



CATTLEMAN'S CORNER



Division of Agriculture Sciences and Natural Resources * Oklahoma State University

MARCH/APRIL 2016

Cattle market “business as usual”?

Derrell S. Peel Oklahoma State University Extension Livestock Marketing Specialist

Feeder and fed cattle prices are currently at roughly the same levels as in late 2013. In the intervening 26 or so months, cattle markets have been on a rollercoaster that took cattle prices higher, faster than ever imagined, followed by a sharp correction in late 2015 that was more abrupt and severe than anyone could anticipate. This has left cattle producers cautious and somewhat hesitant about what to expect going forward. One of the challenges through this period has been the fact that many of the cattle and meat market indicators, patterns and relationships have behaved very unusually leaving producers and analysts at a loss to understand and anticipate market movements.

Recently, however, there are number of indications cattle markets may be returning to somewhat more typical behavior. After the worst year ever in 2015, feedlot margins are moving back to levels will lead to positive returns for feedlots. This process is not complete and will likely continue through the next few months. Within feeder cattle markets, the margins or value of gain across weights just recently has adjusted to reflect feedlot cost of gain. The value of gain calculates to the \$0.70 - \$0.80/pound range in the past couple of weeks. This suggests that feedlots are pricing feeder cattle in a manner that reflects equilibrium across weights. This is the first time in many months that the value of gain in feeder prices is consistent with broader cattle market conditions.

On a very different note, wholesale beef markets appear to returning to patterns not seen for many months. So far in 2016, middle meats are advancing or holding value relative to weaker end meats. This long term tendency for middle meats to be the strongest part of carcass value has been reversed much of the time in recent years, going all the way back to the recession in 2009. Retail beef prices peaked in mid-2015 and are working lower as beef production begins to grow. Similarly, the ratio of retail beef prices to pork and poultry prices pushed to unprecedented levels over the past two years and has now peaked an begins adjusting back to more typical levels. The retail meat price ratios have been an impressive indication of strong beef demand but the fact that the retail price ratios are returning to more typical levels is an indication of more relative stability in meat markets.

Finally, perhaps the most obvious sign of relative stability is the fact that feeder and fed cattle and beef markets are exhibiting mostly seasonal behavior so far in 2016. Dramatic price trends, both up and down over the past couple years have overshadowed seasonal market tendencies. Though cattle and beef prices are expected to trend lower over the coming months, that trend will not be pronounced and markets are expected to behave much more seasonally.

While cattle and beef markets will no doubt continue to experience volatility, especially related to external macroeconomic and global uncertainty, it is encouraging that many of the internal market indicators are swinging back to more typical levels. This indicates a degree of relative stability in cattle and beef markets that has not been there in recent months.

Schedule the breeding soundness exams soon

by Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

Although the spring calving season may still be ongoing, the next breeding season is only a few weeks away. Now is the time to schedule the old and new bulls for their pre-breeding soundness examination.

For the breeding soundness evaluation to be successful, bulls should be evaluated 30 to 60 days before the start of breeding. It is important to allow sufficient time to replace unsatisfactory bulls. Bulls could also be evaluated at the

end of breeding to determine if their fertility decreased. A breeding soundness exam is administered by a veterinarian and includes a physical examination (feet, legs, eyes, teeth, flesh cover, scrotal size and shape), an internal and external examination of the reproductive tract, and semen evaluation for sperm cell motility and normality.

The physical examination studies overall appearance. Flesh cover is one factor to evaluate. Body condition can be affected by length of the breeding season, grazing and supplemental feeding conditions, number of cows the bull is expected to service and distance required to travel during breeding. Ideally, bulls should have enough fat cover at the start of breeding so their ribs appear smooth across their sides. A body condition score 6 (where 1 = emaciated and 9 = very obese) is the target body condition prior to the breeding season.

Sound feet and legs are very important because if they are unsound, this can result in the inability to travel and mount for mating. The general health of the bull is critical since sick, aged and injured bulls are less likely to mate and usually have lower semen quality. The external examination of the reproductive tract includes evaluation of the testes, spermatic cords and epididymis. Scrotal circumference is an important measure since it is directly related to the total mass of sperm producing tissue, sperm cell normality and the onset of puberty in the bull and his female offspring. Bulls with large circumference will produce more sperm with higher normality and also reach sexual maturity sooner.

Hard work spotlights
the character of people.
Some turn up their
sleeves, some turn up
their noses, and some
don't turn up at all.

