

# OFF THE HOOF

**KENTUCKY BEEF CATTLE NEWSLETTER MAY 8, 2023**



University of Kentucky  
College of Agriculture,  
Food and Environment  
Cooperative Extension Service

Cooperative Extension Service  
University of Kentucky

**Beef IRM Team**

*Published Monthly by UK Beef IRM Team and edited by Dr. Les Anderson, Beef Extension Specialist, Department of Animal & Food Science, University of Kentucky*

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## Timely Tips

***Dr. Les Anderson, Beef Extension Professor, University of Kentucky***

### Spring-Calving Cow Herd

- Continue supplying a high magnesium mineral until daytime temperatures are consistently above 60 degrees F.
- Improve or maintain body condition (BCS 5) of cows before breeding season starts. If necessary, increase energy intake even on pasture.
- Bulls should have a breeding soundness evaluation (BSE) well before the breeding season (at least 30 days). Contact your local veterinarian to schedule a BSE for your herd sires. They should also receive their annual booster vaccinations and be dewormed. I often get questions regarding deworming and reduced fertility in bulls. Dr. Phil Prater at MSU and I examined this and found no effect of deworming on bull fertility.
- Schedule spring “turn-out” working in late-April or early-May; i.e. at the end of calving season and before the start of breeding season. Consult with your veterinarian about vaccines and health products for your herd.

“Turn-out” working for the cow herd *may* include:

- Prebreeding vaccinations
- Deworming
- Replacing lost identification tags
- Sort cows into breeding groups, if using more than one bull
- Insecticide eartags (best to wait until fly population builds up)

“Turn-out” working of calves may include:

- Vaccinate for IBR-PI3, Clostridial diseases and Pinkeye
  - Dehorn, if needed (can be done with electric dehorner and fly repellent during fly season)
  - Castrate and implant male feeder calves (if not done at birth)
  - Deworm
  - Insecticide eartags
- Consider breeding yearling replacement heifers one heat cycle (about 21 days) earlier than cows for “head-start” calving. Mate to known calving-ease bulls.
  - Record identification of all cows and bulls in each breeding group.
  - Begin breeding cows no later than mid-May, especially if they are on high endophyte fescue. Cows should be in good condition so that conception occurs prior to periods of extreme heat.
  - Consider synchronizing estrus in all cows. Exposing late-calving cows and first-calf heifers to a progestin (MGA feed or CIDR device) for 7 days before bull turn out increases pregnancy rates and shortens the next calving season.
  - Choose best pastures for grazing during the breeding season. Select those with the best stand of clover and the lowest level of the fescue endophyte, if known. Keep these pastures vegetative by grazing or clipping. *High quality pastures are important for a successful breeding season.*
  - If using **artificial insemination**:
    - Use an experienced inseminator.
    - Make positive identification of cows and semen used. This will permit accurate records on date bred, return to heat, calving date and sire.
    - Good handling facilities and gentle working of the cows are essential.
    - Choose AI sires that will meet your goals and resist the temptation to get your cows bigger. Using sires with higher accuracy EPDs will reduce risk.
  - Observe breeding pastures often to see if bulls are working. Records cows’ heat dates and then check 18-21 days later, for return to heat.

### **Fall-Calving Herd**

- Contact your veterinarian and pregnancy diagnose the cow herd. If a large animal veterinarian is not available in your area, consider taking blood samples for pregnancy diagnosis. Remove open cows at weaning time.
- Plan marketing program for calves. Consider various options, such as maintaining ownership and backgrounding in a grazing program, or precondition and sell in a CPH-45 feeder calf sale.
- Initiate fly control for the cows when fly population builds up.
- Calves may be weaned anytime now but you can take advantage of the spring grass by leaving them on the cow a while or weaning and grazing.

### **Stockers**

- Keep calves on good pasture and rotate pastures rapidly during periods of lush growth. Manage to keep pastures vegetative for best performance.
- Provide mineral mix with an ionophore.

- Implant as needed.
- Control internal and external parasites.

## General

- Harvest hay. *Work around the weather and cut early before plants become too mature. Harvesting forage early is the key to nutritional quality.* Replenish your hay supply!
- Rotate pastures as needed to keep them vegetative.
- Clip pastures to prevent seedhead formation on fescue and to control weeds.
- Seed warm season grasses this month.

