

OFF THE HOOF

Kentucky Beef Newsletter March 2016

Published Monthly by Dr. Les Anderson, Beef Extension Specialist, Department of Animal & Food Science, University of Kentucky

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Timely Tips

Dr. Roy Burris, Beef Extension Professor, University of Kentucky

Spring-Calving Cows

- Stay alert! The spring calving season should be in full swing now, top priority should be to get a live calf and keep cows in sufficient body condition to rebreed early. Calving areas should be accessible and as clean and as free of mud as possible. Pastures which have good sod and are close to handling facilities work best. Be prepared for severe weather and avoid calving losses that were common last winter.
- Check cows at least twice daily and first-calf heifers more frequently than that. Be ready to assist those not making progress after 1 to 2 hours of hard labor. Chilled calves should be dried and warmed as soon as possible.
- See that each calf gets colostrum within an hour of birth, or administer colostrum (or a commercial colostrum replacement) with an esophageal feeder, if needed.
- Identify calves with ear tags and/or tattoos while calves are young and easy to handle and record birthdate and Dam ID. Commercial male calves should be castrated and implanted as soon as possible. Registered calves should be weighed in the first 24 hours.
- Separate cows that have calved and increase their feed. Energy supplementation to cows receiving hay is necessary to prepare them for rebreeding. For example, a 1250 lb cow giving 25 lb/day of milk would need about 25 lb of fescue hay and 5 lb of concentrate daily to maintain condition. If you need to go from a condition score of 4 to 5, you will need to add about 2 more lb of concentrate. Cows must be in good condition to conceive early in the upcoming breeding season.
- Watch for calf scours! If scours become a problem, move cows which have not calved to a clean pasture. Be prepared to give fluids to scouring calves that become dehydrated. Consult your veterinarian for advice and send fecal samples to diagnostic lab to determine which drug therapy will be most effective. Try to avoid feeding hay in excessively muddy areas to avoid contamination of the

dams' udders.

- Continue grass tetany prevention. Be sure that the mineral mix contains high levels (~15%) of magnesium and that cows consume adequate amounts. You can feed the UK Beef IRM High Magnesium mineral.
- Plan to vaccinate calves for clostridial diseases (Blackleg, Malignant Edema) as soon as possible. You might choose to do this at the prebreeding working in late April or early May.
- Obtain yearling measurements on bulls and heifers this month (weight, height, pelvic area, scrotal circumference, ultrasound data, etc.) if needed for special sales. Heifers should be on target to be cycling by the start of the breeding season.
- Prepare bulls for the breeding season. Increase feed if necessary to have bulls in adequate condition for breeding.
- Finalize plans for your spring breeding program. Purchase new bulls at least 30 days before the breeding season – demand performance records and check health history including immunizations. Use visual evaluation and expected progeny differences (EPD's) to select a bull that fits your program. Order semen now, if using artificial insemination.

Fall-Calving Cows

- Bull(s) should be away from the cows now!
- Plan to pregnancy check cows soon. You can also blood test for pregnancy 30 days after bull removal.
- Creep feed calves with grain, by-products or high quality forage. Calves will not make satisfactory gains on the dam's milk alone after about 4 mos. of age – since there isn't much pasture in March, fall calves need supplemental nutrition. Consider creep grazing on wheat pasture, if available. Calves can also be early-weaned.
- Calves intended for feeders should be implanted.
- Consider adding weight and selling your fall calves as "heavy" feeder calves. Keep them gaining!

General

- Watch for lice and treat if needed.
- Repair fences, equipment and handling facilities.
- If you have a dry, sunny day, use chain-link harrow to spread manure in areas where cattle have overwintered. This may be done in conjunction with renovation.
- Renovation and fertilization of pastures should be completed.
- Start thistle control. They can be a severe problem in Kentucky pastures. Chemical control must be done early to be effective.

Thinking about Stockyards

Dr. Roy Burris, Beef Extension Professor, University of Kentucky

Stockyards (sale barns) have long been a part of our heritage, I suppose, ever since they replaced the old "court days" and livestock were traded or sold when folks came to town when court was in session. A recent survey in the southeast indicated that 65% of cattle are sold in sale barns.

Sale barns/stockyards could offer some structure to livestock marketing – more buyers, certified scales, sale rings and they were bonded to handle large sums of money. This provided a new and improved system of price discovery which helped farmers get paid "top dollar" for their livestock.

