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Timely Tips
Dr. Les Anderson, Beef Extension Professor, University of Kentucky

Spring-Calving Herd

Get ready for calving season this month!

- Have calving equipment, supplies and labor ready for the spring calving season. Some supplies which may be needed are: eartags and applicator (put numbers on eartags now), tattoo pliers and ink, record book, scales for calf weights, iodine for calves' navels and colostrum supplement. Calving equipment (puller and chains, etc.) and facilities should be ready and clean.
- Overall condition of the cow herd should be evaluated. Cows losing weight now are more likely to have weak or dead calves. These cows will likely be a poor source of colostrum milk for the newborn calf. Feed cows, if necessary to keep them in good body condition.
- Heifers may begin head-start calving in early February. Move them to a clean, accessible pasture, away from cow herd and near facilities so that calving assistance can be given. Cows may start calving later this month. Signs of calving are relaxation of pelvic ligaments, enlargement and swelling of the vulva, and enlargement of the udder. Expect calving difficulty if (1) calf's head and two feet are not visible, (2) only the calf's tail is visible, and (3) the cow has been in labor for 1½ hours. Be sure calf is being presented normally before using calf puller. Recognize situations that are beyond your capability and seek professional help as early as possible. Calves that aren’t breathing should receive assistance. Try sticking a straw in nostril to stimulate a reflex or try alternate pressure and release on rib cage. Commercial respirators are also available. Calves should consume colostrum within 30 minutes of birth to achieve good immunity.
- Record birthdate, cow I.D., and birthweight immediately (use your Beef IRM calendar). Identify calf
with eartag and/or tattoo. Registered calves should be weighed in the first 24 hours. Male calves in commercial herds should be castrated and implanted as soon as possible.

- Separate cows that calve away from dry cows and increase their feed. Increase feed after calving to 25-27 pounds of high quality hay. Concentrate (3-4 lb. for mature cows and about 8 lb. for first-calf heifers) may be needed if you are feeding lower quality hay. Supplementation may have a beneficial effect on date and rate of conception. The most important time to feed a beef cow is after calving. Thin cows don't come into heat very soon after calving. We must have cows in good condition, if we plan to breed them early in the season for best pregnancy rates, especially on high-endophyte fescue pastures.

- Sub-zero weather can mean death for newborn calves. During extremely cold spells, bring the cow(s) into a sheltered area as calving approaches to protect the calf. Be prepared to warm-up and feed newborn, chilled calves. Calving in mud can also cause problems.

- Watch for scours in newborn calves. Consult your veterinarian for diagnosis, cause, and treatment. Avoid muddy feeding areas so that cows' udders won't become contaminated and spread scours. Don't confine cows to muddy lots.

- Replacement heifers should be gaining adequately to reach target breeding weights by May 1. Be sure that their feeding program is adequate for early breeding.

- Start looking for herd sire replacements, if needed.

**Fall-Calving Herd**

- Breeding season should end this month – maybe Valentine’s Day. Remove bulls and confine them so that they regain condition.

- Consider creep feed or creep grazing (wheat, etc.) to supply extra nutrition to fall-born calves which may have to depend solely on their dam’s milk supply for growth. They are not getting much except their dam’s milk now (i.e. there is nothing to graze). February/March is the worst time of the year for fall-born calves.

- Provide windbreaks or clean shelter for calves.

**General**

- Increase feed as temperature drops. When temperature falls below 15 degrees, cattle need access to windbreaks. For each 10 degree drop below 15 degrees, add three pounds of hay, two pounds of corn, or six pounds of silage to their rations.

- Provide water at all times. Watch for frozen pond hazards. If cattle are watering in a pond, be sure to keep ice “chopped” to keep cattle from walking on the ice and, possibly, breaking through. Keep automatic waterers working.

- You should be feeding a mineral supplement with adequate magnesium to prevent grass tetany (~ 15% Mg) now. The Hi-mag UK Beef IRM mineral can be used now.

- Control lice. Watch for signs such as rubbing.