## **“You Don’t Know What You Don’t Know”**

*Dr. Les Anderson, Extension Professor, University of Kentucky*

Centuries ago, the Greek philosopher Socrates coined the phrase “You don’t know what you don’t know”. I randomly heard this last week, and it struck me how apropos this is to cow-calf producers and the beef industry. So, what “don’t you know”?

According to the USDA NAHMS survey in 2017, less than 20% of cow-calf producers in the US obtain a breeding soundness exam (BSE) on their bulls. A breeding soundness exam is performed by your herd veterinarian and is designed to identify INFERTILE bulls; those bulls that do not have the ability to breed cows. A BSE is inexpensive insurance that your bull can breed cows. It eliminates bulls that have physical issues that would prevent them from breeding cows, and it eliminates bulls that no longer can produce viable sperm. A producer occasionally, but not always, can tell if a bull pulls up lame and if they have an injury to the reproductive tract. But it is impossible to determine if the bull no longer produces viable sperm without performing a BSE. So “you don’t know what you don’t know” unless you have a BSE done annually in your herd sires.

This same USDA survey, less than 20% of cow-calf producers have pregnancy diagnosed in their herd. Pregnancy diagnosis is another simple, inexpensive tool that can be used to help increase production efficiency and profitability. Pregnancy can be determined via rectal palpation (including ultrasound) by your herd veterinarian. Rectal palpation can not only indicate if a cow is pregnant but can also indicate the stage of pregnancy to help plan calving. Pregnancy can also be determined using blood sampling, but blood sampling only provides pregnant or non-pregnant information. Researchers in Ag Economics at UK (Erol and Dillion) have developed a model that demonstrates pregnancy diagnosis increases revenue by 69% in typical beef cow-calf operations. This model assumes that open cows without a calf at side are culled. If cow-calf operators don’t get pregnancy diagnosed, when do they realize their cow will not produce a calf? Again, without pregnancy diagnosis, “you don’t know what you don’t know”.

The last example is record keeping. Beef cattle producers are exceptional note takers (we seem to write a bunch of information down) but we are terrible record keepers. What’s the difference? A record keeper takes their notes, creates a report, and uses the data to make management decisions. Creating reports from hand-written records stinks, can be a time-consuming task, and is likely what prevents most cattle producers from using records. A great option for a producer is to use an electronic method for record keeping but survey data indicates that only 3% of beef producers use electronics to manage their

records. So, we are an industry of note takers, we are an industry of “you don’t know what you don’t know”.

If we are not keeping records, how are we making sound management decisions? Instead of “knowing”, we guess, or, in most cases, we try to remember. The UK IRM Farm program helped connect producers with information including information about their own operations. We taught cattle producers how to keep and use records to run their small business (cattle). Within two years, revenue was increased by 34% on the 147 farms that participated. The key.....keep records and make management decisions based upon the data. Our goal with this program was to reduce “what you don’t know”, record the results, and use the data to improve management. The average size of these farms was 40 cows and managing with data helped increase the percentage of cows that weaned a calf, the pounds of calf weaned per cow exposed, and gross revenue. On these farms, producers stopped guessing and started managing and it made a difference.

Running cattle as your side business is not generally a high-profit small business venture. Most cattle producers are in it because they love it. I argue that producers can love it and make money at the same time. How? “You know when you know”!

## **The Do’s and Don’ts of Submitting a Dead Animal for Necropsy to a Veterinary Diagnostic Laboratory**

*Dr. Michelle Arnold, UK Veterinary Diagnostic Laboratory*



UK Veterinary Diagnostic Laboratory

Useful links:

Home page <http://vdl.uky.edu>

Directions:

<http://vdl.uky.edu/submissions-and-lab-info/contact-us>

Hours of Operation and Holiday Schedule: <http://vdl.uky.edu/about-us/Hours-of-Operation>

Accession (Submission) Forms:

<http://vdl.uky.edu/forms>

Feed and Forage Sample Collection Guidelines:

<http://vdl.uky.edu/submission-guidelines>

Sickness and death loss of farm animals is an unavoidable consequence of owning them. Whether it is one animal that dies unexpectedly or multiple animals developing symptoms of disease over a short span of time, most producers want to know the reason, the best effective treatment and how to prevent it. The local veterinarian should be the first person contacted to examine any sick animals and determine an appropriate treatment. The earlier the veterinarian is contacted in the disease process, the better the chance of instituting an effective therapy. However, in cases of sudden death or when disease appears to be spreading or in cases where treatment is ineffective, a veterinary diagnostic laboratory can help make a diagnosis and assist in development of a plan for treatment and control based on test results. The UK