Being bonded to handle large sums of money is important, too. Did you ever think about how much money the livestock markets “float” before they get paid? Producers get paid immediately after their cattle sell but it might be several days before the stockyard receives their payment – sums that frequently reach a million dollars make this a risky business!

Years ago, stockyards dotted the rural landscape. Small counties had small sale barns while larger areas had larger barns. While this was seen as an advantage in many cases, it led to some problems in southeastern states. Feeder calves were frequently sold early in the week at a small yard, then again a day or two later at a larger barn and sometimes by about Friday they would be sold at the large markets. You talk about “stale cattle”, this was a problem. In the 1970’s Kentucky sold a lot of calves in graded feeder calf sales but stale cattle (in my opinion) contributed to their demise. Our reputation for feeder cattle was so bad that one beef specialist from Texas told me in the early 80’s that “Kentucky just had short, straightbred calves that always got sick and the heifers must be born pregnant.” I can remember that when we started graded “CPH” feeder calf sales that some folks tried to pull the back tags off calves, trim their switches to make them look younger and attempted to pass them off as KY-CPH calves. It didn’t work. Kentucky is now recognized as a source of high quality feeder calves.

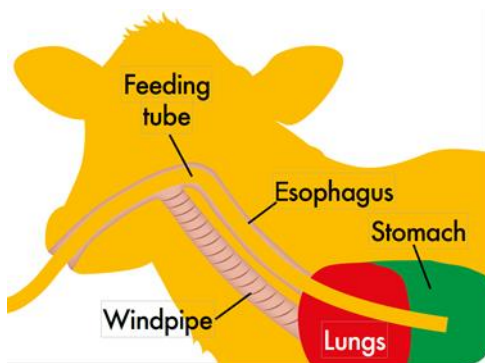
Larger stockyards eventually modernized and the small yards disappeared. We now have a livestock marketing system that is as good as any in the U.S.

But sometimes I still think about my childhood when my Dad and I would pull up to the stockyard with a calf or two and “pen hookers” would jump on side of the truck and offer to buy those “little old calves”. They could pay you “cash money and avoid the commission”. Some of them apparently made good money doing this since they would pull a roll of bills out of their bib overalls that would “choke a horse”. We would get unloaded and have enough time to enjoy the best hamburger you ever tasted at the restaurant that was located next to the office and sale ring. Good times!

Livestock marketing has evolved (and improved) over time – like adding video sales, but the actual stockyard continue to be a valuable part of price discovery for our cattle and dependable venues to buy and sell our livestock. A reputable, modern sale barn is an asset to a rural community and this is an appropriate time to recognize their importance to agricultural marketing.

Tube Feeding Colostrum – an Essential Skill for All Producers

Michelle Arnold, DVM (UK Ruminant Veterinarian)



Picture accessed 3/9/2016 from <http://dairy.ahdb.org.uk/resources-library/technical-information/health-welfare/tube-feeding-a-calf/#.VuBDM0BM6VM>

“Failure of passive transfer” of immunity occurs when a calf does not absorb enough good quality immunoglobulin before closure of the intestine that occurs at approximately 24 hours after birth. This failure leads to increased calf sickness and death. If the calf survives, it will have a slower growth rate and use feed less efficiently. It is estimated that of the calf deaths occurring in the first 3 weeks of life, approximately a third are due to inadequate colostrum intake. **Early and adequate consumption of high quality colostrum is considered the single most important management factor in determining health and survival of a newborn calf.** Four key factors (the 4 Q’s) contribute to the goal of successful passive transfer of immunity:

1. Quality: Feeding high quality colostrum with a high immunoglobulin concentration (>50 g/L of IgG) or use of a good

- quality powdered colostrum replacer (not a supplement);
2. Quantity: Feeding an adequate volume of colostrum (2 quarts to beef calves at birth followed by 2 more quarts in 4-6 hours);
 3. Quickly: Feeding colostrum promptly after birth (within 1-2 hours and again by 6 hours maximum);
 4. Quietly: Passing the tube too quickly may result in damage to the laryngeal area and passage into the trachea and lungs. Handling the calf correctly minimizes this risk.

The esophageal feeder is a tool designed to deliver colostrum when a calf is unwilling or unable to nurse. The inability to nurse may be due to a variety of causes. Regardless of the reason, colostrum delivery can be accomplished quickly and safely with an esophageal feeder if proper technique is followed. The steps involved in using an esophageal feeder are as follows:

Preparation:

- Prior to tubing the calf, examine the feeder to make sure it is clean and undamaged. Sharp edges can injure the mouth and esophagus.
- The length of the tube and the size of the calf will dictate how far the tube should be inserted. Compare the tube length to the distance between the mouth of the calf and the point of the shoulder. This is the approximate distance the tube should be inserted.

