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Beef IRM Team

OFF THE HOOF

KENTUCKY BEEF CATTLE NEWSLETTER JUNE 1, 2021

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Contents

This month's newsletter includes:

Timely Tips

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

Spring-Calving Cow Herd

- Cows should be on good pasture with clover and preferably low endophyte levels in fescue for the spring breeding season. Keep pastures vegetative by clipping or making hay. They should have abundant shade and water. Our goal is to have cows become pregnant before July when temperatures and heat stress can ruin the "spring" breeding season.
- Observe the cows and bulls as the breeding season continues. Watch bulls for injury or lameness and change bulls if a high percentage of cows are returning to heat. Record cow breeding dates to determine next year's calving dates and keep records of cows and bulls in each breeding group.
- Keep a good pasture mineral mix, which contains adequate levels of phosphorus, vitamin A, selenium, and copper, available at all times.
- Consider a special area for creep grazing calves, or practice "forward grazing" this summer, allowing calves to graze fresh pasture ahead of the cows. This can be accomplished by raising an electric wire or building a creep gate.

Fall-Calving Herd

- Pregnancy test cows if not done previously.
- Cull cows at weaning time

  - Smooth-mouthed cows
  - Cows weaning light weight and/or poor-quality calves
  - Open cows
  - "Problem cows" with bad feet, teats, udders, etc.
- Select replacement heifers based on:
  - temperament
  - conformation
  - weaning weight
  - dam and sire records
  - Select more than needed to allow for culling after a short breeding season

General

- Finish harvesting excess pasture as hay soon! It should be cut before it becomes too mature. Be sure and replenish your reserves. Try to put up more than you think you will need in case of a late summer drought.
- Pasture should supply adequate energy, protein, and vitamins at this time. However, be prepared for drought situations. Do not overgraze pastures so that recovery time will be faster. Overgrazed pastures will recover very slowly during July/August.
- Keep pastures small for rotational grazing so that nutritive quality can be maintained. They should be small enough, so cattle do not graze longer than a week. As the season progresses, you need several paddocks to give each properly stocked pasture about 4 weeks' rest.
- Maintain a clean water supply and check it routinely. Water is extremely important in hot weather.
- Control flies. Consider changing insecticides and/or methods of control this year, because insecticide resistant flies may have developed if you have used the same chemical year after year. Consider pour-on and sprays that allow you to put cattle in the corral or through the chute with little stress on them. It will make subsequent trips through the "chute" less stressful.
- Prevent/Control pinkeye
  - consider vaccinating,
  - control flies,
  - clip tall, mature grass,
  - treat problems quickly.
- Clip grazed-over pastures for weed control and so that seed heads do not irritate eyes. Pastures should be kept in a vegetative state for best quality.

Recent and Upcoming On-line Beef Education Opportunities

Beef IRM Team, University of Kentucky

Beef Minutes *Options for Fly Control* – Dr. Katie VanValin

To access this and other excellent beef educational content, visit our Facebook Page (facebook.com/KyBeefIRM) and/or on the Department of Animal & Food Science YouTube page (https://www.youtube.com/channel/UCu4t18Zo2E_4_DBBELPjPMg). Subscribe to the AFS YouTube page and click the notifications bell to receive a notification whenever we publish new beef education content.

Beef Bits can also be accessed on the podcast website (https://www.podbean.com/media/share/pb-meqic-e6f8f1?utm_campaign=u_share_ep&utm_medium=dlink&utm_source=u_share).

Meeting Cow Nutrient Requirements in the Winter Starts in the Spring

Dr. Katie VanValin, Assistant Extension Professor, University of Kentucky.

When the weather forecast calls for a few days of clear skies this time of year, it is a safe bet that many producers are hitting the hay fields to get hay put up to feed their herd this winter. When thinking about the hay requirements for a herd, I often hear discussions about the number of bales required. However, focusing on the number of bales alone is like only looking at half of the picture. Cattle have nutrient (energy and protein) requirements, not a bale requirement. So really, at the end of the day, it won't be a certain number of bales that maintain the cowherd at a BCS 5 or greater. Instead, supplying enough pounds of total digestible nutrients (TDN) or energy and pounds of crude protein will meet the cow's nutrient requirements. The exact amount of TDN and crude protein required depends on several factors such as stage of production, environmental factors, and mature cow size, to name a few.