- Begin pasture renovation. You can overseed clover on frozen or snow-covered pastures.

**Mid-South Stocker Conference in March**

*Dr. Jeff Lehmkuhler, Associate Extension Professor and Mr. Ben Crites, IRM Coordinator, University of Kentucky*

The Mid-South Stocker Conference is headed to Clarksville, Tennessee for 2019. Mark your calendars to join us on March 21st, 2019 beginning at 8:00 am CT with registration and plan to stay the day with us.
This year’s conference will take place at the Quality Inn Exit 4, a location easily accessible off I—24. The facility provides plenty of space for the tradeshow as well as the educational sessions. This area had been identified as a desirable location several years ago. It is near the Kentucky - Tennessee border and between the I-65 corridor and the western Kentucky region that is home to several stocker and backgrounding operations.

This year’s theme, “Opening Pathways to Profitability,” lays the foundation for the 2019 conference. Speakers from several universities across the southeast will provide valuable information to assist the stocker and backgrounding operations in the region to find additional profit margins in their business. An update on the U.S. Roundtable for Sustainable Beef, adding value by reconditioning cull cows, and economic evaluations are topics slated to kick off the morning educational sessions. Participants will have time to view the trade-show and visit with vendors in the morning, lunch, and early afternoon to learn about products and services available. Topics for afternoon sessions include virtual tours of local operations, proper dart use, and pinkeye considerations will round out the program.

Early-bird registration is $50 and ends March 1st. After March 1st, registration will increase to $65. You may register by mailing in the registration form or online. A registration form and program agenda can be obtained from your local ANR extension agent. Additionally, information on how to register and the complete agenda can be found on the Mid-South Stocker website housed by UT at https://ag.tennessee.edu/midsouthstockerconference. You may also contact Dr. Jeff Lehmkuhler, jeff.lehmkuhler@uky.edu or 859-257-2853 for additional information. We look forward to seeing you on March 21st in Clarksville, TN.

The CPH Report – 2018 Summary
Mr. Kevin Laurent, Extension Specialist, University Of Kentucky and Mr. Tim Dietrich, Kentucky Department of Agriculture

The CPH Report expands the analysis of CPH-45 sales to estimate the economic value of preconditioning calves prior to marketing. This analysis consists of two main components. First, is the CPH Advantage – which compares prices received in the CPH Sale to the average weekly statewide prices, as reported by the Market News Service of the Kentucky Department of Agriculture, to determine how well CPH calves sold in that particular week’s current market. The second component is the Estimated Net Added Return – which compares the CPH Sale value of the calf to the estimated value of the calf at weaning. These estimates use a 60 day preconditioning period and an average daily gain of 2.5 lbs., with a ration balanced for 2.8 lbs. of average daily gain. Costs incurred during the preconditioning period such as feed, health program, interest, death loss and differences in sales commission are subtracted from the added value to arrive at an Estimated Net Added Returns in dollars per head to estimate the profitability of preconditioning calves 60 days prior to that particular sale.

The following table is a summary of all fifteen CPH-45 sales held in calendar year 2018. Sales were held in Guthrie, Lexington, Owensboro, Paris, Richmond and Springfield. Several items to note:
- Paris sold in one owner lots, non-commingled, and weighed at time of sale.
- Owensboro sold with a 2% pencil shrink.
- Owensboro, Guthrie and Springfield charge less commission for CPH calves.

Included in this table, for easy comparison, is the weighted average line from the same summary for 2017. You can see that in 2018, CPH Advantage or premiums were slightly down (5.81 vs. 6.11) and feed costs were slightly higher (0.55 vs 0.52). The biggest difference was a higher negative wean to sale margin in 2018 (~$6.66 vs +0.18). This resulted in a lower average Estimated Net Added Returns in dollars per head.
Realize that the beginning value or calf value at weaning, is calculated by the average calf prices 60 days prior to each CPH sale, so fluctuations in the market, both at the beginning of the preconditioning period and at the end of the preconditioning period can have a significant effect on these estimates. An example of this market volatility can be seen when comparing sales held the first week of December vs the second week of December. The Estimated Net Added Returns for sales held in the second week of December benefitted from a market that broke lower in the second week of October (lower starting value) coupled with a rise in the market the second week of December (higher ending value). No estimate model is fool proof and obviously not everyone precondition exactly 60 days, however these estimates still provide a type of thumb sketch or barometer of the performance of the CPH-45 sales. Special thanks to Tim Dietrich for gathering the raw data and making the initial comparisons used in this process.