Handling the Calf:

- The calf should be standing if possible. Place its rear end into a corner and hold its head between your knees. Place one hand under the chin to keep its head and neck upright. If the calf won't stand, at least sit it up on its sternum (breastbone) and hold the head between your legs. Never tube a calf lying flat as milk can enter the lungs causing death.
- Be aware of the cow's maternal instinct to protect her calf; it is best to place the cow in a separate pen while performing this task.

Inserting the Tube:

- To insure that no fluid runs into the mouth of the calf that could be inhaled in the lungs, either kink the plastic tubing or clamp it off during passage.
- Moisten the end of the feeder (the ball) with colostrum to make it more slippery. In cold weather, it is also important to warm the rubber tube so it is not as rigid.
- Stimulate the calf to open its mouth by squeezing the sides of the mouth gently and pressing on the roof of the mouth with your fingers. Do not hold the nose straight up; keep the nose below the ears to reduce the risk of trauma to the back of the throat.
- Gently insert the tube into the mouth over the top of the calf's tongue. When the rounded end hits the back of the tongue where there is a ridge, the calf should swallow. Wait patiently until the calf swallows then slide the tube gently down the esophagus. Remember this is soft tissue so stop immediately if you feel resistance. Pull the tube back slightly and redirect it-never force a tube down the throat because you can perforate (put a hole in) the esophagus.

Checking Placement:

- Prior to administering the colostrum, check that you feel the tube in the esophagus on the left side of the calf's neck. You should feel two tube-like structures in the neck. The trachea (or windpipe) is firm and has ridges of cartilage all along its length. The esophageal feeder tube in the throat is firm but smooth.
- If the tube is in the right place, the calf should seem comfortable and be swallowing. However, if the calf is coughing and puffs of air can be felt at the end of the tube, remove the tube and re-insert it slowly.

Administering the Colostrum:

- Administer the colostrum by raising the bag above the calf and allowing the fluid to flow by gravity. The liquid should be fed at body temperature (around 100° F).
- Control the flow rate by raising and lowering the bag. Keeping the bag low will be more comfortable for the calf and will result in less possibility of regurgitation. Never squeeze the bag to hurry the process.
- The calf will begin to move (and vocalize) when it feels pressure as the rumen fills. Do not remove the tube until the fluid has had time to completely empty into the rumen.

Removal of the Tube:

- Again, kink the plastic tube or use a clamp before pulling the tube out in one swift motion.
- Removing the tube while there is still liquid in the feeder may cause colostrum to enter the lungs; kinking the tube keeps the calf from inhaling any remaining fluid.

Cleaning of the Equipment:

- Immediately wash the tube and feeder in hot, soapy water. Follow with a chlorine and hot water rinse in order to remove the film of fat and protein that adheres to the inside of the feeder. Hang in a clean, dry environment so it can completely drain and dry. If not properly cleaned and disinfected, you risk inoculating bacteria directly into the intestinal tract when a calf is most vulnerable to infections.
- Keep the feeder in good repair-change them when they begin to show any signs of wear.

Esophageal feeders come in a range of sizes and designs, depending on whether to be used in calves, yearlings or adult cows. The calf esophageal feeder generally consists of a plastic pouch or bottle which



holds the colostrum with an attaching plastic or stainless steel tube and a ball or bulb on the end. While it is best for the calf to suck a teat or a bottle, it is now understood that there is no difference in absorption when colostrum is administered by esophageal feeder because the colostrum quickly spills out of the rumen into the abomasum. Ultimately, 48-hour serum immunoglobulin concentrations were found to be no different in bottle-fed or tubed calves. In summary, learning to use an esophageal feeder may mean the difference in life or death to a newborn calf. Esophageal feeders can also be used to administer vital electrolytes to scouring calves if reluctant to nurse a bottle. Videos are available on U-tube that show the process http://www.youtube.com/watch?v=ndj8O7_j6j8 or <http://www.youtube.com/watch?v=GLHOe6xInJg> but your veterinarian is the best resource to teach the proper technique for passing a tube correctly and safely.