The single most significant factor that impacts forage quality or the nutrient content and digestibility of the forage is the stage of maturity at harvest. As the plant matures, the leaf to stem ratio decreases, which means a greater concentration of fiber (a portion of which is undigestible) and decreased protein concentrations. Unfortunately, when cool-season forages are rapidly growing in the spring, it can be easy to miss the optimal stage of maturity to capitalize on forage quality. Weather can also have a significant impact on harvesting hay at optimal maturity. While wet springs can be a catalyst for cool-season grass growth, they can also make finding a window to cut hay difficult. However, this spring, we have had several good opportunities to get hay harvested. Luckily, it takes the same amount of time to cut, rake, and bale good quality hay as it does poor quality hay.

It is important to remember that hay is often the base of any of our cattle rations (or perhaps mixed with other forage sources such as silage). The goal should be to meet as much of the cow's nutrient requirements through the forage as possible and limit the amount of supplement that is needed. The table below shows an example of the cost of supplementation with an 80:20 soyhull and DDGS blend (priced at $210/T) based on hay quality.

Forage	lbs of supplement (lbs/head/d)			Cost of supplementation ($/head/d)		
	Mid-gestation	Late-gestation	Lactation	Mid-gestation	Late-gestation	Lactation
TDN: 58, CP: 10.5, NDF: 50	None	None	None	-	-	-
TDN: 54, CP: 8, NDF: 55	None	None	6	-	-	0.63
TDN: 48, CP: 6, NDF: 65	1.5	4	12	0.16	0.42	1.26

As we can see in this example, supplying medium to high-quality hay can go a long way to meeting cow nutrient requirements while minimizing supplementation costs. Getting hay tested will also help ensure that the right hay gets fed to the right cows by matching nutrient concentrations with nutrient requirements. However, the time to truly impact hay quality is before and at harvest, well before it is fed out this winter.

Keep an Eye on that Bull

Dr. Les Anderson, Extension Professor, University of Kentucky

Many producers with spring calving herds just turned out their bulls. In the May Off the Hoof, we reminded everyone to subject their herd bulls to a breeding soundness exam (BSE). A BSE is the best insurance we available to ensure we don't turn out a bull that is infertile or incapable of breeding cows. However, the BSE does not indicate if the bull is willing to breed cows. I was reminded of this very recently in the herd that I used for the "I bought a farm" YouTube video series. To get these heifers bred, we synchronized them for AI and then turned out a mature bull that had passed a BSE. When I inseminated these heifers, the weather turned very poor (middle of December) and the estrus response rate in the heifers was low, so I wasn't expecting high conception rates to AI. Just to get an idea of how well we did, I spent some time in the pasture watching for return heats. As I expected, several heifers had return heats but what really stuck out was the bull was NOT breeding them. Some of the heifers were jumping on the bull and he seemed disinterested. I was concerned about the bull and told the owner that he needed to consider finding another bull. I could not assure him the bull was not getting the job done as research has shown that mature bulls will only breed a female in heat 1-3 times even though she is in heat for as long as 12 hours. This bull however showed absolutely no interest. For a variety of reasons, the owner decided to not get another bull. Pregnancy rates were only 61% in this group of heifers. The decision may have cost this producer significantly.

Bottomline: keep an eye on your bull to make sure he is working. Multiple return heats indicate a bull that is not getting females pregnant. If possible, replace the lazy bull. It will cost some money to make a switch, but this cost is likely much lower than the cost of open females.

To Crack or Not to Crack, A Common Question

Dr. Jeff Lehmkuhler, Extension Professor, University of Kentucky

As grain and commodity prices shoot up, beef producers begin to look for other feedstuffs to find bargains. In many cases, there are no bargains to be found as commodity brokers know the value of the feeds they market. However, occasional opportunities do present themselves from plant shutdowns, shipping issues, and other various reasons. Yet, many folks look past the common feeds available such as corn, oats, wheat, distillers grains and other local feedstuffs hoping to save a few dollars. Corn is a constant in our area and should always be considered as an energy source in ruminant diets.