Veterinary Diagnostic Laboratory in Lexington (Web: <http://vdl.uky.edu>) and the Breathitt Veterinary Center in Hopkinsville (Web: <https://breathitt.murraystate.edu/>) are both full service laboratories serving the veterinarians and producers across the Commonwealth of Kentucky. Their websites contain complete, up-to-date access to all services offered as well as hours of operation, location, forms, and all other pertinent information. The submission form (also known as an “accession form”), needs to be filled out as completely as possible. This form as well as all other testing submission forms can be found on the web at: <http://vdl.uky.edu/forms>. To save valuable time and money, if there are any questions, call the laboratory ahead of time. A phone call to the lab prior to leaving the farm is never a bad idea to avoid any unforeseen circumstances.

Much useful information about an individual animal’s death and overall health issues in the herd can be gleaned from a necropsy (the animal equivalent of a human “autopsy”). During the necropsy, the veterinary pathologist will first open the animal and look for any visible abnormalities. This is called a “gross necropsy” and often gives an initial indication of the cause of death. Samples are then taken from all organ systems as well as blood and other bodily fluids and submitted to various laboratory sections for specific testing. In addition, sections of each organ (liver, lung, heart, kidney, brain, etc.) are cut into thin slices, processed, and placed on glass slides for examination under the microscope. It is under the scope, at the cellular level, that pathologists most often confirm the cause of death by recognizing the characteristic patterns of tissue damage resulting from a certain disease. Once the pathologist receives test results and looks at the slides, the pieces come together like a puzzle to arrive at a diagnosis. A plan can then be formulated with the producer and veterinarian to control and hopefully prevent the problem in the future. However, it is important to understand that autolysis (rotting) begins immediately after death and progresses rapidly, especially in hot weather. Rotten tissues make interpretation of tests and other lab findings very difficult if not impossible. Do bring dead animals to the lab within 24 hours after death, the sooner the better, for the best chance at an accurate diagnosis. Don’t bring live animals to the lab because euthanasia services are not offered. If euthanasia is performed prior to submission, don’t damage the brain if the animal has symptoms of rabies or other neurologic problem. Don’t show up at the lab after-hours with a dead animal without prior approval because there is no guarantee someone will be available to help unload and place the animal in the cooler. If timely submission to a diagnostic laboratory is not possible, the herd veterinarian can perform a “field” necropsy and take the necessary samples to send to the lab.

At the diagnostic laboratory, the tests ordered are based on initial necropsy findings and the “history” from the producer submitted with the dead animal. Simply put, the more information available about this animal and the herd, the easier and faster it is to narrow down the list of possibilities. Try to compile a complete “history” which is simply a snapshot of what the situation is on the farm, making sure to note anything out of the ordinary. Pictures and videos are worth a thousand words and can easily be added to the history by the staff at the laboratory. Be sure to indicate all treatments with antibiotics, recent vaccinations, etc., because these can impact test results and interpretation. The answers to the following questions will often yield useful information:



1. A full description of this animal (breed, age, sex). If female, was she pregnant and did she have a calf on her? Was this animal raised on the farm or purchased? If purchased, when and where? Also, a description of the herd. How many cattle on the farm, how many in the group this animal came from and how many deaths have occurred in that group over what period of time? Are cattle in other groups and/or on different farms also affected?

2. If sick when found, what symptoms were observed? Any pictures or videos taken? Was a vet contacted and/or treatment attempted? If found dead, when was the last time you saw the animal alive? Any signs of struggle at the time of death? Where was the animal found (for example, next to a pond)?
3. When did this problem first begin? Have you ever had a similar problem on the farm? Are any other cattle showing signs of illness now?
4. Vaccination history-what was given most recently and when?
5. Summarize the diet currently being fed. Include what type of feed (grain) if offered and how much is consumed, forage available (hay/pasture/silage/baleage), and any tubs, trace mineral or salt available. Bring any feed tags or take pictures of labels from the bags or tubs. It is especially important to note any recent changes to the diet and when the changes were made. For example, have the cattle been without salt or mineral and were just given a new bag? Have they just rotated onto a new pasture? Is the water source a pond, creek, or stock tank? If it is a tank, is it city water, well water or pond/creek water? If a feed, forage, or water-related problem is suspected, do bring samples of those, too. However, don't expect tests to be performed on every sample submitted unless the preliminary findings are pointing in that direction.
6. Note when any new additions joined the herd, including replacement females, bulls, and calves and where they were purchased. Also note if any animals have been on the show circuit and, if so, when they returned to the farm.
7. Is there recent history of contact with other animals? Any fence-line contact with neighbors' livestock? Are there cats, dogs, rats, and/or wildlife in contact with your herd or their feed and water?
8. Any recent bad weather events such as flooding, high winds causing down trees, lightning storms?
9. Are there any junk piles, burn piles, compost piles, weed or yard trimmings in the pasture? Any sheds or old barns accessible to the herd? Are their woods available for the cattle to run in? Recent pesticide or herbicide use? Is there a road next to the farm where trash could be thrown over the fence?