More details on how these figures were calculated can be found in the column definitions below the table. Also, visit the CPH-45 website at www.cph45.com. If you are interested in selling in a CPH-45 sale, contact your local County Extension Agent for Agriculture and Natural Resources.

### Summary of prices and estimated net added returns per head for all CPH-45 sales in 2018

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<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>No Head</th>
<th>Wean Weight (lbs)</th>
<th>Wean Price ($/cwt)</th>
<th>CPH Weight (lbs)</th>
<th>CPH Price ($/cwt)</th>
<th>State Avg. Price ($/cwt)</th>
<th>CPH Advantage ($/cwt)</th>
<th>Feed Cost ($/lb gain)</th>
<th>Net Add Return ($/head)</th>
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<tr>
<td>Lexington</td>
<td>1/17/2018</td>
<td>534</td>
<td>513</td>
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<td>153.94</td>
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<td><strong>2018 Weighted Average</strong></td>
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<td>494</td>
<td>149.49</td>
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<td>136.71</td>
<td>6.11</td>
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</table>

### Column Descriptions

- **Wean Weight**: CPH weight minus 150 lbs. (minus 100 lbs for cattle less than 500 lbs at the CPH sale)
- **Wean Price**: average price of LM 1-2 calves at the calculated weaning weight 60 days prior to the CPH sale as reported by KDA
- **CPH Weight**: average weight of calves at the CPH sale
- **CPH Price**: average price of LM 1-2 calves at the CPH sale
- **State Avg. Price**: average price of LM 1-2 calves as reported by KDA during the week of the CPH sale
- **CPH Advantage**: CPH price minus state average price
- **Feed Cost**: average feed cost per pound of gain using current feed prices for the 60 day preconditioning period prior to the CPH sale
- **Net Add Return**: net return per head after feed, vet ($12.00), mineral ($3.75), interest (6%), mortality (0.5%), and commission (varies by sale)
- **Owensboro****: sold with a 2% pencil shrink
- **Paris***: sold as one owner, non-comingled and weighed at time of sale
Bull Buying Tips

Dr. Darrh Bullock, Extension Professor, University of Kentucky

We are rapidly approaching bull buying season in Kentucky so there are few basics I would like to share. The genetics in the bull you are buying now will have a huge impact on your herd immediately and could linger for years to come if you keep replacements from him. For this reason it is important to get this decision right.

For commercial cattlemen, the first suggestion is to evaluate your crossbreeding program and make sure you are taking full advantage of heterosis (hybrid vigor). If your cow herd is made up of predominantly one breed then you might consider introducing a second breed and start a rotation system with those breeds. This can improve the productivity of your herd by greater than 10% with no additional costs. I am not an economist, but I think I am safe to say that should pay for itself! For more information on crossbreeding please see factsheet:
ASC-168 (http://www2.ca.uky.edu/agcomm/pubs/asc/asc168/asc168.pdf)

Once you have decided on a breed the next decision is determining which bull within that breed is best for you. This should be guided by how you plan to market his calves, whether or not you will be keeping replacements, whether or not you will be breeding him to first-calf heifers and what level of management you have on your farm. If keeping replacements then you have to focus on both production traits to fit your market and maternal traits the bull will pass on to his daughters. The best tool for making decisions about production traits is Expected Progeny Differences (EPD). Focus on the traits that can put money in your pocket (weaning weight) or potentially take money out of your pocket (calving ease). The level of emphasis to put on each trait depends on your management and market, but in most cases extremes should be avoided. For more information on EPDs and how to use them in selection please see factsheets:
ASC-141 (http://www2.ca.uky.edu/agcomm/pubs/asc/asc141/asc141.pdf)
ASC-165 (http://www2.ca.uky.edu/agcomm/pubs/asc/asc165/asc165.pdf)
ASC-211 (http://www2.ca.uky.edu/agcomm/pubs/asc/asc211/asc211.pdf)