One of the first questions I get when I start talking about feeding corn to beef cattle producers is whether it has to be cracked or ground. Seems like an easy question with a simple answer. However, the impact of grain processing has been studied for decades and continues to be researched. The hammer mill was invented in 1840 to process grains for feeding. Flaking of corn was developed in 1962 to gelatinize starch and increase efficiency. Reviews on grain processing were presented in papers dating back almost 50 years by the National Research Council. Yet today, research continues to investigate the impact of grain processing on cattle performance.

A review paper on grain processing published around 25 years ago summarized research of finishing cattle and the impact of grain processing. Similar daily gains were noted when corn was fed whole or cracked. Intakes were slightly lower improving feed efficiency when grain was left whole. Ohio researchers published a paper in 2020 in which dry rolled corn was compared to whole shelled corn in

finishing diets feeding a typical level of hay at 7% of the diet dry matter. Feeding dry rolled corn resulted in greater intakes which in turn led to close to an 8% or 0.25 lb/d increase in daily gains. Yet, feed efficiency, animal gain per unit of feed consumed, was similar between the rolled and whole corn. Keep in mind the work discussed above relates to finishing diets with low forage levels. Diet composition, feeds selected, hay level, feed additives and other factors can have an influence on performance.

The main site of starch digestion is the rumen and processing can influence the extent of digestion in the rumen. Processing can increase rumen starch digestion from approximately 60% to 80%. This increase in ruminal starch fermentation can increase the risk of ruminal acidosis and digestive upset. Maintaining sufficient forage intake is important to reduce this risk. Today, the substitution of low starch feedstuffs like corn gluten and distillers grains for corn or other grains reduces the risk of digestive upsets.
I normally cannot convince producers that feeding whole corn rather than cracked corn will result in similar performance. Producers always have the rebuttal that they see whole kernels of corn in the feces. Research conducted by Ohio researchers investigated the interaction of grain processing and forage or roughage level in finishing diets. The poor student working on this project determined the number of corn kernels fed, and wait for it, physically separated corn kernels from the manure! For both weanlings and yearlings, the percentage of whole corn kernels digested was similar at 92%. The weanling calves ate almost 19,000 kernels of corn a day. Some quick math reveals that these steers excreted about 1,500 kernels of corn a day, about 1 pound of corn. Seeing this corn in the feces is the reason producers are convinced they must grind the corn. You are convinced now that you should process the corn, aren't you?

This Ohio work also demonstrated that processing corn did not have an impact on digestibility of dry matter, starch, protein, or fiber. The authors mention a 44% increase in fecal starch excretion, a variable feedlot nutritionists monitor. This is a huge increase, right? Well, figures can be misleading and there was 100 grams more starch excreted in the feces. However, steers eating whole corn consumed 800 grams more starch compared to ground corn. Overall, total gastrointestinal tract starch digestibility was found to be similar at 93% for whole and 95% for ground corn. Previous research in Kansas revealed similar results with total GI tract digestibility of corn being 89% and 91%, whole and cracked, respectively.

What about performance on higher forage diets? North Dakota researchers investigated daily gains of yearling cattle from 900 to 1,100 lbs consuming a diet containing approximately 30% forage. Average daily gains for cattle receiving whole corn were 7% lower than cracked and 3% lower than ground corn. However, feed efficiency was better for whole corn. When 500-700 feeders were offered a receiving diet with 35% forage, gains were slightly higher for whole corn compared to cracked and gain efficiency was similar. These studies would seem to support the previous feedlot review with little or no benefit in processing corn.

In our area, cracked or ground corn is often significantly greater in price than whole corn. Further, if you can purchase whole corn from your neighbor at elevator price, it will often be much less than what one will pay from the feed dealer. In many instances, the cost of processing corn will likely not be recovered unless we are finishing cattle with low roughage diets.

I caution readers to consider the forage source and other diet components. If supplementing mature cows on the spring flush, the rapid passage rate and greater orifice for feed to pass out of the rumen will impact kernel digestion and processing corn will likely improve total tract digestibility greater than discussed above. Further, consider the risk of sorting. Cattle have the capacity to sort out larger feed particles, even the size of a corn gluten pellet. When using a loose mineral supplement or a protein source in a meal form like soybean meal or dried distillers grains, rolled corn may be needed to minimize sorting. This needs to be considered particularly if feed additives are in your mineral or meal protein source.
So, I ask you, process or feed whole?

