

WHAT IS THE PRICE SLIDE?

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Price slide is the naturally occurring phenomenon that cattle prices (often expressed in dollar per hundredweight [\$/cwt]) tend to decrease as an animal's weight increases.

Price slide is seen at auctions as well as in agreements in forward price contracts. The price slide is important to consider when making production and marketing management decisions. If making operational changes to increase weaning weights – for example, buying more expensive bulls or shifting calving dates – understanding how that decision affects calf values, not just weights, can be important.

Understanding how price slide affects forward contracts can help producers decide whether or not to deliver calves that are under or over the agreed-upon weight.

The Impact of the Price Slide on Calf Values at Auction

Optimal cow size, calving date, and animal costs cause much debate. One of the recent trends in the cow/calf sector is to increase weaning weights by shifting calving dates, increasing mature cow size, or improving herd genetics overtime. While heavier calves do generally bring more money per head at weaning, the increased value often isn't as large as many people expect.

Price slide is part of this discrepancy. Figure 1 depicts this phenomena for Wyoming steer calves using October sales prices from 1999–2017. All prices are from the Livestock Marketing Information Center (LMIC) and are USDA-reported data. The prices were adjusted for inflation using the Producer Price Index as reported by the St. Louis Federal Reserve and are shown in 2017 dollars.

The graph shows the effect steer weights have on prices. As heavier calves bring lower prices per pound, animal value increases at a lower rate than weights. Table 1 shows the average October value for steer calves at various weights from 1999–2017. The difference is also shown for each weight as compared to a 550-pound steer over the same period. For example, 475 pound steer calves generally bring almost \$50/head less than 550 pound steers, and 675 pound steers bring



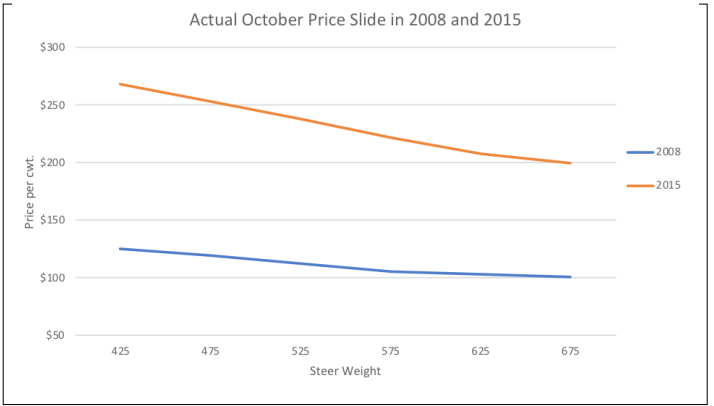
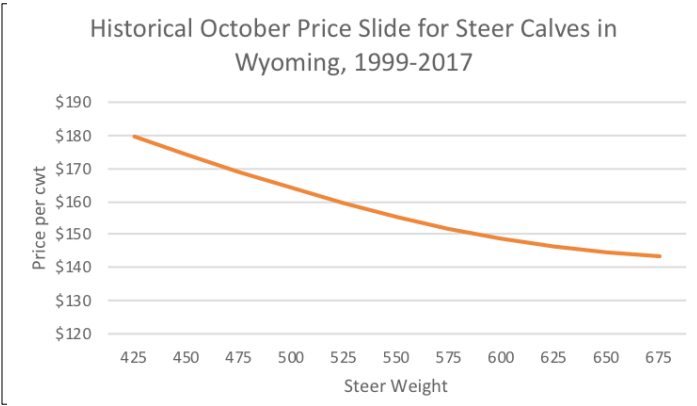


Figure 1. Average October price slide in Wyoming for steer calves from 1999–2017, adjusted for inflation

Figure 2. Actual October price slide in Wyoming for steer calves in 2008 and 2015, adjusted for inflation

Table 1. Average October value per head from 1999–2017 per head value of steer calves

	475	525	575	625	675
Value/head	\$818.76	\$851.76	\$885.54	\$930.49	\$981.99
Difference compared to 550 lbs.	-\$49.89	-\$16.89	\$16.89	\$61.84	\$113.34

over \$100 more than 550 pound steers. While the increase in value for heavier calves is expected, most people tend to overestimate the value of added calf weights.

The average price per cwt for 675 steer calves over this period was \$145.48. Many people would think a 675-pound steer should be worth \$290 more than a 475-pound steer (200 pounds \times \$1.45 pound) in this case. However, the difference in value of a 675-pound steer and a 475-pound steer over this timeframe is only \$163.23, or \$0.82 per pound. This discrepancy is due to the first 475 pounds of the now heavier calf discounted by \$0.27 per pound, as they were valued at \$1.72 per pound at the lighter weight class.

