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Marketing Feeder Cattle With a Price Slide

Making dollars and sense out of buying and selling feeder cattle using a price slide is not hard to do. The use of a price slide reduces the uncertainty surrounding the weight of feeder cattle and helps the buyer and seller attain a competitive market price. In the past, the most difficult aspect of marketing feeder cattle was accurately estimating weight. Because lighter feeder cattle typically sell for a higher price per hundredweight, a price slide was developed to help the buyer and seller avoid over or underestimating the actual weight.

The price slide allows the bid price to be adjusted up or down based on the difference between the estimated and the actual pay weights of feeder cattle. If the estimated pay weight is larger than the actual pay weight, then the feeder cattle are lighter than estimated and the bid price would be adjusted upward based on the price slide. Likewise, when the estimated pay weight is less than the actual pay weight, then the feeder cattle are heavier than estimated and the bid price would be adjusted downward based on the slide.

Another factor affecting the use of a price slide is the time of delivery of feeder cattle. Buyers want to buy their feeder cattle early, but ranchers often want to sell later, when their cattle weigh more. This discrepancy can cause problems. Estimating delivery weights in the distant future results in greater weight error and, therefore, fewer forward contract sales. The price slide provides a method that allows buyers and sellers to agree on a trade today based on certain weight and price specifications with a future delivery date. Thus, the use of a price slide improves the opportunity for buyers and sellers to forward-contract feeder cattle.

Why Use a Price Slide?

A price slide is necessary because neither the buyer nor the seller can accurately estimate the weight of feeder cattle with consistency. The slide was developed to prevent the buyer and seller from incorrectly estimating the weight of the cattle, which can result in substantially lower or higher bid prices and dollar sales. The use of the price slide permits the buyer and seller to make adjustments in the bid price based on the difference between the estimated and actual pay weights, allowing them to reach the competitive market price with less haggling over weight or price. The price slide focuses attention on the relative value of heavier and lighter feeder cattle.

Who Uses a Price Slide?

Many buyers and sellers of feeder cattle throughout the United States use a price slide. It is frequently used in direct, televideo, and satellite video auction sales (Western Livestock Marketing Information Project, 1991). Feeder cattle in these market outlets were traditionally bought and sold with the buyer and seller negotiating a given price. The weight of the feeder cattle was the unknown factor that each estimated before discussing price. The development of the price slide provides a method by which the producer may attain a competitive bid price based on weight adjustments. The ease and convenience of using the price slide has encouraged its rapid adoption by buyers and sellers alike.

Price slides of $6 to $15 per hundredweight have been common on lightweight weaned calves (about 400 to 600 pounds). Heavier feeder cattle (600 to 800 pounds) have used smaller price slides that range between $1 and $5 per hundredweight. The larger price slide for lighter-weight cattle reflects larger incremental price differences based on weight.

Determining the appropriate price slide is very important to both the buyer and the seller. The value of the slide is affected by weight, sex, breed, grade, location, and time of delivery. Virtually any factor that affects beef cattle prices affects the price slide. Consequently, the absolute value of the appropriate price slide will change to reflect current market conditions.

Using a Price Slide

A price slide is usually specified in dollars per hundredweight. The price slide should be consistent with the price difference due to factors such as weight observed in feeder cattle markets. The price slide is used to adjust the bid price based on the pay weight of the feeder cattle.

Price slides may be used in a number of different ways. For instance, price slides may be applied up and down using the same price slide value, or one price slide value may be used to

slide up and another used to slide down. Also, in some sales, price slides are specified to slide one way (eight down or up). In addition, some price slides are used in conjunction with an acceptable weight range for which no bid price adjustment is made within the weight allowance (window).

The price slide is simple to use. However, it does require four pieces of information:

- the estimated pay weight (EPW)
- the actual pay weight (APW)
- the bid price (BP)
- The magnitude of the price slide (PS), as shown in Equation 1.

These factors will allow us to calculate the actual pay price (APP).

Equation 1:

Actual pay price = Bid price + [(Estimated pay weight – Actual pay weight) x Slide] or

APP = BP + [(EPW – APW) x PS]

For example, assume the seller overestimated the feeder cattle weight at 735 pounds (estimated pay weight), when the actual pay weight was 686 pounds. Also, assume a $5 per hundredweight price slide and a $75 per hundredweight bid price. Through the use of the slide, the bid price would be adjusted upward by $2.45 ((735 – 686) x 5/100), resulting in an actual pay price of$77.45 per hundredweight, as shown in table 1.