Examination of the external underline before and during semen collection will detect any inflammation, foreskin adhesions, warts, abscesses and penile deviations. The internal examination is conducted to detect any abnormalities in the internal reproductive organs. Also, be certain to ask your veterinarian about the need to test the bulls for the reproductive disease, *trichomoniasis*.

The semen evaluation is done by examining a sample of the semen under a microscope. The veterinarian will estimate the percentage of sperm cells that are moving in a forward direction. This estimate is called "motility". In addition, the sperm cells will be individually examined for proper shape or "morphology". Less than 30 percent of the cells should be found to have an abnormal shape.

Any bull meeting all minimum standards for the physical exam, scrotal size and semen quality will be classed as a "satisfactory" potential breeder. Many bulls that fail any minimum standard will be given a rating of "classification deferred." This rating indicates that the bull will need another test to confirm status. Mature bulls (that were listed as classification deferred) should be retested after four to six weeks. Mature bulls will be classified as unsatisfactory potential breeders if they fail subsequent tests. Young bulls that are just reaching puberty may be rated as "classification deferred", and then later meet all of the minimum standards. Therefore caution should be exercised when making culling decisions based on just one breeding soundness exam.

Many producers work hard to manage their cows for high fertility. They may assume that the bulls will do their expected duties. However, it's important to pay close attention to bulls to establish successful breeding.

Using young bulls in multi-sire pastures and cow-to-bull ratios

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

With spring bull sales in full swing, cow calf operators are assessing their bull batteries and making needed purchases. Producers often ask about the use of young bulls in the same breeding pasture with older, larger bulls. In most instances, this is a practice that should be discouraged if at all possible. Young bulls will normally lose the battle of deciding who is the dominant individual in the breeding pasture. Ranchers report that in some cases young

bulls that have been severely “whipped” are less aggressive breeders after that incident. Australian data on multi-sire pastures have shown that some young bulls gain a dominant role as they mature and breed a large percentage of the cows. Other bulls will not gain that dominant status, and only breed a very small percentage of the cows in a multi-sire pasture for the remainder of his stay at the ranch. The best solution is to always place young bulls with young bulls and mature bulls with mature bulls in the breeding pasture.

In some situations, the rancher may choose to use the mature bulls in the first two-thirds of the breeding season, and then rotate in the young bulls. This allows the young bulls to gain one to two months of additional age and sexual maturity. In addition the young bulls should have considerably fewer cows in heat at the end of the breeding season as the mature bulls will have bred the bulk of the cows or heifers. The young bulls will be in the breeding season only a few weeks and should not be as “run down” or in poor body condition at the conclusion of the breeding season.

Also a commonly asked question is: "How many cows should be mated to young bulls?" The old rule of thumb is to place the young bull with about as many cows as his age in months. Therefore the true “yearling” would only be exposed to 12 or 13 females. If he is a year and a half old (18 months), then he should be able to breed 15 – 18 cows. By the time the bull is two years of age, he should be able to breed 24 or 25 cows. Realize that tremendous variability exists between bulls. Some are capable of breeding many more cows than what is suggested here. AND sadly enough, a few bulls will fail when mated to a very few cows. Hopefully, a breeding soundness exam and close observation during the first part of the breeding season will identify those potential failures.

U.S. imports of Canadian cattle: A look back and a look ahead

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

With the final 2015 trade data in hand, it is possible to look back and summarize 2015 North American cattle trade. Limited cattle inventories, market conditions and exchange rates all played a part in 2015 cattle trade between the U.S. and Canada and suggest what might be expected in 2016.

Total imports of Canadian cattle were down 33.2 percent year over year in 2015 with decreases across the board for all cattle types. This follows three years of year over year increases in imports of Canadian cattle with the 2015 total dropping back near the 2012 level. This reflects small Canadian cattle inventories that have not yet begun to rebuild. Total fed steer and heifer imports were down 42.3 percent, with fed steers down 40.6 percent and fed heifers down 44.6 percent. Average Canadian feedlot placements in 2015 reached the lowest levels in data going back to 2000. Though year over year feedlot placements in Canada have increased the past three months, it is likely that feedlot production in Canada will remain low as there is no indication that cattle inventories have increased yet in Canada. Herd rebuilding may begin in 2016 but dry conditions remain in western Canada (though less severe compared to several months ago) and may limit herd expansion in 2016 as it did in 2015.