Selecting a bull can be time consuming and represent a significant cost, so take your time, do your homework and buy the bull that is right for your farm and your management. For more information on buying bulls contact Darrh Bullock – dbullock@uky.edu – (859) 257-7514

For Your Information! The CAIP Genetic Improvement Program’s EPD Guidelines has gone through significant changes this year. Please check the updated values before purchasing your bull to be certain he qualifies.

Marketing and Beef Quality and Care Assurance

Becky Thompson, Director, Kentucky Beef Network; Dr. Darrh Bullock, Extension Professor, University of Kentucky; Kevin Laurent, Extension Specialist, University of Kentucky

Is your Beef Quality Assurance or in Kentucky Beef Quality and Care Assurance training up to date? If you don’t have a number or it is has expired please consider going through the training process to enroll or renew your number. We are beginning to see announcements from some packers they will only purchase fed cattle from feedyards that are Beef Quality Assurance trained this comes as a result of more restaurants and fast food chains making claims they will begin sourcing a larger percent of their beef only from BQA trained suppliers. To date National Packing and Tyson have announced that beginning January 1, 2019 they would source 100% of their fed cattle supply from Beef Quality Assurance certified feedyards. Cargill has also made a commitment to source 90% of their fed cattle supply from feedyards that are BQA certified.
Who does this apply to?

Today this only applies to fed cattle being marketed directly to one of the above mentioned packers either directly or through an auction market. To market fed cattle in these markets, a producer must be able to supply their BQA or BQCA certification number to the direct buyer, or have their number on file with the auction market.

Do cow/calf producers have to be BQA certified? Currently, they do not fall under any requirement to sell calves to a feedyard or backgrounder. But keep in mind having a current training number is the right thing to do for your operation and shows your commitment to good stewardship practices.

Beef Quality Assurance certification

In Kentucky we have added a cattle handling and care component to our training model. Educational modules have been developed to educate farmers on best management practices for handling cattle and providing for their well-being while also training on the core principles of BQA. Upon completion of the program participants will receive the option of a farm gate sign and a training card valid for three years. Kentucky Agriculture Extension Agents and Kentucky Beef Network field associates can provide training opportunities at the local level. Please contact your local county extension office to see when their next training is scheduled. If you are interested in hosting a training session for your customers please contact the Kentucky Beef Network to schedule training at your business.

Beef Quality Assurance Transportation

If you do sell fed calves and are hauling your calves directly to the packer please note you will also need to have a BQA Transportation certification. This certification can only be completed online at https://www.bqa.org/programs/bqa-transportation.

Getting your BQA or BQCA number is great way to make an investment in your beef operation; it shows your commitment to consumers and your animal’s well-being.

For more information on BQCA contact your county ANR agent or:
Kevin Laurent: kevin.laurent@uky.edu
Darrh Bullock: dbullock@uky.edu
Becky Thompson: bthompson@kycattle.org

Grass Tetany –Start Preventive Measures Now

Michelle Arnold, DVM (Ruminant Extension Veterinarian, UKVDL); Dr. Jeff Lehmkuhler, Extension Beef Cattle Specialist, University of Kentucky; Dr. Cynthia Gaskill, Veterinary Toxicologist, University of Kentucky Veterinary Diagnostic Laboratory

What is “Grass Tetany” and when are cattle most likely to have it? Grass tetany, also known as spring tetany, grass staggerer, wheat pasture poisoning, winter tetany or lactation tetany, is a condition due to a low level of magnesium (Mg) in the blood. The disorder in adult cattle begins with muscle spasms and quickly progresses to convulsions, respiratory difficulty, and death. The amount of magnesium in the blood is completely dependent on the amount obtained from the daily diet. Deficiencies occur most often in beef cows when they are nursing a calf and grazing young, green grass in early spring. Fast-growing spring pastures are high in potassium (K+) and nitrogen (N+) and low in magnesium (Mg++) and sodium (Na+).
Affected cattle often have low blood calcium concurrently. Fall calving cows may also experience grass tetany during the winter months.