Note that the actual pay price is increased when the estimated pay weight is greater than the actual pay weight. Likewise, the actual pay price is decreased when the estimated pay weight is less than the actual pay weight.

Print "Table 1. Feeder Cattle Weight and Price Calculations Using the Price Slide*" table from our website.

*The calculations assume a 2 percent shrink and no weight allowance. Estimated and actual pay weights are after shrink.

Figures 1a and 1b graphically show the effect of a price slide on the actual pay price for feeder cattle with an estimated pay weight of 700 pounds, a $75 per hundredweight bid price, and a $5 per hundredweight price slide. The actual pay price increases for feeder cattle whose weights have been overestimated (lighter actual pay weights) and decreases for feeder cattle whose weights have been underestimated (heavier actual pay weights), as shown in figure 1a. Figure 1b illustrates that the larger the price slide, the more significant the impact on actual pay price becomes. Furthermore, in this example, if you assume an actual pay weight of 660 pounds, the actual pay prices become $76.20, $77.00, and $77.80 for $3, $5, and $7 per

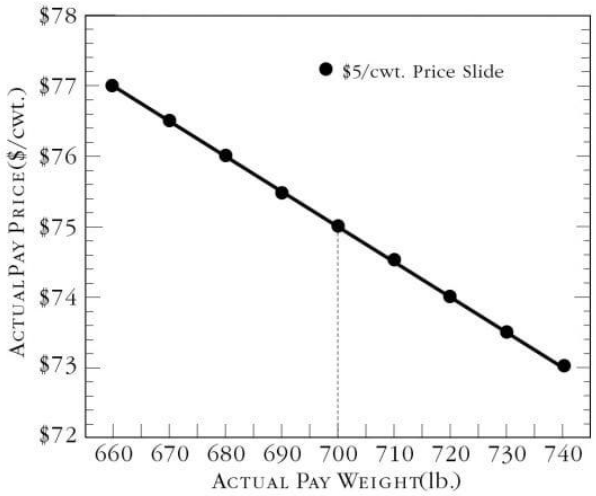

Figure 1a. The effect of a price slide without a weight allowance on actual pay.

hundredweight price slides, respectively. The total value per head for the respective price slides are $502.92, $508.20, and $513.48 per head. The value per head increases as the price slide values increase. However, the value per head will decrease for feeder cattle with heavier-than-expected pay weights.

The actual pay price is sensitive to weight error (Estimated – Actual pay weight) and the price slide. Therefore, it is important that the estimated pay weight should be close to the actual pay weight and that the magnitude of the price slide should accurately reflect the price adjustment for heavier or lighter feeder cattle in order to obtain the current competitive market price.

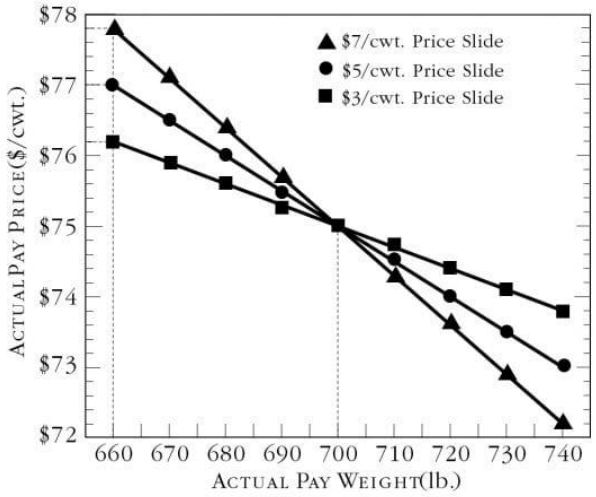

Figure 1b. The effects of different price slides without a weight allowance on actual pay price.

Price Slide With a Weight Allowance

Building a weight allowance (WA) into the price slide provides an extra incentive for the seller to accurately estimate the pay weight of feeder cattle. The weight allowance usually applies both up and down from the estimated pay weight, as shown in Table 2. Equation 2 may be used to calculate the actual pay price using a price slide with a weight allowance.

Equation 2:

BP + {[(EPW – APW) ± WA]□PS}, if|EPW – APW|> WA
APP = or

BP,

if |EPW – APW|≤WA

Print "Table 2. Feeder Cattle Weight and Price Calculations Using the Price Slide With a Weight Allowance*" table from our website.

*The calculations assume a 2 percent shrink and a weight allowance of 10 pounds. Estimated and actual pay weights are after shrink.