Hay Sampling 101

Chris Teutsch, Forage Extension, UK Research and Education Center at Princeton

I have been trying and I stress the word "trying" to be more proactive lately. In this same vein, I thought I would start talking about hay testing earlier this year. As most everyone knows, the ideal time to sample hay for forage quality is just prior to feeding. This provides you with the most accurate representation of what the animal will be consuming. However, sampling early also has some advantages. These advantages will be discussed below.

The remainder of this article will focus on getting a sample that accurately represents the hay that you have on hand. Hay testing is of little value if the results do not accurately represent what you are actually feeding. The following tips will help you get a sample that represents the hay that you have on your farm.

Always use a hay probe to obtain representative sample. A representative sample starts with cores taken with a properly designed and maintained hay probe (Figure 1). Collecting grab samples or bale slices does NOT provide a representative sample. The hay probe should have internal diameter of at least 3/8 inches and a probe length of 15 to 18 inches.

Figure 1. Always use a hay probe to sample bales. Round bales should be sampled from the sides and square

Sample hay in lots. Hay should ALWAYS be sampled in lots. A lot consists of hay made from the same field and cutting. A lot should not represent more than 200 tons of dry matter. In the event that a lot exceeds 200 tons of dry matter, multiple samples should be taken and forage quality results should be averaged to represent the overall lot. It is very important the we keep track of where different hay lots stop and start (Figure 2). The quality from one hay lot to another can vary markedly.

Sample hay just prior to feeding. Ideally, hay should be sampled just prior to feeding. This will provide the most accurate representation of nutritional. This is especially true for hay stored outside that has weathered. However, in some cases sampling early may be more practical. If you are storing hay in a

barn, it may be difficult or nearly impossible to sample after is packed in. So, sampling and marking where hay lots start and stop as the hay is moved into the barn may be a more practical approach.

Early sampling also allows you to better plan how and when certain lots of hay should be fed. For example, if you have a hay lot (one field-one cutting) that is very high in quality (cut early and cured well) then it could be fed when the nutritional requirements of the animal are the highest. Likewise, identifying hay lots that have marginal nutritive value early, will allow you plenty of time to plan appropriate supplementation strategies.

Figure 2. Make sure and keep track of where different hay lots are located. This can be accomplished by labeling where lots start and stop and drawing maps. This best done when hay is moved from the field to its storage location. This will help with sampling later.

The bottom-line: although sampling close to time of feeding is ideal, it is more important to sample your hay whenever you can get it done!!!

Sample at least 20 bales from each hay lot. A representative sample will consist of at least 20 cores from 20 bales (one core per bale) resulting in a sample size of approximately one-half pound of hay from each lot. Sample bales at random and NOT on some predetermined characteristic such as leafiness, color, or weed content.

Remove weathered material prior to sampling. For round bales stored outside, remove weathered material from the area to be probed prior to sampling. Weathered material represents refusal and should not be included in the sample.

Core rectangular bales from the end. Center the hay probe in the end of the bale and insert at least 15-18 inches.

Core round bales from the side. Sample round bales by drilling or pushing the probe horizontally into center of the rounded side of the bale at least 15-18 inches (Figure 1).

Submit the entire sample for analysis. Do NOT subdivide the hay sample. This can result in the loss of smaller pieces of the sample that tend to be higher in nutritional value (Figure 3).

Do NOT submit excessively large samples. Forage testing labs will subdivide samples. They will NOT grind entire sample. This can significantly impact test results. The sample submitted should be no larger than one-half pound.

Figure 3. Never subdivide a sample before submitting it to the lab. Core samples are made up of both large and small particles that can segregate making it difficult to get a representative subsample. In this photo the fine particles have move to the bottom of the bag.

Clearly label samples. The entire sample should be placed into a labeled plastic bag and sealed. Make sure that the bag is clearly labeled with your farm's name, a description of the hay lot sampled that will allow you to reference the results back to the hay lot, the type of hay, cutting, and year, and the date it was sampled.

Submit samples immediately. The sample should be sent immediately to the lab for analysis. Make sure and complete the sample submission form for the lab that you are using.

Sampling Baled Silage. Sample baled silage in the same manner as hay. Delay sampling until at least four weeks after harvest to allow complete ensiling. Samples should be placed into labeled plastic bags as previously described and as much air as possible pushed out prior to sealing. Submit the samples immediately or refrigerate until shipped. Remember to immediately repair holes caused by coring using a UV-resistant tape designed for silage film.