Once the animal is submitted, don't expect answers immediately. Some diseases are easily recognized but others are more challenging. Interim test results are sent from the lab periodically until a final report is issued. It can take as long as 2 weeks to generate the final report or even longer if any special tests were sent to outside laboratories. Questions about the final report can be addressed by the herd veterinarian or by the faculty and staff at the diagnostic laboratory.

It is important to understand that no veterinary diagnostic laboratory is 100% successful at figuring out every cause of death. To utilize a veterinary diagnostic lab most effectively, do come with fresh samples, pictures, or videos, and plenty of information. If a veterinarian examined the animal before death, be sure to let the lab personnel know so we can contact him or her for more information. By far, the most important factor for a successful diagnosis is minimizing the degree of autolysis (rotting) that takes place before submission. Getting the dead animal to the lab as soon as it is found or having a veterinarian euthanize an animal that is close to death and bringing it straight to the lab will markedly increase the effectiveness of testing. In cases of multiple death loss, do send more than one animal as it increases the odds of finding the inciting cause. In cases where a diagnosis is not found, don't consider it a waste of time and money because many diseases may be ruled out with negative test results. However,

rotten animals or those that have been scavenged are much more difficult to work with and often give disappointing answers.

<b>Do's</b> 	<b>Don'ts</b> 
<ul style="list-style-type: none"> <li>○ <b>Do call the laboratory prior to leaving the farm to avoid any unforeseen circumstances</b></li> </ul>	<ul style="list-style-type: none"> <li>○ Do not bring live animals to the lab because euthanasia services are not offered</li> </ul>
<ul style="list-style-type: none"> <li>○ <b>Do bring dead animals to the lab within 24 hours after death, the sooner the better, for the best chance at an accurate diagnosis</b></li> </ul>	<ul style="list-style-type: none"> <li>○ If euthanasia is performed prior to submission, do not damage the brain if the animal has symptoms of rabies or other neurologic problem</li> </ul>
<ul style="list-style-type: none"> <li>○ <b>If timely submission to a diagnostic laboratory is not possible, the herd veterinarian can perform a “field” necropsy and take the necessary samples to send to the lab.</b></li> </ul>	<ul style="list-style-type: none"> <li>○ Do not arrive at the lab after-hours with a dead animal without prior approval because there is no 24-hour service available to unload and place the animal in the cooler</li> </ul>
<ul style="list-style-type: none"> <li>○ <b>Do compile a complete “history” which is simply a snapshot of what the situation is on the farm, making sure to note anything out of the ordinary. Pictures and videos are worth a thousand words and can easily be added to the history by the staff at the laboratory</b></li> </ul>	<ul style="list-style-type: none"> <li>○ Once the animal is submitted, do not expect answers immediately. Some diseases are easily recognized but others are more challenging and require additional tests to diagnose correctly.</li> </ul>
<ul style="list-style-type: none"> <li>○ <b>In cases of multiple death loss, do send more than one animal as it increases the odds of finding the cause</b></li> </ul>	<ul style="list-style-type: none"> <li>○ In cases where a diagnosis is not found, do not consider it a waste of time and money because many diseases may be ruled out with negative test results.</li> </ul>

When you go to the lab, be prepared with as much information as possible to help guide the investigation.