The price slide occurs within the year and across weight classes. Table 2 shows the value of a calf at different weights in late summer and fall to show how the calf's value changes as it gains weight over the year. Again, using the average values from 1999–2017, calf values are shown for expected weights at different times for a calf expected to weigh 550 pounds in mid-October. Selling that calf two months earlier results in reduced revenues of \$118/head, while selling one month early only reduced revenues by \$41/head. Retaining ownership a month to add weight results in increased revenues of almost \$65/head.

The big question is, are any of these proposed changes in marketing dates worth it?

The answer, as it always is in economics, is it depends. By weaning a month early, would your cows begin to put on body condition earlier, resulting in lower winter feed costs? What would it cost to carry your calves an extra month? Would \$65/head be sufficient?

Remembering that the previous numbers are the average over the last 18 years is important, and some years have more drastic price slides than average. Demand for beef (which increases demand for calves) and corn prices (which affects feedlot cost of gain) are two major factors that affect the severity of the price slide. Feeders are willing to bid up feeders at all weights when domestic and global demand for beef is strong. And, if corn is cheap, feeders are happy to pay more for lighter calves, as feedlot cost of gain is low. The price slide shifts up and becomes relatively steep under these circumstances. However, when corn is expensive, feeders are less likely to want lighter calves due to the increased cost of gain in the feedlot, and the price slide flattens a bit. Figure 2

shows these impacts through the actual October price slides for 2008 (a year with relatively low beef demand and higher corn prices) and 2015 (a year with relatively high beef demand and lower corn prices).

The Impact of the Contract Price Slide on Forward Price Contracting

There is an agreed upon price per cwt. and an agreed upon shipping weight when a buyer and seller enter into a forward price contract on calves. As discussed above, price per cwt. fluctuates with weight. Lighter calves bring a higher price and as weights increase, bid prices decline. Making sure the average calf weight comes out to the exact agreed-upon figure is not always easy. We can have good years and bad years in the West and both affect calf weights.

Generally, when a seller enters a forward contract, they are conservative on the estimated weight of their calves. If they contracted 500 pound calves at \$135 per cwt., they would not want to end up selling 450 pound calves at the same price. While being conservative on the weight estimate usually works to protect the seller's interest, that is not very helpful for the buyer. The buyer wants to be protected against overweight calves as they often make their money putting additional weight on the calves. In the previous example, if the contract was for 500 pound calves at \$135 cwt., the buyer would not want to pay that same agreed upon price for 550 pound calves.

Hence, we get the contract price slide. The contract price slide is an agreed upon discount to protect against overweight calves. The price slide can vary from contract to contract and is often used in video auctions but generally ranges from \$5–\$10 per cwt. Contracted price slides are also often one-sided, meaning they protect the buyer by discounting prices for heavier calves, but calves weighing less than the contracted weight are not adjusted. If the agreed upon slide is \$5, that means for every 100 pounds above the agreed upon weight, the agreed upon price will be \$5 per cwt. less. Does that mean the price slide only works in 100-pound increments? No, the price slide adjusts to the exact weight of the calves.

Let's look at an example to clarify.

Calves are contracted at 500 pounds at \$135 with an overweight price slide of \$5. The actual shipping weight of the calves ends up at 515 pounds. The new market price would be $\$135 - ((15 \text{ lbs.}/100) \times \$5) = \$134.25$.

Is the Price Slide Fair?

If contracted price slides are one-sided, ranchers may decide to weigh a subset of calves prior to weaning, just to make sure calves will make minimum weight. There may be management strategies, such as moving pairs to fresh pasture, to guarantee minimum weights are met. As sellers, ranchers generally don't like getting less per pound for their calves. However, oftentimes the per-pound discount is still in the seller's favor.

The answer to the question "Is the price slide fair?" depends on the cost of gain. If the difference in value due to the added weight is equal to or less than the cost of gain, then the seller should be comfortable with the slide.

$$\text{Projected value: } 500 \text{ lbs.} \times \$135/100 = \$675$$

$$\text{Actual value: } 515 \text{ lbs.} \times \$134.25/100 = \$691.39$$

$$\text{Value difference: } \$691.39 - \$675 = \$16.39$$

$$\text{Break-even cost of gain: } \$16.39/15 \text{ lbs.} = \$1.09$$

According to this example, if the seller can add 15 pounds of weight on their calves for less than \$1.09 per pound, then the negotiated price slide is a benefit to the seller.

New Wyoming Ranch Tools Calculator

A calculator on the Wyoming Ranch Tools website (www.uwyoextension.org/ranchtools) helps ranchers analyze the price slide. The calculator works through the same math as in the example to provide a break-even cost of gain. Users can enter their own contracted price and weight and the agreed upon price slide. The user then enters the actual shipping weight to complete the calculation. This is a great way to analyze a forward contracting opportunity on calves.

Conclusion

Forward contracting can be a good way to mitigate price risk. The answer to the question "Is the price slide fair?" is "It depends." Evaluate whether the added value of an animal at the lower price, given the added weight, overcomes the cost of putting on that added weight. Use the calculator to find the break-even cost of gain and make your decision from there.