Advanced Kentucky Grazing School to be held in April *Austin Sexten, Master Grazing Coordinator, University of Kentucky*

The Master Grazer program will be hosting the Advanced Kentucky Grazing School at the UK C. Oran Little Research Unit in Versailles, KY on April 12, 2016. The program will be held in the pastures of the Beef Research Unit.

The advanced grazing school is designed to provide participants in-field learning opportunities and see forage management and grazing systems first hand. Topics that will be covered include: establishing new alfalfa stands, using alfalfa in a grazing system, and spring grazing of winter annuals.

Registration will begin at 5:00 p.m. EDT and the Grazing program will be over at 8:00 p.m. There is no registration fee for this program and dinner and refreshments will be provided. For more information please contact Master Grazer Coordinator Austin Sexten at (859) 257-7512 or austin.sexten@uky.edu.

2016 Kentucky Grazing School

Austin Sexten, Master Grazing Coordinator, University of Kentucky

This year the spring grazing school will be held on May 17-18, 2016 at Woodford County Extension office and the Oran C. Little Research Center in Versailles, KY. This two-day program will include hands-on exercises, such as building temporary paddocks and watering systems, assessing pasture production, and designing your own grazing systems. Classroom sessions include a variety of topics regarding forages, animal management, and grazing systems. Emphasis will be on spring and summer grazing management for ruminant species.

Anyone interested in this program may apply, but a limited number of applicants will be accepted, so apply early. Past participants have included new farmers to experienced grazers and all have gained new information and practical skills to implement on their operations. All grazing school participants have indicated that attending this program motivated them to make changes to their grazing systems to improve their operations and increase production.

Pre-registration for the grazing school as enrollment is limited to the first 45 who register. The \$50.00 registration fee includes all materials, grazing manuals, breaks, and lunch both days. To register, contact Austin Sexten, Master Grazer Coordinator, at (859) 257-7512 or austin.sexten@uky.edu. A program and additional information can be found at the following link:

Lessons Learned from the 2014 and 2015 Cattle Markets

Dr. Kenny Burdine and Dr. Greg Halich, University of Kentucky Department of Agricultural Economics

The last couple of years have been nothing short of a roller coaster ride for beef cattle producers. We saw prices rise to record levels and then fall as sharply as we have ever seen. A combination of factors such as cattle inventory, production of competing meats, increasing slaughter weights, and international trade were all at play in the market. At the same time, producers were making management decisions in a rapidly changing environment. If the old adage is right and history repeats itself, it's worth taking a look back to reflect on some things that can be learned.

1) If Calf Prices Seem too Good to be True, They Probably Are

There is a long time adage by agricultural economists that the cure to high prices is high prices. The implication is that producers respond to high prices by increasing production, which then brings down prices. As basic as this may seem, it is easy to get caught up in the euphoria of historically high calf prices and try to find reasons why it is different this time. Perhaps it may have been different in terms of how high prices rose, but it was no different in terms of how producers responded to high profits and how quickly these prices came crashing back down. Don't expect prices that seem too good to be true to last, they never do.

2) The Cattle Cycle Isn't Dead

Over the last 10 years, many "experts" stated that the cattle cycle is dead or no longer exists. We have never agreed with this logic, and feel part of that reason is that we may define the cattle cycle differently that most

people. To us, the cattle cycle is primarily about cow-calf operators responding to profits by expanding their cow herds and the time lag between this decision and the associated supply impact. Two major external events in the last half-dozen years impacted the current cattle cycle, and changed its dynamics. First, historically high grain prices from 2008-2013 caused significant conversion of pasture and hay-ground to row crops. This conversion was occurring during the liquidation phase of the last cattle cycle and thus caused cow numbers to drop quicker than what we would have normally seen in this phase. Second, during a portion of this same time period, 2011-2013, a major drought hit a large section of the Southern Plains and forced a massive liquidation in the cow herd, further dropping cow numbers during the liquidation phase. This was in an area that made up roughly 25% of our entire U.S. beef cow herd at the time.

The combined effect was that cow numbers continued to drop during a time period when they normally would have been expected to start increasing. By 2012, calf prices (and cow-calf profits) were likely high enough to justify heifer retention. However, the combination of severe drought and pasture conversion led to cow-herd liquidation at a time when calf prices would have suggested expansion. As weather improved and cow profits soared in 2014 and 2015, expansion took a firm foothold. This cow herd is currently growing, and doing so at a swift pace as beef cow numbers are up over 4% over the last two years. While it is true that many other factors impact cattle prices than the size of the cow-herd, we are not yet ready to bid farewell to the notion of the cattle cycle.