**Will Feeding Plain White Salt to Cows Prevent Grass Tetany?** This claim is shared every spring and, indeed, there are producers who do not have grass tetany that only feed salt. How can that be? Simply put, for those few lucky producers, the minerals available in their soils and forages are enough to meet the needs of their cows. A number of complex factors contribute to the ability of magnesium to be absorbed through the rumen (stomach) wall. Primarily there is a “pump” mechanism that actively transports the dissolved form of Mg across the rumen wall to the bloodstream. This pump does not work when potassium in the rumen is high and sodium is low because this changes the electrical potential necessary to drive it. Adding salt to the ration will improve magnesium transport to the bloodstream only when sodium is low in the overall diet. Too much salt will increase urination and cause magnesium to be lost in urine. Salt, as with any substance, can be dangerous and even fatal at high levels.

Research has shown that the negative effects of high potassium in early spring grass cannot be overcome by simply adding large quantities of salt. However, a second, passive transport system for Mg exists which is not influenced by potassium. This transport system only works when Mg in solution in the rumen fluid is high. High magnesium mineral mixes prevent grass tetany by allowing magnesium to passively flow into the bloodstream of the cow without the need for the active transport pump.

**Has Limited Amounts of Salt in Trace Mineral Mixes led to an Overconsumption of Minerals?** Regional soil types, soil fertility and diverse forage species result in different mineral needs for grazing livestock on every farm. A blanket statement disregarding these factors is oversimplifying a very complex situation. Trace minerals such as copper, selenium, and zinc are all essential nutrients vital for proper growth, production, and immune system function. Trace mineral deficiencies are common and can predispose animals to serious and sometimes fatal disease conditions. Interactions occur between all of the various metals, minerals, and other elements in the diet, and optimal amounts of all elements are essential for proper nutrition. Trace mineral mixes are formulated to meet the needs of cattle, including the need for salt. The keys to using a free-choice product are to ensure cattle have access to mineral 100% of the time, use a palatable, quality product and make sure they are consuming it at the expected level. Remember a 50-pound bag of hi-mag mineral to be fed at 4 ounces per head per day will only last 4 days in a 50 cow herd. If the cows have calves that also eat mineral, a bag may only last 3 days.

**Does Grass Tetany Only Occur in the Spring?** No! “Winter tetany” in beef cattle is caused by consumption of a diet low in energy and an insufficient intake of magnesium over a period of time. It may also be observed when feeding wheat or rye baleage during the winter since these forages are often high in potassium.
and nitrogen but low in magnesium. Affected cattle have borderline low blood magnesium concentration then clinical signs of grass tetany are triggered by a stressor such as a severe cold snap.

**Hypomagnesemia is often referred to as an “iceberg” disease because only a few clinical cases occur but there are many unobserved or subclinical cases that may become problems after a stressful event such as a weather change.**

**How Can Grass Tetany Be Prevented?** Prevention is based on providing magnesium in the diet during times when conditions are right for grass tetany. As long as the active transport pump for magnesium is working well and driving magnesium across the rumen wall, grass tetany problems should not develop. However, when factors prevent this pump from working (such as when potassium is high in lush spring grass), the second or “backup” pathway depends on increasing levels of magnesium in the diet with a high magnesium mineral mix. A high rumen magnesium level will allow magnesium to passively flow into the bloodstream of the cow without the need for the active transport pump. **Supplementation with high magnesium mineral should begin at least 30 days prior to calving.** Cows require 20 grams of magnesium daily or 4 ounces per day of a 15% magnesium mineral mix, especially during the late winter and early spring if pregnant or lactating. Mineral feeders should not be allowed to be empty because consistent intake is important for clinical disease prevention. Do not offer additional loose salt or salt blocks at the same time! High magnesium mineral may be discontinued in late spring once the grass is more mature, the water content of the forage is decreased, and daily temperatures reach at or above 60°F.

