Cowboy Marketing: Using a Put Option to Manage Price Risk

Rod Sharp
Colorado State University Extension

The two basic components that determine profits for cow calf producers are revenues and costs. This article will look at the revenue side of the equation and focus on managing market price risk to improve cow/calf profitability.

The factors that impact revenues are the percent of cows weaning a calf, the weaning weights of the calves, and the market price received for the calves. Because of its importance to profitability, market price and market price risks are and will always be a concern to cow/calf producers.

While overall calf prices are determined by factors outside the overall control of an individual producer, some elements of market prices can be managed by the producer. Producers have several marketing alternatives. Among them are to:

- Sell calves on the cash market at weaning
- Hedge the weaned calves using a futures or options contract
- Forward contract the weaned calves
- Retain ownership

Selling at weaning, forward contracting, and even retaining ownership are common practices many producers are familiar with. However, fewer are familiar with using the futures and options markets to hedge feeder cattle prices. The remainder of this article will focus on the basics of using a put option hedge to help a cow/calf producer manage price risk.

The concept of a hedge is to participate in two separate markets (cash and futures) at the same time where gains in one market are offset by losses in the other. Hedging with options is similar to purchasing insurance to lock in a floor price or a minimum price to protect against lower prices without margin deposits. But unlike a futures hedge, a put option allows the flexibility of benefiting from higher market prices.

A put option is a financial contract between two parties. The buyer (cow/calf producer) acquires a short position by purchasing a right, but not the obligation, to sell a futures contract for a specific date in the future. The cost or premium is paid at the time of purchase. This payment goes to the seller of the option. Each option contract represents a standard quantity of 50,000 pounds and trades must go through a commodity broker. The producer’s financial obligation is limited to the premium and brokerage fees.

A put option contract specifies the futures commodity (feeder cattle), the expiration month, the strike price, and the premium. The premium is the only part of the option contract that is negotiated in the trading pit. Depending on price movements after a put option is purchased, the producer or buyer of the put option can either accept the predetermined price or let the contract expire without action.

Buying a put option is like purchasing auto insurance. A producer purchases auto insurance to protect against the risk the auto will be involved in an accident. A producer purchases a put option to protect against the risk feeder cattle market prices will fall. With the auto insurance an acceptable deductible is chosen. With a put option an acceptable floor price is chosen. For each, a premium is paid based on the selected deductible or floor price. In the case the auto is involved in an accident, a claim is filed and a payment is collected based on the coverage level. In the case market prices fall below the selected floor price, the value of the put option increases and the producer would exercise or sell the put option and collect this value from the broker as a gain. If the auto is not involved in an accident during the period covered by the insurance, the policy would expire without a claim. If the market price does not fall below the selected floor price (prices increase or are stable), the put option would expire without value.

In summary, a put option provides downside market price risk protection and still allows the cow/calf producer to benefit from potential price gains if the market should increase. Depending on price movements, the producer can either accept the contracted strike price or let the contract expire. That is, if the price goes higher after purchasing an option a producer sells his calves in the cash market and lets the put option expire without action. However if the market falls, the producer has the price protection with the put option at the selected strike price. Put options are an excellent way for cow/calf producers to start managing feeder cattle market price risk.