The bid price will be adjusted when the difference between the estimated and the actual pay weights is greater than the weight allowance. However, the adjustment may be negative or positive. When the difference between the estimated and the actual pay weights is negative (the seller underestimated the weight), then the weight allowance is added to the difference. Alternatively, when the difference between the estimated and the actual pay weights is positive (the seller overestimated the weight), then the weight allowance is subtracted from the difference.

An example will help to make this point clear. Assume the agreed upon weight allowance was ± 10 pounds (20-pound interval), with a price slide of $5 per hundredweight and a bid price of $75 per hundredweight. If the difference between the estimated and the actual pay weights is 10 pounds or less, there would be no adjustment in bid price. The bid price becomes the actual pay price.

However, if the seller overestimated the pay weight and the difference between the estimated and the actual pay weights was 49 pounds (735 – 686), then the bid price would be adjusted. The bid price would be adjusted upward $1.95 per hundredweight ((49 – 10) x ⅝₀₀) , resulting in an actual pay price of $76.95 per hundredweight. Table 2 also presents correctly estimated and underestimated pay weight situations that describe the weight and price calculations.

Including a weight allowance in the price slide permits the seller to receive the bid price if the difference between the estimated and the actual pay weights is less than or equal to the agreed-upon weight allowance. In other words, a 10-pound weight allowance for an estimated pay weight of 700 pounds would allow the actual pay weight to fall anywhere between 690 and 710 pounds without affecting the bid price of $75 per hundredweight, as shown in Figure 2a.

The price slide with a weight allowance affects the actual bid price only if the difference between the estimated and the actual pay weights is greater than the weight allowance. Therefore, the price slide is applied for actual pay weights above and below the

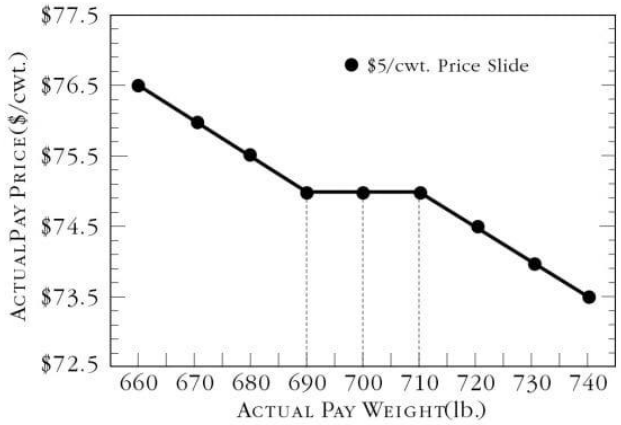

Figure 2a. The effect of a price slide with a 10-pound weight allowance on actual pay price.

range of the weight allowance. As shown in figure 2b, an actual pay weight of 660 pounds would result in actual pay prices of $75.90, $76.50, and $77.10 per hundredweight for price slides of $3, $5, and $7, respectively.

The total values per head for the respective price slides shown in figure 2b are $500.94, $504.90, and $508.86 per head. Thus, if the appropriate price slide were $5 per hundredweight and if a $3 slide were used, the seller would lose $3.96 per head, or $277.20 per truckload (seventy head) of feeder cattle. Also note that the actual pay price and the total value per head are slightly larger when using a price slide without a weight allowance.

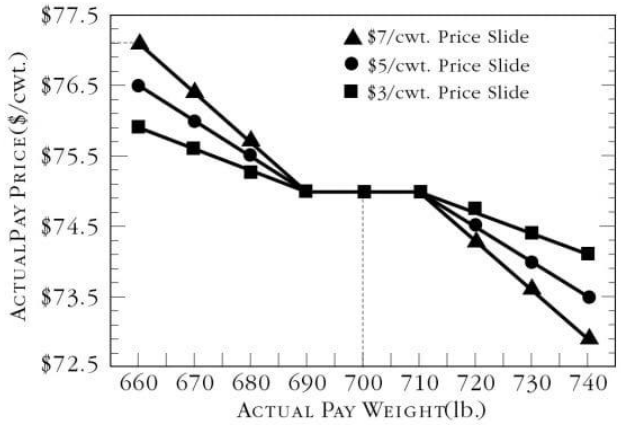

Figure 2b. The effects of different price slides with a 10-pound weigh allowance on actual pay price.

