

COW/CALF CORNER

The Newsletter

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Old rules of thumb can be misleading

Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

It's a new world of cattle prices and some of the old rules of thumb that have been used for years need to be modified. I still hear folks talking about a \$10/cwt slide for calf prices...the idea that calf prices should decrease by \$10/cwt. or 10 cents per pound as weight increases. This evolved from historical prices. For example, from 2000-2006, the average price difference between 4-500 pound steers and 5-600 pound steers in Oklahoma auctions was \$10.66/cwt, i.e., the \$10 price slide. However, the price slide is not a constant absolute dollar amount as much as it is a constant percentage. The price slide for calves is typically in the range of 8-10 percent of the calf price. The price slide for the period 2000-2006 was 8.9 percent.

The average price slide for 4-500 pound steers from 2012-2014 was \$20.07/cwt...about double the old \$10/cwt. rule of thumb. In percent, the price slide for this period was 9.3 percent. In 2014, the average price slide for 4-500 pound steers was \$26.35/cwt. with a slightly higher percentage, at 9.7 percent. The old rule of thumb needs to be modified from "\$10/cwt" to a percentage level, say 9 percent of the calf price. Thus, at a 450 pound calf price of \$325/cwt, the price slide would be roughly \$29.25/cwt. The same idea applies to heavier feeder cattle with the price slide for 5-600 to 6-700 pound steers averaging 6-8 percent and steers above 650 pounds averaging 4-6 percent. This would suggest, for example, that a 550 pound steer price of \$280/cwt would have a price slide of approximately \$19.60/cwt and a 650 pound steer priced at \$250/cwt. would have a price slide of roughly \$12.50/cwt.

There are factors that change price slides for feeder cattle. The most important factor affecting feeder cattle price slides is the feedlot cost of gain, i.e., grain price, relative to cattle prices. All else being equal, higher feedlot cost of gain will reduce the price slides for feeder cattle by weight. For example, in the period 2007-2011, feed cost increased dramatically relative to cattle prices and the 4-500 to 5-600 pound steer price slide for this period averaged 7 percent. It is the relative relationship between feed cost and feeder cattle price that matters. In fact, an increase in

feed cost with constant feeder prices or a decrease in feeder prices with constant feed prices will both have the effect of reducing the feeder cattle price slide. The overall average price slide for calves from 2000-2014 was 8.4 percent, including the extraordinarily high feed prices (i.e. reduced price slides) in 2007-2011. A general average of 9 percent is probably more typical for calves.

The price slides discussed above, which are adjustments in feeder prices at specific weights, add up to the total price rollback between purchase and sales prices that stocker producers commonly evaluate to determine the feasibility of a stocker enterprise. Sometimes these are also expressed in absolute dollars, as in, “the price rollback must be less than \$50/cwt. (or \$40/cwt. or \$30/cwt., etc.) for a stocker enterprise to work”. In reality the value of gain for stockers is a function of both the price rollback and the feeder price level. Consider the example of a \$300/cwt purchase price for a 500 pound beginning weight and \$250/cwt sales price for a 750 pound final weight. The value of gain in this example is $(\$1875 - \$1500) / 250$ or \$1.50/pound of gain. As an example from a time of lower prices, assume a purchase price of \$150/cwt. for 500 pound beginning weight and \$100/cwt. selling price for a 750 pound ending weight. The value of gain in this example is $(\$750 - \$750) / 250$ or \$0. In both cases, the price rollback between purchase price and sales prices is \$50/cwt. but the value of gain is very different. The first example has an implied average price slide in \$/cwt. (over 250 total pounds of gain) of 6.7 percent of the purchase price, consistent with the price slides discussed above. In the low price example, a 6.7 percent price slide would result in a \$25/cwt. rollback over the 250 pounds of gain and would produce only half the value of gain of the high price example. It would actually require that both the purchase and selling price be at \$150/cwt (i.e. no rollback) to generate the same value of gain, $(\$1125 - \$750) / 250$ at the low prices, compared to the high price scenario with a \$50/cwt. rollback. It is important to not judge price rollbacks in absolute dollar terms but to evaluate carefully at various price levels. A rule of thumb based on a dollar value of the rollback can be very misleading.