If you need help with hay sampling or interpreting hay testing results, make sure and contact your local extension agent. They will provide you with accurate and science-based information.

Forage testing is available from a number of commercial labs and the Kentucky Department of Agriculture. The Kentucky Department of Agriculture offers a standard forage analysis to Kentucky producers for a reduced cost. More information on this program can be found at http://www.kyagr.com/marketing/forage-program.html. Make sure and use a lab that has been certified for accuracy and precision by the National Forage Testing Association. A list of certified labs can be found on the National Forage Testing Association webpage.

FAQs about Bovine Leukemia Virus (BLV) and Beef Cattle

Dr. Michelle Arnold, Ruminant Extension Veterinarian, University of Kentucky Veterinary Diagnostic Lab

What is "BLV"? Bovine Leukemia Virus (BLV) is an "oncogenic retrovirus" common in cattle throughout the United States. "Oncogenic" means the virus can cause the infected animal to develop cancer. A "Retrovirus" is a unique type of virus that uses an enzyme to reverse its genetic code from RNA into DNA which then gets inserted into the host cell's DNA and remains there for life. A well-known retrovirus in humans is the human immunodeficiency virus or "HIV" that causes the disease "Acquired Immune Deficiency Syndrome" or "AIDS". Cattle infected with bovine leukemia virus have the disease known to veterinarians as "Enzootic Bovine Leukosis" or EBL, but it is most often referred to as "Leukosis".

How common is BLV in beef cattle? Compared with dairy cattle, much less is known about BLV and beef cattle. A survey completed in 2019 of 28 cow-calf herds in the Midwest found at least one BLV-infected animal in 21 of those 28 herds and more than a third of the individual cows tested were positive. A similar study of bulls on 39 Midwest farms found nearly 50% of these operations had at least one positive bull and 45% of the 121 bulls tested were positive.

Why should BLV infection and leukosis be of concern when it is so common in cattle? Up until recently, the economic loss from leukosis was thought to be only due to death from cancer (lymphoma) or carcass condemnation at slaughter. However, like HIV in humans, now we understand the most

important impact from BLV is disruption of the immune system that allows more diseases to occur, resulting in suboptimal performance and early culling. Because BLV indirectly allows other disease conditions to flourish, there has been delayed recognition of its importance to overall cattle health.

How is the virus transmitted? This is one area of knowledge that is rapidly changing with improved technology. Blood-borne transmission is the most recognized route, but it can occur in many ways. Traditionally, BLV was thought to spread primarily through biting flies and poor management procedures such as injections with used needles, surgical castration/dehorning/tattooing with bloody equipment, and rectal palpation with dirty sleeves. However, other modes of transmission are possible including, for example, blood exchange during natural service when there is penile or vaginal trauma, and calves may be infected during pregnancy, or blood exchange during calving or through colostrum or milk while nursing an infected dam. Although BLV can spread through management procedures, recent studies have shown that changing management practices does not dramatically decrease prevalence. Similarly, transmission by biting insect vectors such as horseflies was found to be important in some, but not all agricultural areas.

Perhaps as important as knowing how the virus is transmitted, is knowing which cows are most likely to transmit the virus to their herdmates. A minority of cows are referred to as "super shedders" and are thought to be responsible for most BLV transmission in a herd. A new quantitative polymerase chain reaction (qPCR) assay has recently been developed that measures the amount of virus in the blood sample called the "proviral load" or PVL ("Provirus" is the portion of viral genetic material that is found within the lymphocyte). PVL is a good indicator of infectivity; for example, a cow that is highly infectious may have a PVL = 0.5 or more, which a 0.5 means there is one BLV-infected lymphocyte out of every 2 in the sample. For more information, visit https://mycentralstar.com/diagnostic-services#1556487494253-1f97cd0c-b360 and click on BLV.

Do all cattle with leukosis develop cancer? Leukosis has 3 distinct stages: asymptomatic (no visible symptoms of disease), persistent lymphocytosis, and a cancerous stage (leukemia, lymphoma, and lymphosarcoma).