<p><b>Description of Animal and Herd</b></p> <ul style="list-style-type: none"> <li>○ A full description of this animal (breed, age, sex).</li> <li>○ If female, was she pregnant and did she have a calf on her?</li> <li>○ Was this animal raised on the farm or purchased?</li> <li>○ If purchased, when and where?</li> <li>○ Also, a description of the herd. How many cattle on the farm, how many in the group this animal came from and how many deaths have occurred in that group over what period?</li> <li>○ Know recent vaccination history. What was given and when?</li> </ul>	<p><b>Description of the diet currently being fed</b></p> <ul style="list-style-type: none"> <li>○ Include what type of feed (grain) if offered and how much is consumed, all types of forage available (hay/ pasture/ silage/baleage), and any tubs, trace mineral or salt available.</li> <li>○ Bring any feed and mineral tags or take pictures of labels from the bag.</li> <li>○ Note any recent changes to the diet and when the changes were made. For example, have the cattle been without salt or mineral and were just given a new bag? Have they just rotated onto a new pasture? Is water source a pond, creek, or stock tank? If it is a tank, is it city water, well water or pond/creek water?</li> <li>○ If a feed, forage, or water-related problem is suspected, do bring samples of those, too.</li> </ul>
<p><b>Description of Disease or Health Problem</b></p> <ul style="list-style-type: none"> <li>○ When did this problem first begin?</li> <li>○ Have you ever had a similar problem on the farm?</li> <li>○ Are any other cattle showing signs of illness now?</li> <li>○ If sick when found, what symptoms were observed? Any pictures or videos taken?</li> </ul>	<ul style="list-style-type: none"> <li>○ Was a vet contacted and/or treatment attempted?</li> <li>○ If found dead, when was the last time you saw the animal alive?</li> <li>○ Any signs of struggle at the time of death?</li> </ul>
<p><b>Potential Transmission from an Outside Source</b></p> <ul style="list-style-type: none"> <li>○ Is there recent history of contact with cattle from other farms?</li> <li>○ Any fence line contact with neighbors' animals?</li> <li>○ Are there cats, dogs, rats, and/or wildlife in contact with your herd or their feed?</li> </ul>	<ul style="list-style-type: none"> <li>○ Do note when any new additions joined the herd, including purchased replacement females, bulls, or sale barn animals.</li> <li>○ Also note if any animals have been on the show circuit and, if so, when they returned to the farm.</li> </ul>
<p><b>Other Potential Problem Sources</b></p> <ul style="list-style-type: none"> <li>○ Are there any junk piles, burn piles, compost piles, weed or yard trimmings in the pasture?</li> <li>○ Any sheds or old barns accessible to the herd?</li> <li>○ Are their woods available for the cattle to run in?</li> <li>○ Recent pesticide or herbicide use?</li> </ul>	<ul style="list-style-type: none"> <li>○ Is there a road next to the farm where trash could be thrown over the fence?</li> <li>○ Any recent bad weather such as flooding, high winds causing down trees, lightning storms?</li> </ul>



## **A Breeding Soundness Exam: Insurance for Your Breeding Season**

*Dr. Les Anderson, Beef Extension Professor, University of Kentucky*

I received the call last week. I seem to receive this call 6-8 times each year. This cow-calf producer had just finished getting his cows diagnosed for pregnancy. He had 43 cows falling calving cows. Last fall, these cows were synchronized for artificial insemination and were exposed to one bull for about 5 weeks and a second bull for 7 weeks. Only 22 cows conceived and all of them conceived to the AI. The first question I asked this rancher was the obvious one; did you get a breeding soundness exam (BSE) performed on your bulls? His response: the bulls had one when he bought them, but he had not had one done since (2-3 years). The bulls were checked and, sure enough, both were infertile.

What is a BSE? A BSE is a fertility exam performed on bulls by a veterinarian. A BSE has three components: scrotal circumference, a physical exam, and a semen evaluation. Scrotal circumference is highly correlated with semen output and serving capacity. It is recommended that a 12–13-month-old bull have a scrotal circumference of at least 30 cm. The physical exam is performed to simply ensure that a bull is physically up to the challenge of the breeding season. Are his feet and legs structurally correct? Is he free from injury and/or infection? The veterinarian then examines the bull's semen to determine if the sperm cells are normal. The bull is then graded as satisfactory, unsatisfactory, or deferred. Bulls classified as unsatisfactory are considered infertile and it is not recommended that they be used for breeding. Bulls that receive the deferred classification had some irregularities in their ejaculate and a second collection is required to determine his fertility. A BSE very accurately identifies bulls that are total infertile.