A comparison of a price slide with and without a weight allowance is presented in figure 3. Assuming a price slide of $5 per hundredweight, a bid price of $75.00 per hundredweight, an estimated pay weight of 700 pounds, and an actual pay weight of 660 pounds, the actual pay prices would be $77.00 and $76.50 per hundredweight (total value per head of $502.92 and $500.94) for feeder cattle sold with and without a 10-pound weight allowance. Thus, the actual pay price and total value per head are slightly larger when using a price slide without a weight

allowance for feeder cattle that have overestimated weights (weigh less than expected). However, the price slide with a weight allowance results in the larger actual pay price when feeder cattle weights are underestimated (weigh more than expected). Also, the actual pay price and total value per head will decrease for feeder cattle with heavier-than-expected pay weights.

Sensitivity

The value of an animal is sensitive to the weight error (estimated and actual pay weights) and the selected price slide. Large variations in either or both factors may result in significant dollar losses.

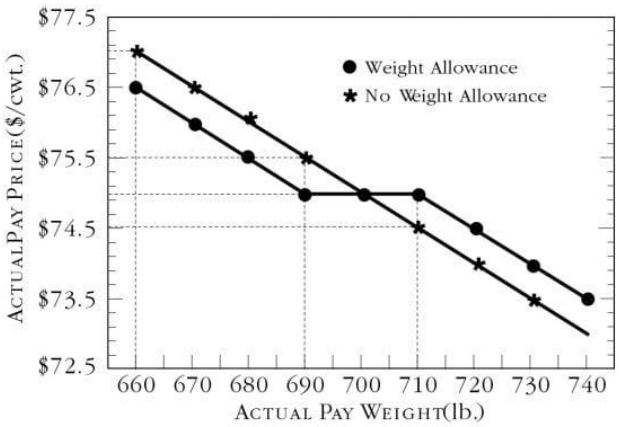

Figure 3. A comparison of the actual pay price for a price slide with and without a weight allowance.

Many sellers are tempted to underestimate their pay weights in hopes of getting a higher bid price. This strategy frequently results in lower returns due to the price slide adjustment and the buyer's discounting the bid price.

A simple example using the price slide will help illustrate the sensitivity of the weight error. First, the seller predicts an estimated pay weight for the feeder cattle that may be used as a base for the competitive bid. Next, the price slide is set by the seller or negotiated by the buyer and seller. Also, the delivery date is selected.

Now, let's assume an estimated pay weight (after shrink) of 750 pounds, a bid price of $70 per hundredweight, a weight allowance of 10 pounds, and a price slide of $5 per hundredweight. At the delivery date, the actual pay weight (actual weight less shrink) was 780 pounds. The seller underestimated the pay weight.

Therefore, using the price slide, the actual pay price becomes $69.00 per hundredweight ($70/cwt. + [(750lb. – 780 lb.) + 10] x ⁵⁄₁₀₀) and the value of the animal is$538.20. Alternatively, if the estimated pay weight was 760 pounds, the actual pay price becomes $69. 50 per hundredweight ($70/cwt. + [(760 lb. – 780 lb.) + 10] x⁵⁄₁₀₀) and the value of the animal is $542.10.

In this example, a 10-pound increase in the weight error (30 – 20 pounds) resulted in a difference of $0.50 per hundredweight ($69.00 – $69.50) in actual pay price
and a loss of $3.90 per head. Of course, larger weight errors result in larger losses per head. The possible dollar losses associated with "weight error" and "off-farm weighing" may justify the purchase of on-farm scales. In addition, larger weight errors are more easily detected by the buyer and often result in a discounted bid price, which further increases the losses per head.

Table 3 describes the value of an animal based on various actual pay weights and price slides. The sensitivity of the price slide can be easily seen as you move from a price slide of $1 to $5 per hundredweight for an animal with an estimated pay weight of 700 pounds, an actual pay weight of 670 pounds, and an adjusted weight error of 20 pounds. The corresponding actual pay price (shown in parentheses) ranges from $75.20 to $76.00 per hundredweight for the $1 to $5 per hundredweight price slide, which results in an additional $5.36 per head (509.20 – 503.84). These values become larger as weight errors and price slides increase. The additional revenue per head approaches zero as the weight error approaches zero. This provides further incentive to accurately estimate the pay weight.

Print "Table 3. Value of Animal Based on Various Actual Pay Weights and Price Slides*" table from our website.

*Assumes a $75 per hundredweight bid price, a weight allowance of 10 pounds, and an estimated pay weight of 700 pounds. The actual pay prices are reported in bold for the various actual pay weights and price slides.