- "Persistent lymphocytosis" or "PL" is a condition diagnosed by a 3-fold increase in total lymphocyte count (a type of white blood cell) above normal, and that lasts for at least three months but with no cancer development. PL is thought to occur in approximately 1/3 of all BLV-infected cattle. Lymphocytes are one type of white blood cell vital in immune system function. Dairy cattle with PL have decreased milk production, increased culling rates and more cancers. Beef cattle are probably similar, but studies are lacking to make this claim.
- Cancers, including leukemia, lymphoma and malignant lymphosarcoma, are the most common neoplastic (cancerous) diseases identified in cattle slaughtered in the United States and the largest single reason cattle are condemned during postmortem inspection. However, less than 5% of BLV- infected cattle go on to develop cancer. Interestingly, approximately 1/3 of the cattle with lymphomas did not have excessively high lymphocytes (PL) so cattle do not have to go through a PL stage to develop cancer. Also, younger animals, generally < 2 years old, can develop sporadic forms of cancer (juvenile, thymic and cutaneous lymphoma) that are not caused by the bovine leukemia virus.

What does a cow with cancer look like? The end stage of Enzootic Bovine Leukosis is cancer, usually a malignant lymphosarcoma. Only a small fraction of BLV-infected cattle, < 5%, develop cancer after an

average incubation period of 7 years after infection with the virus. The sites most affected by tumors are the heart, abomasum (true stomach), uterus, kidney (see Figure 1), spinal cord, and the area behind the eyeball. Early symptoms often include loss of appetite, weight loss, decreased milk production, and sometimes fever. The most common and usually earliest outward sign of cancer is enlarged lymph nodes which look like fist-size swellings in front of the shoulder, in the flank and other lymph node locations. Some cattle with cancer will show no sign of the disease and die suddenly.

Other symptoms depend on the organ affected by the tumor and can include:

- Tumors in the heart that can cause cardiovascular arrhythmias, jugular vein distension, rapid heart rate or heart murmurs. These tumors in the heart are often found in cases of sudden death where the cow is described as "absolutely normal" the day before she was found dead.
- Abomasal (stomach) tumors (see Figure 2) cause digestive problems resulting in loss of appetite and weight, constipation, or diarrhea, abomasal tympany (bloat), and slow gut motility.
- Retrobulbar (behind the eyeball) tumors can cause bulging eyes, blindness, and other ocular signs.
- Spinal tumors may cause rear limb weakness or paralysis or other neurologic signs due to tumor growth.

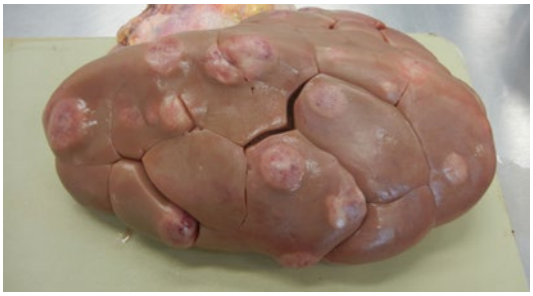


Figure 1: Lymphosarcoma in the kidney-Photo courtesy of the UKVDL

How is BLV diagnosed? Blood testing is the first step to identify BLV-positive (infected) animals. An inexpensive serum ELISA test is available at the UK Veterinary Diagnostic Laboratory to detect antibodies to the virus. Once an animal is infected and tests positive for antibodies, she will remain test positive for her lifetime. Testing can be done in animals over six months of age. Peripheral lymphocytosis can be diagnosed by a complete blood count (CBC) on a blood sample submitted to a veterinary practice or vet diagnostic lab. Tumors such as lymphosarcoma are usually diagnosed after death at necropsy but some are identified ante-mortem through a biopsy of an affected lymph node.

What should a producer do with a BLV (+) animal? The decision on what to do with a positive animal is best determined through consultation with the herd veterinarian, based on the specific goals of the individual farm. Implementation of a BLV control program depends largely on a comparison of the cost of the disease and the cost of preventing disease. Economic losses stem directly from the inability to sell cattle for export or as bull studs, condemnation of carcass at slaughter if tumors are present, and clinical disease/death loss. Recent research has shown indirect losses through lost milk production realized in lower weaning weights, higher culling rates, and immune system dysfunction also need to be considered. Seed stock producers and especially those who export internationally are more likely to aggressively pursue BLV-free herd status. Disease control is based on testing and segregating or culling positive cattle, adding only BLV-negative cattle to the herd, and making management changes that eliminate contact with infected blood. Reducing transmission through single-use needles/sleeves and disinfecting equipment between animals and implementing an integrated pest management program will help reduce the risk of BLV and all other blood-borne diseases. There is evidence of genetic influence on susceptibility to BLV that may become another tool for removing BLV soon.