Results from surveys nationally and in Kentucky indicate that fewer than 20% of cattlemen routinely subject their bulls to a BSE. I am amazed by how few people obtain a BSE in their herd bull annually before each breeding season. We purchase car, health, life, and crop insurance why wouldn't we purchase a little breeding-season insurance? We protect ourselves against most disasters, but we don't protect our cow herd from the ultimate disaster? A BSE will cost \$50-100 so it is an inexpensive, easy form of risk management. I'm certain that the cattleman that called me wished he had gotten a BSE on his bulls before he found out that he had 21 open cows. So, protect your investment. Obtain a BSE on all your bulls 30 days before every breeding season.

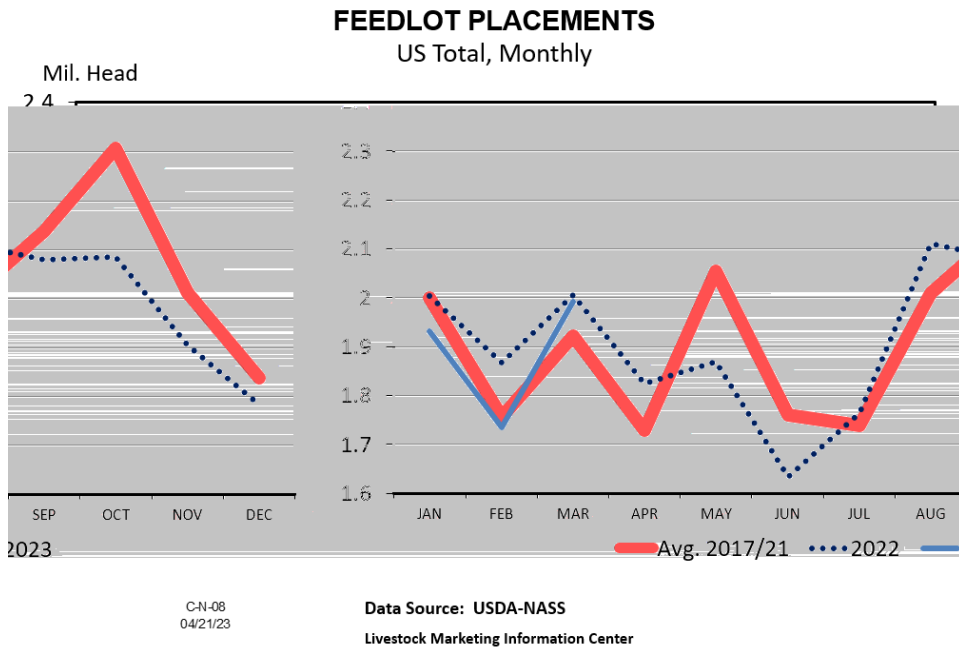
## **April Cattle on Feed – What to Make of March Placements**

*Dr. Kenny Burdine, Extension Professor, Livestock Marketing, University of Kentucky*

USDA released the April Cattle on Feed report on Friday April 21<sup>st</sup>. This monthly publication estimates the number of cattle on feed at feedlots with capacity of over 1,000 head and serves as a measure of likely beef production over the next several months. While the cow herd has been decreasing in size for several years, an increase in the number of heifers in the beef system kept on-feed numbers running relatively high for much of 2022. Finally in the fall, the long-expected shift occurred, and on-feed numbers have been running below year-ago levels since then.

In Friday's report, April 1, 2023, on-feed inventory was estimated to be down about 4.5% from April 1, 2022. While this might not immediately raise any eyebrows from casual observers, this on feed number was higher than expected and really came down to March placements being greater than most pre-report

estimates (see chart below). The net effect was that total on-feed inventory was virtually unchanged from March 1 to April 1, which was counter to what many expected.



Heifers continue to make up a historically large proportion of cattle on feed. Fewer heifers were reported on feed than on April 1, 2022. While steers on feed declined by 6 percent, heifers on feed were only down about 1.7 percent from last year. That indicates that there has not been a large movement in holding back heifers yet.

There are some possible explanations for the larger-than-expected March placements number. First, March is a month when cattle are often moved off wheat pasture and continued dry weather, combined with high wheat prices, likely impacted movement of feeders. Secondly, live cattle imports from Mexico were higher in March. So far this year, feeder cattle imports from Mexico are up about 95,000 head from last year. But it's worth remembering that feeder cattle imports in 2022 were the fewest since 2008. Finally, there is still a lot of carry on the feeder cattle board, meaning that feedlots have been aggressively buying feeders ahead, in anticipation of the rising price levels suggested by deferred live cattle futures. Put simply, I absolutely think that feedlot placements bears watching in the coming months, but I suspect the larger placement number last month has more to do with timing than a major shift in market fundamentals.