3) Expansion Isn't Just About Heifers

Traditional cattle cycle mentality is that expansion comes from heifer retention and this is true from a long-term perspective. However, the age of the cow herd cannot be ignored in the short-run. A factor that drove beef cow numbers so low from 2011-2013 was extremely high cow slaughter. Most of this came from the Southern Plains as they dealt with widespread severe drought. When increased moisture was overlaid with strong calf prices in 2014 and 2015, most of the initial increase in cow inventory came from reduced beef cow slaughter. The overall age of the herd was younger, fewer cows were near the end of their productive lives, and profit was there. It made logical sense to cull fewer cows during these two years and this worked to jump-start the expansion phase of this cycle.

4) The Impact of Competing Meats

In the US, beef, chicken, and pork are the primary consumer meats and 2014 was a banner year for profitability in all three. So, it is no surprise that expansion occurred in all of these markets. However, the pace at which growth can occur in these markets is different. Due to shorter gestation periods and younger age at harvest, pork and poultry producers can increase production much faster than beef producers. It is likely that 2016 will be the first year that we actually see increased beef production (boxed beef), while significant increases have already been seen in the pork and poultry markets. Since these proteins compete in the meat case, beef prices were pressured in late 2015 from increased pork and poultry supplies before beef supply increased significantly.

5) Exports are a Double-Edged Sword

There is no doubt that increased exports have a positive impact on price, holding everything else constant. Increased exports reduce domestic consumer supply, which drives prices upward at home. However, over time we respond to these higher price levels with increased production. Then, as shocks occur in international markets that lead to decreased exports, all that extra supply is left on the domestic market, and prices fall. Last year, 2015, was a good example of how this can play out. Exports were down drastically due to increased price levels, a stronger US dollar, and weakening economies for some of our trading partners. The decrease in exports piled onto an already decreasing market, with the net effect being a price implosion. This is not to say that we should stop exporting beef. We just need to be aware that exports can cut both ways.

6) Learn to Manage Price Risk

Few people predicted cattle prices would increase as quickly as they did during 2014 or decrease as quickly as they did in 2015/2016. These price swings represented hundreds of dollars in cattle revenue and meant the difference between profit and loss for many stocker/backgrounders. They also represented over \$300 in value per calf for cow-calf operators. Many producers, especially those in the first few years farming, simply can't self-insure this type of market risk. Cattle producers who could have self-insured against the normal volatility of a typical cattle cycle need to learn to manage today's price risk and volatility through futures markets, LRP insurance, forward contracts, or any other means available. This will mean that in some years money will be left on the table, but other years it will avoid huge losses that could destroy the financial well-being of the operation. For more information on using the futures market as a tool to manage price risk in feeder cattle see the following publication: <http://www.uky.edu/Ag/AgEcon/pubs/ext2013-0128.pdf>.

7) Don't Take a Short-Term Perspective on Long-Term Decisions

While we don't think many people expected calf prices to stay in the \$2.50 per lb range forever, most of us were surprised how sharply prices came down in 2015. The folks hit hardest by this drop will be the ones who made decisions in the last couple years as though calf prices were going to stay at \$2.50 for years to come. As was discussed in lesson #1, if there is one certainty about agricultural markets it is that abnormally large profits won't exist for long. Supply will increase until profits reach more normal levels. Long term investments in land, breeding stock, equipment, facilities, etc. need to be made from a long term perspective. It appears that a lot of producers made investments over the last couple of years based on the assumption that those incredibly high prices were here to stay.

Possibly the most extreme example of this is bred heifer prices. Given reasonable cow maintenance costs, weaning weights, and weaning rates over the life of the heifer, calf prices would have needed to stay above \$2 per lb for 5-8 years to justify the prices that were being paid for bred heifers. This was the focus of an article in the November 2015 issue of Cow Country News and a decision aid created to help determine what can be paid for bred heifer given the users assumptions and cost estimates. It can be found at the following link: <http://www.uky.edu/Ag/AgEcon/pubs/BredHeifer.xlsx>.

These examples aren't just limited to breeding stock. Similarly, it is easy to justify purchasing a new piece of equipment during a year of abnormally high profits on the basis that you can avoid paying taxes by using a Section 179 depreciation allowance. But also understand that decision will impact your long-run profitability negatively if it is a piece of equipment you could really do without.