Selecting the Proper Price Slide and Weight Allowance

Not only is it important for producers to be able to closely approximate the pay weight, but it is also important to select the appropriate price slide. The seller and buyer should ensure that the magnitude of the price slide is consistent with price adjustments observed in the feeder cattle cash market (local auction market, televideo sales, or reported sales). For instance, the agreed upon price slide for 700- to 800-pound feeder steers, medium frame 1, should be consistent with the price difference observed from the sale of 700- versus 800-pound feeder steers, medium frame 1, in other markets (USDA, 1992). The price slide is often sensitive to factors such as grade, weight, sex, breed, location, and time of year. Table 4 presents an example of feeder cattle weight and market price information used to calculate the proper price slide.

The price slide is calculated by dividing the difference in market price by the corresponding difference in weight of the feeder cattle. For example, if you were calculating a price slide for feeder cattle of similar quality weighing from 200-250 to 250-300 pounds, the corresponding market price difference would be

$7.00 per hundredweight ($128.00 – $121.00) for a weight difference of 50 pounds (225 – 275). Therefore, the price slide would round to 14.00 cents per pound or $14.00 per hundredweight ($7.00/0.5 cwt.). Notice that the price slides in table 4 range from $3 to $22 per hundredweight, depending on the respective weight category.

Print "Table 4. Estimating the Magnitude of the Price Slide for Feeder Steers, Various Weights, Medium and Large Frame 1, Alabama, April 1992*" table from our website.

*The magnitude of the price slide may be affected by the sex, weight, grade, breed, location, and delivery date of the feeder cattle.

The weight allowance is also an incentive for the seller to accurately estimate the feeder cattle pay weight. The magnitude of the weight allowance does not follow any logical mathematical relationship with regard to the characteristics of the feeder cattle. The usual weight allowance is about 10 pounds, but it may be negotiable.

A lower-than-appropriate price slide coupled with a large weight allowance suggests to the buyer that the seller is unsure about the estimated pay weight placed on the feeder cattle at delivery. Conversely, a large slide and small weight allowance tells the buyer that the seller is reasonably sure the estimated pay weights are correct. Research has shown that buyers tend to discount the bid price for feeder cattle with small slides and large weight allowances (Bailey, 1992).

Advantages and Disadvantages

Marketing feeder cattle with a price slide has become common practice. However, the use of the price slide does have some advantages and disadvantages.

Advantages

- The price slide reduces the risk associated with accurately estimating the weight of feeder cattle.
- The price slide attracts more potential buyers.
- A price slide with delivery at some future date serves as a “forward contract,” which may provide additional price protection for the buyer and the seller.
- A price slide is a convenient method for dealing with the risk associated with future delivery weights.
- Developing the proper slide can be an important seller merchandising strategy since it communicates to the buyer the seller’s confidence in the estimated pay weight.
- A price slide may allow a higher bid price.

Disadvantages

- Accurately estimating the pay weight is critical to getting a competitive bid for your feeder cattle.
- Buyer and seller are required to be knowledgeable of the appropriate price slide for the type of feeder cattle.
- Buyers discount their bid prices for feeder cattle offered with large weight allowances.
- Buyers discount the bid price for feeder cattle offered with lower-than-normal price slides.
- The buyer and the seller each must agree to each element of the price slide.
- Buyers procuring feeder cattle with some future delivery date run the risk that future market conditions may reduce market prices.
- Sellers offering feeder cattle for some future delivery date run the risk that future market conditions may increase market prices.
- Specifying a future delivery date reduces the seller’s ability to estimate the pay weight precisely.

Of course, there are other advantages and disadvantages not listed because many versions of the price slide are used to market feeder cattle. For instance, some offer a price slide which slides only one way; some price slide values up and down are different; and the use of weight windows and allowances may differ. All of these variables affect the ultimate actual pay price received. Understanding the elements of the price slide and how they affect the actual pay price is essential to using a price slide effectively.

The advantages of using a price slide often outweigh the disadvantages, according to many feeder cattle buyers and sellers. Most point to the benefit of reducing the uncertainty of the average weight of feeder cattle as the major reason that they use the price slide. Those who can accurately estimate their pay weights and use the proper price slide will benefit from its use.

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Bailey, Dee Von, and Lyle N. Holmgren. “Price Slides For Feeder Cattle.” Letter #9, Analysis and Comments. Western Livestock Marketing Information Project. Lakewood, Colorado. February 28, 1992.

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