Imports of Canadian feeder cattle dropped sharply year over year after spiking up in 2014. Imports of feeder steers were down 7.9 percent from 2014 levels while feeder heifers were down 41.6 percent from the previous year. The drop in feeder heifer imports could imply heifer retention in Canada but the 2015 level of heifer imports is actually close to the average of recent years and is down only relative to the sharp jump in feeder heifers imported from Canada in 2014. Imports of Canadian cull cows were down 25.9 percent year over year, with imports of cull bulls down a similar amount. As with feeder cattle, the decrease in imports of Canadian cows and bulls could be indicative of herd rebuilding in Canada but actually represent a return to more typical levels after sharply higher imports of cows and bulls the previous two years.

Smaller imports of Canadian cattle in 2015 occurred despite strong U.S. cattle prices through most of the year and the continued erosion of the Canadian dollar to the U.S. dollar, which makes exporting cattle to the U.S. even more attractive. This is an indication of the tightness of Canadian cattle supplies and suggests that cattle imports from

Canada will continue at reduced levels, though 2016 imports may be closer to already reduced 2015 levels. The sharp adjustment down in U.S. cattle prices in 2016, compared to most of 2015, will additionally limit incentives for cattle movement from Canada into the U.S. A very limited attempt at herd expansion in Canada in 2013 has been followed by more erosion of cattle inventories in 2014 and 2015. Should herd expansion begin significantly in 2016, supplies of feeder heifers and cull cows would likely be further squeezed. In any event, imports of Canadian cattle are likely to remain near or below 2015 levels in 2016 and below the average of recent years.

Keep replacement heifers growing

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

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 responded to estrous synchronization and ovulated, whereas all of the heifers receiving the 120% of maintenance responded and ovulated.

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. The winter of 2015-2016 has seen many Oklahoma heifers raised on wheat pasture. 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. In most operations, the heifers must be moved to a pasture or trap near the headquarters for adequate facilities to be used at breeding. Therefore the supplementation program on the dormant grass should allow the heifers to continue to gain weight in to and through the breeding season.

Making other changes in diet 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".

Cattle Inventory: telling the new story and retelling the old one

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

The annual USDA Cattle report contains new numbers on cattle inventories and significant revisions to the 2015 numbers. It's important to consider the revisions when interpreting the new numbers. In general, the report confirms, as expected, that cattle inventories in the U.S. grew in 2015. However, the magnitude of the changes is somewhat different than expected in some cases and reflects the impacts of the revisions in last year's values. It's important to look back at how the 2014 story changes as a part of understanding the 2015 story.

The latest report pegs the January 1, 2016 all cattle and calves inventory at 92.0 million head, up 3.2 percent from one year ago. This increase was larger than expected but the 2015 total was revised down by roughly 650 thousand head implying that total herd growth in 2014 was 0.7 percent rather than the previously reported 1.4 percent year over year increase. The overall increase over the two year period is close to expectations but the report now says that more growth occurred in 2015 and less in 2014.

The beef cow herd was up 3.5 percent, adding just over one million head to the herd inventory as expected. However, the 2015 beef cow total was revised down nearly 400 thousand head, indicating that 2014 herd growth was only 0.7 percent rather than 2.1 percent as earlier reported. Thus, the herd growth in 2015 was equal to my expectations but the 2016 level of 30.33 million head is smaller than I anticipated.

Perhaps the biggest surprises were in the beef replacement heifer numbers. The 2016 level was up 3.3 percent, smaller than expected; but the 2015 number was revised up by roughly 300 thousand head indicating that the 2015 beef heifer total was up 9.6 percent over 2014, compared to the previously reported 4.1 percent year over year increase. As a result, the revised numbers have the 2015 beef replacement heifer total at 6.09 million head and the 2016 total at 6.29 million head. The 9.6 percent increase in beef replacement heifers from 2014 to 2015 is the largest year over year increase in replacement heifers since 1974. Beef replacement heifers are now reported at more than 20 percent of the beef cow herd for both 2015 and 2016; the highest levels since 1969.

The 2015 calf crop was estimated at 34.3 million head, up 2.3 percent from 2014. However, the 2014 calf crop was revised down from 33.9 million head to 33.5 million head. The 2016 dairy cow inventory was unchanged at 9.3 million head from the 2015 level (unrevised). Dairy replacement heifers were up 2.4 percent at 4.8 million head on top of a revised 2015 total revised up by about 100 thousand head.