Summary

While there is no simple success recipe for cattle producers to follow, we felt the last couple years provided an excellent opportunity to reflect on what we saw and what we can learn. While it is impossible to know if, and when, we might see markets like we saw in 2014 and 2015, it would be naïve on our part to assume that we would never see something like that again. Many of the "lessons learned" we discussed in this article apply to all cattle cycles, but the extreme market swings of the last year or two amplified their importance. We've heard it said before that challenging times show who the better managers are and we believe this will play out in the next few years. The producers who made wise decisions over the last couple years will be the ones who are in the best position moving forward with lower prices. Hopefully, by reflecting on some things learned during this time period, we will be less likely to make some of the same mistakes the next time it comes around.

Kentucky Beef Cattle Market Update

Dr. Kenny Burdine, Livestock Marketing Specialist, University of Kentucky

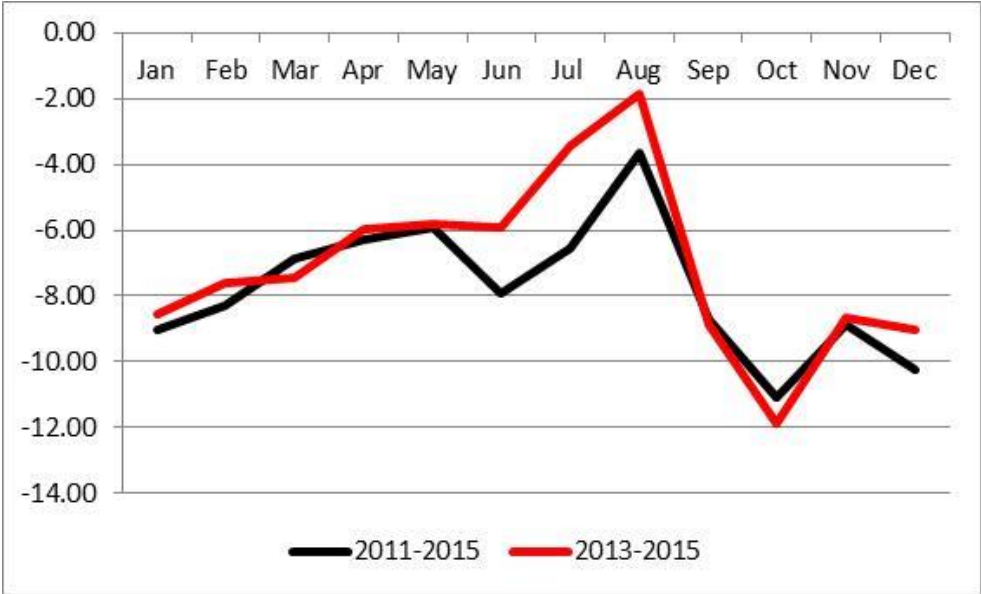
As I write this article (March 8, 2016) we are enjoying a very spring-like day in Kentucky. The sun is out and the temps are in the low 70's. While it may be a little pre-mature to say that spring is here, clearly we

are getting closer to warmer temperatures and pasture growth. As we approach spring, calf prices have risen by about \$20 per cwt from their December lows. For the first week of March, 550# steer calves appear to be trading in the upper \$170's to low \$180's, with some larger groups well into the \$180's.

In all likelihood, this spring Kentucky calf market will be the 3rd highest I have record of (my data goes back to the early 1990's). It is not going to see the levels that were seen in 2015 and it would have to add about \$20 per cwt between now and April to reach 2014 levels. Still, it is a historically strong market. In fact, this will actually be the 4th year, out of the last five, that 550# steer calf prices has exceeded \$150 per cwt in the spring.

The futures' market also seems to have some swagger. After testing the \$140's twice since the first of the year, spring CME© feeder cattle futures contracts have found the upper \$150's. Cash markets have responded as 750# feeder steers in Kentucky seem to be moving in the upper \$140's with some larger groups in the \$150's. Seasonally, our basis for heavy feeders tends to improve through spring and summer. I chose to show our historical basis charts for 750# steers in Kentucky this month (see below). I am showing both a 3-year and 5-year average. As always, remember the Kentucky prices are weighted average prices for multiple markets and are not load lot quantities. These estimates likely are most representative of groups of 20-25 head and should be adjusted accordingly.

Figure 1: Basis Estimates for 750# Feeder Steers in Kentucky



Data Source: USDA-AMS, CME© Group via the Livestock Marketing Information Center