cash market, you don't have any extra costs for broker fees or margin calls.

Some argue that if you are buying and selling cattle regularly, you have a natural hedge in place. You stand to get the "average" price. But if you can identify down-trending markets, other strategies may enhance profits.

The concept of a short futures hedge is to sell a futures contract as a temporary substitute for a cash sale you'll make later. You can hedge to protect either short-term or long-term sales.

The goal is to reduce the risk of falling prices. If futures and cash prices fall while your short hedge is in place, you'll capture a futures gain to at least partially offset the lower cash price you receive. Conversely, if prices rise following initiation of the short hedge, you'll incur a futures loss that will roughly offset the cash price increase.

When you initiate a futures hedge, you must deposit margin money with the broker. This is earnest money (good-faith funds) that will be used to offset any losses in the futures account should the market keep rising in the case of a short hedge.

Use basis to find expected sale price

Before you sell futures to hedge, you need to project what you expect the difference will be between the cash cattle price and futures price at the time you will buy back the futures contract and sell the cash cattle. That is the basis. Adding the basis to the current trading price of futures contract you would sell to hedge gives an "expected" sale price.

Errors in projecting what basis will be will result in the "actual" sale price being somewhat higher or lower than the expected sale price. Being able to reliably forecast basis is the key to successful hedging.

The following example using 2019's actual cash and futures price action illustrates the mechanics of a short futures hedge.

Suppose back in March a producer planned to have a pen of steers that is equivalent to one futures contract (40,000 pounds, or 400 cwt) ready for the cash market in August 2019. The producer projected a breakeven sale price of \$115 per cwt for the steers. In March, the producer was uncertain about cattle price prospects. He saw

August live cattle futures at \$117.725 per cwt. He expected the August basis (cash minus futures) to be \$1.564 per cwt based on the 2016-18 average. The producer sold an August live cattle futures contract at \$117.725 per cwt.

Assume brokerage commission costs 15 cents per cwt. Brokerage fees can vary by firm and number of contracts traded. Based upon the basis forecast and brokerage commission, the August 2019 expected sale price was \$119.139 per cwt ($\$117.725 + \1.564 expected basis – \$0.150 fees).

Here's how it turned out

By August 2019, the futures price had fallen to \$102.850 per cwt, and the cash price was \$109.820 per cwt. The basis turned out to be \$6.970, which was higher than expected. The producer buys back the futures contract and realizes a futures gain of \$14.875 per cwt ($\$117.725 - \102.850). Then, the producer sells the cattle in the cash market at \$109.820 per cwt. The actual sale price is the cash price of \$109.820 plus the \$14.875 futures gain minus the 15 cents brokerage commission, or \$124.545 per cwt.

The lower price in the cash market is offset by the gain realized in the futures market. The August breakeven price turned out to be \$116.826 cwt. So, hedging turned a \$7.719-per-cwt profit, or about \$100 per head. Not hedging would have resulted in a \$7.006-per-cwt loss.

The *actual sale price* was higher than the *expected sale price* because the basis at the time the producer bought back the futures contract and sold the cash cattle was more favorable than projected.

This example serves to highlight the fact that, once the initial futures position has been established, the hedger is no longer exposed to the risk that futures prices will go down since the hedger has effectively “locked in” the futures price. However, hedgers are still exposed to basis risk since basis is not established until the cash market transaction takes place. This basis risk can be positive or negative.

Hedging opportunities exist

Fed cattle prices seem to have found a bottom. Recent price gains offer favorable opportunities to hedge or put a floor on fed cattle prices.

On Sept. 9, the October 2019 live cattle futures closed at \$94.20 per cwt. By Oct. 31, that contract had risen \$17.475 to \$111.675 per cwt. On Nov. 8, the December contract was trading at \$119.250, February at \$124.675, April at \$126.100, and June at \$118.275.

Futures prices are offering at or above breakeven margins for November 2019 through July 2020 closeouts, according to the ISU estimated yearling-to-finish cost and return series.

Opportunities to learn more

An online course on livestock price risk management is available at the Iowa State University Extension. The course focuses on the basic concepts and definitions related to price risk management. It introduces some risk management strategies producers commonly use, and discusses their relative strengths and weaknesses. The course covers forward contracts, futures, options and livestock insurance for both beef and swine producers. Visit [ISU Extension](#) .

The course is free, but participants will need to create an account if they do not already have an account at the website above and then they will receive an email to confirm the account. After confirming the account, users can go to the main course webpage – moodle.extension.iastate.edu – and look for Agriculture and Natural Resources courses and select the Livestock Price and Market Risk Management course to begin. Once enrolled with an account, users can return directly to the course by just entering their username and password.

Schulz is the Iowa State University Extension livestock economist. Email lschulz@iastate.edu .

Source URL: <https://www.farmprogress.com/beef/basis-key-hedging-success>