**Does the form of magnesium used in the mineral matter?** Absolutely. The feed industry utilizes magnesium oxide (MgO) to supply magnesium but there is tremendous variation in quality and bioavailability. UK Beef Integrated Resource Management (IRM) mineral recommendations for free choice supplements for grazing beef cattle include 15% salt and 14% magnesium in the complete mineral mix and all magnesium from magnesium oxide (no dolomitic limestone or magnesium mica). Current recommendations also include a minimum 50% of the MgO should be of the Martin Marietta AniMag prilled form. “Prilling” is a method of processing ruminant animal feed that decreases degradation by ruminal microorganisms and allows absorption further down the digestive tract. These complete mineral mixtures also supply the necessary sodium in the form of salt to aid in combatting high potassium intakes. Consumption should be monitored because cattle will not eat enough trace mineral if using poor quality products. In addition, feeding an ionophore (such as monensin or lasalocid) has been shown to improve magnesium absorption efficiency.

**Are there management changes that reduce the risk of grass tetany?** Yes. These include: 1) Soil test and apply fertilizer based on soil test results and use no more potassium than recommended since grasses are luxury consumers of potassium; 2) Legumes are high in magnesium and will help offset the problem although their growth is often limited in late winter; 3) Feeding hay to cattle on lush pasture during susceptible periods or limit grazing to 2-3 hours per day will slow the rate of passage through the digestive tract and allow more time for absorption; 4) Graze the less susceptible or non-lactating animals (heifers, dry cows, stocker cattle) on the highest risk pastures.

In summary, increasing magnesium intake by supplementing with magnesium oxide, offering adequate salt to prevent sodium deficiency, and increasing total energy intake with good quality forage or supplemental feed are all effective tools in preventing grass tetany. These are exceptionally important when moving from winter rations to young spring grass pasture, especially in lactating cows. Grass tetany is considered a true veterinary emergency requiring prompt treatment with magnesium to prevent death.
Ordinarily, I would use my February article to discuss the USDA cattle inventory report that typically comes out in late January or early February. However, due to the shutdown, that report is scheduled to come out at the end of the month, so we can have that discussion in March. With beef cow slaughter at such high levels, I do think we are starting to see early signs of beef cow herd growth slowing. But, I still look for a slight increase in beef cow numbers when the estimate comes out. In reality, anything between no change and a 1% increase would not surprise me.

Calf markets really haven’t moved since December. A 550 lb steer remains in the low-mid $140’s, as can be seen in Figure 1. January 2019 prices were roughly $11 per cwt below 2018 levels. Note that February just includes one week of prices, but I did choose to include it in the chart. I still feel that this calf market can rally significantly, probably $20 per cwt, between now and spring grass. Cull cow markets also continue to struggle and I do think weather is a major reason due to stress and condition. Market reporters are indicating that a larger-than-usual share of cows are falling outside or normal grades that are reported. This means that a lot of producers are receiving prices for cull cows below what I typically report as a state average.

It has been a while since we discussed cattle on feed numbers, so I thought it might be worth revisiting that for just a bit. In January 2018, cattle on feed numbers were 8% above year ago levels. Much of that was due to the larger 2017 calf crop and early placements of cattle due to poor wheat grazing conditions last winter. By the end of 2018, total on feed inventory was roughly 2% above year-ago levels. This is about what I would have expected given the size of our last calf crop. Put simply, current on feed numbers are probably a lot more representative of current conditions (see figure 2). Beef production will increase for 2019, but by a smaller percentage than we have seen in several years.
Source: USDA-NASS, Livestock Marketing Information Center