The 2015 inventories of other heifers (over 500 pounds), steers (over 500 pounds) and calves (under 500 pounds) were all revised down. Other heifers changed from being down 0.2 percent to down 4.6 percent; steers were revised from being up 0.7 percent to being down 0.2 percent from 2014 levels. Calves were revised from being up 0.9 percent to being down 0.2 percent year over year from 2014. The result is that the 2015 estimate of feeder supplies outside of feedlots was down 1.9 percent in 2015 rather than being up 0.5 percent as previously reported. The 2016 report leads to an estimated January 1 feeder supply of 25.9 million head, up sharply by 5.3 percent from 2015 based on more other heifers, up 2.9 percent; more steers, 4.4 percent; and more calves, up 3.9 percent. Without the revisions to the 2015 numbers, the 2016 estimated feeder supply would be up 2.8 percent.

**It's not about how much
you want it,
It's about how hard you're
willing to work for it.**



Posterior Presentation

Assisting the backwards calf

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Any cow calf producer that has spent several years in the cattle business has had the experience of assisting a cow or heifer deliver a calf that was coming backwards. Understanding the physiology and anatomy of the calf and mother will improve the likelihood of a successful outcome. Study the diagram of the “posterior presentation” shown to the left.

Note the relative positions of the tailhead of the baby calf and the umbilical cord that connects the calf to the mother's blood supply. As the calf's hips are pulled through the pelvic opening, the baby calf's tail will reach the outer areas of the mother's vaginal opening. Once a person can see the baby calf's tailhead, the umbilical vessels are being compressed against the rim of the mother's pelvic bone. The blood flow, exchanging oxygen and carbon dioxide, between calf and mother is greatly impaired, if not completely clamped off.

Research, many years ago, conducted in Europe illustrates how little time it takes to compromise the calf's survivability when the umbilical cord is clamped. These scientists studied the impact of clamping the umbilical cord for 0, 4, 6, or 8 minutes.

Table 1. Impact of clamping of umbilical vessels on calf survivability

Duration of Clamping	Number of Calves	Fate of Calves
0 minutes	5 calves	All of the 5 calves lived
4 minutes	5 calves	4 lived; 1 died
6 minutes	3 calves	3 died
8 minutes	3 calves	3 died

Certainly, if a producer does not feel confident in their abilities to deliver the backward calf, call your veterinarian immediately. Time is of the essence. As producers examine heifers or cows at calving and find a situation where the calf is coming backward, they need to keep this European data in mind. If the calf's hips are not yet through the pelvic opening, they have a little time to locate help and have someone else to aid in the assistance process. Locate and notify someone to assist you before the "pulling" begins.

If the hips are causing severe resistance, pull with the chains crossed in order to cause a quarter turn of the hips. This quarter turn will align the widest part of the hips with vertical axis of the pelvic opening. The vertical axis of the pelvic opening is greater than the horizontal axis. Once the cow and the producer in concert have pushed and pulled the calf's hips through the pelvic opening and the tailhead is apparent, the calf needs to be completely delivered as quickly as possible. The remainder of the delivery should go with less resistance as the hips are usually the toughest part to get through the pelvic opening. The shoulders may provide some resistance. However, some calf rotation and traction being applied as the cow strains will usually produce significant progress. Remember, the completion of the delivery is to be accomplished in about 4 minutes or less. If you discover that the calf's legs are also still not through pelvic opening and all you can feel is the calf's tail (a breech presentation), then call your local veterinarian immediately. A breech presentation often requires a spinal block or caesarian section to deliver the calf.

After a backwards calf is delivered, the calf must begin breathing as soon as possible. The calf's head and nostrils are in the uterine fluids and cannot breathe until completely delivered. The calf must get oxygen rapidly to offset the hypoxia that it is been subjected to during the delivery. After the calf is delivered, clean the mouth and nostrils of fluids and tickle it's nostrils with a straw to cause snorting and inhalation of air to get it started to breathing. Learn more about working with cows and heifers at calving time by downloading and reading OSU Extension Circular E-1006 [Calving Time Management of Beef Cows and Heifers.](#)

Repeatability of calving difficulty

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

As the spring calving season begins, it is inevitable that a young cow (probably a two-year old heifer) will need assistance at calving time. After the event is over and the cow and calf are doing well, the rancher can't help but ask the question: "If a heifer has calving difficulty this year, what is the likelihood that she will have trouble again next year?" That question is followed by the thought of the money invested in this young heifer to grow her to a two-year old. Should she be culled next fall because of calving difficulty this spring?

A look back through the scientific literature sheds some light on this subject. Research conducted by Colorado State University and published in 1973 looked at parturition records of 2733 Hereford calves sired by 123 bulls and born to 778 cows/heifers. (Source: Brinks, et al. Journal of Animal Science 1973 Vol. 36 pp 11-17) .A repeatability estimate was obtained from heifers calving both as 2 year- and 3-year-olds. The estimate was 4.5%. Of 195 heifers which had no difficulty in calving at two years of age, 7.2% had difficulty as 3 year olds. Of the 77 two-year old heifers which experienced calving difficulty, 11.7% had difficulty again as 3-year-olds.