A final example is the steer to heifer price differential. It is common to think of heifer calves being priced \$10-\$15/cwt. back of the steer price. Indeed, in the period 2000-2006, 450 pound heifer calf prices averaged \$10.95/cwt. lower than comparable steers. This was a price discount of 11.3 percent from the steer price over that period. In 2014, the average difference between 450 pound steers and heifers was \$29.99/cwt., which was an 11 percent discount to the steer price. Over the entire period from 2000-2014, the average heifer calf discount was 12 percent. For feeder weights above 650 pounds, heifers tend to be priced at 7-7.5 percent below steers on average. As with price slides, the heifer discount to steers is much more constant in percentage terms than in absolute dollar levels.

I had a professor in graduate school who admonished us to remember that the abbreviation for “rule of thumb” is ROT...as in rotten; meaning that they can be misleading. As a practical matter, rules of thumb are very useful for managers to facilitate decision making, especially for frequent and repeated decisions. However, the discussion above reminds us that it is important to understand the basis for those rules of thumb in order to be sure they are applied correctly in dynamic situations. Feeder cattle price relationships expressed as percentages are much more robust than rules of thumb stated in absolute dollar values.

Keep replacement heifers growing

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

“First hollow stem” will be arriving at wheat field near you very soon. The [Mesonet predictor of first hollow stem](#) indicates that Southern Oklahoma may have already reached that stage. Wheat producers that are using wheat pasture to grow yearling replacement heifers must decide if they are going to leave the heifers on the wheat pasture until April just before the breeding season, or remove them soon to maximize wheat grain production. Science has shown us that the cattle must be removed from the wheat at or near the time of the first hollow stem to achieve the highest possible grain yields. Replacement heifers that are scheduled to be bred artificially often must be moved to a pasture close to working chutes for synchronization and insemination. Whether the move from wheat pasture occurs now, or in April (just before breeding), the heifers need to consume a diet that will allow them to continue to grow at a rate of 1 to 1.5 pounds per head per day. Heifers placed on low quality dormant native range or dormant bermudagrass will need supplementation to continue this rate of gain. Without supplementation the heifers may be slower to reach puberty and maintain cycling activity.

Replacement heifers that have just reached puberty and started cycling may be vulnerable to any drastic change in feed intake. A small trial conducted at [Oklahoma State University \(White, et al., 2001\)](#) illustrates the impact that sudden severe reduction in energy intake can have on cycling activity in replacement heifers. Nineteen heifers were divided into two groups. Both groups were fed at 120% of the maintenance requirements needed for yearling heifers. By the use of hormone assay and ultrasonography, it was determined that all heifers were cycling when the treatments began. Nine of the heifers were continued on the 120% of maintenance diet. The other ten heifers were placed on a diet that was 40% of the requirement for maintenance. They remained on this diet for 14 days. At the conclusion of the 14 day treatment period, only 3 of the feed restricted heifers were still cycling, whereas all of the heifers receiving the 120% of maintenance were still cycling.

Table 1. Impact of sudden, severe reduction in feed intake on cycling activity of yearling heifers

	Treatments			
	120% of Maintenance		40% of Maintenance	
Day of treatment	Day 0	Day 14	Day 0	Day 14
# of Heifers	9	9	10	10
Weight	704	711	691	658
# cycling	9	9	10	3

This very small, but impressive, data set illustrates that we must be cautious about any disruption in the feed intake of replacement heifers at the start of their breeding season. Movement from high quality cool season grass (in the spring) to dormant winter native range may cause such a

weight loss in a short period of time. Making changes in supplement programs at the start of the breeding season should be done carefully and gradually to avoid any chance of digestive disorder and the possibility of the heifers going "off-feed".

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