Heifers that experienced calving difficulty as 2 year-olds weaned 59% of calves born, whereas, those having no difficulty weaned 70% of calves born. Calving difficulty as 2 year-olds affected the number of calves weaned when 3 years of age and also the weaning weight of those calves. Heifers having calving difficulty as 2-year-olds weaned a 63% calf crop as 3-year-olds. Heifers having no difficulty as 2 years-olds weaned a 77% calf crop as three-year-olds.

From this research we learned that calving difficulty as a two-year-old had a profound effect on productivity. The likelihood that calving difficulty will happen again next year is only slightly greater than in heifer counterparts that calved unassisted this year. Proper heifer development to a body condition score of 5.5 or 6 at calving, along with breeding heifers to low birth weight EPD bulls should help reduce calving difficulty in two-year olds.

What cow-calf producers should maximize

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

Cow-calf production occurs across most of the U.S. in a wide variety of production environments. I had a very enjoyable opportunity to visit several ranches in southern Florida last week and learn more about the challenges of cow-calf production in one of the most unique production environments in the country. Producers in this region are keenly aware of the need to match cattle to the environment and of the tradeoffs between production targets and costs of achieving those targets. Though perhaps not as obvious in less extreme environments, the decision principles used by the Florida producers are the same for cattle producers everywhere.

It is easy for ranchers to focus on various production attributes and get caught up maximizing technical measures of production such as weaning weights, conception rates or stocking rates. However, as those Florida producers are keenly aware, it is obvious that maximizing narrow production measures will not be economical. For example, attempting to maximize conception rates will result in increasing cost to achieve the last increments of additional conception. The correct approach is to optimize by increasing conception rates until the value of the last percent of additional conception is equal to the cost of achieving that level of conception. In a more adverse environment such as southern Florida, that optimal level of conception is likely to be lower than it would be in more moderate situations. The need to optimize rather than maximize applies to other production measures such as weaning weights, stocking rates, and the rest. The biggest weaning weights or highest calving percentages may provide coffee shop bragging rights but it is usually a costly gloat.

Producers around the country are increasingly aware that optimization begins with matching cows to their environment. More and more, producers are recognizing that cow weights have trended up over time and now exceed the efficient size in many situations. Often, this happened as a result of chasing higher weaning weights which led to selection of bigger and bigger replacement heifers. Putting values on inputs and outputs translates technical efficiency measures into economic efficiency and highlights that changes in values also affects optimal decisions. Thus, for example, either lower calf prices or higher input costs should lead to marginal decisions to use fewer inputs and adjust output despite the fact that technical efficiency of inputs has not changed. Net returns per cow put values on inputs and outputs and combines many production measures into a single value but even that is a limited measure.

Land is the primary resource used in cattle production and cattle are simply a convenient means to harvest the forage produced on the land. The most important measure for cow-calf producers and the one that should be maximized is net returns per acre. Maximizing net returns per acre highlights that the ultimate objective of cow-calf producers is to market forage to the highest value. Maximizing net returns per acre is accomplished by optimizing the array of production parameters that contribute to cow-calf production. Additionally, a focus on net returns per acre means that ranchers should think beyond narrowly defined weaned calf production and evaluate the potential for retained calves or complementary stocker enterprises in conjunction with cow-calf production to boost net returns per acre. The level of production; the method of production; and the mix of production enterprises are all subject to change as input and output market values change. With a new production season approaching, January is a good time to evaluate the cow-calf operation relative to production efficiency and changing input and output values to determine if all components of the ranch are being optimized and contributing to maximum net returns per acre.

The *Cattleman's Corner* newsletter is distributed bi-monthly by the following:

Oklahoma Cooperative Extension Service
707 West Electric Avenue
McAlester, Oklahoma 74501
918/423-4120
www.oces.okstate.edu/pittsburg

This Newsletter is one way of communicating cattle information to those interested.

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THE TRADITION

Some folks just don't get it.
They think owning cattle makes no sense.
It takes too much time, too much equipment,
not to mention the expense.

But the fondest memories of my life
- they might think sound funny -
were made possible by Mom and Dad,
'cause they spent the time and spent the money.

You see, the most important lessons
helping values grow so strong,
come from loving cattle
and passing that tradition on.