If I test my herd and a large percentage are BLV +, do I have to just sell them all and start over? The good news is that you can progressively reduce BLV transmission by removing the most infectious cattle first. A majority of antibody + cows (ELISA +) pose a low risk of transmitting BLV to their herdmates so by identifying and culling only the most infectious cattle first will greatly reduce new cases of the disease. Any cow that shows + on the inexpensive ELISA test (meaning she has antibodies) can undergo the new, more expensive qPCR test for proviral load then one can cull or segregate based off results. With this method, the number of BLV-infected cattle in the herd decreases quite rapidly to the point where the inexpensive ELISA blood test for antibodies can be used alone to make culling decisions until BLV is eradicated in the herd. Twenty countries in the world are BLV free now but they started with very low infection rates and therefore could test and remove all animals positive for BLV antibodies. The qPCR for proviral load is an opportunity for countries like the US to remove the most infectious cattle and move a step closer to being BLV-free.

Thoughts on the May Cattle on Feed Report

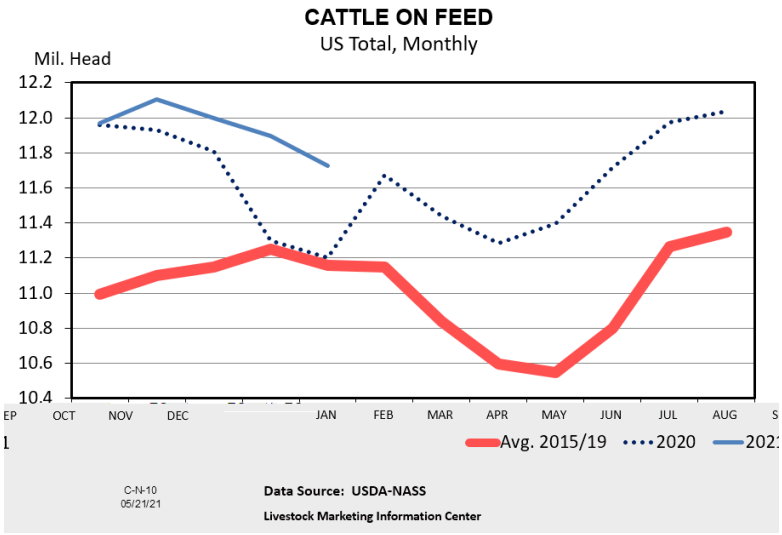
Dr. Kenny Burdine, Livestock Marketing Specialist, University of Kentucky

Friday May 21st brought USDA's May Cattle on Feed report, which estimates feedlot inventory in feedlots with one-time capacity over 1,000 head. Total feedlot inventory on May 1st was estimated at 11.7 million head, which was 5% greater than May 1st of last year. Like most every report being released, comparison of data to last year is difficult due to COVID impacts in 2020. The May 2021 estimate was just under 1% lower than 2019, which is probably a better comparison. Seasonally, on-feed inventories tend to decrease through summer, before increasing in fall / winter as spring born calves start hitting the markets. A link to the report can be found here: https://downloads.usda.library.cornell.edu/usda-esmis/files/m326m174z/f7624798b/fq978r249/cofd0521.pdf

April 2021 placements were up 27% year-over-year, mostly because placement were so low in 2020 due to the pandemic. However, placements did come in higher than pre-report estimates, and I think that could have been partially due to dry weather in many parts of the US. Drought tends to push cattle into feeding programs sooner than usual as grazing conditions deteriorate. The percent of pasture rated poor and very poor, is the highest it has been since the start of the series in 1995.

April marketings came in 33% above 2020 levels, which was right in line with expectations. Marketing patterns will also be interesting to watch as we move through 2021. Holding everything else constant, high feed prices tend to encourage cattle to move from feedlots to processors more quickly. Slaughter levels have been running quite high recently and Saturday slaughter is suggesting that packers are pushing volume. Given where feed prices are, I would expect weights to pull back, but I can't really say that we are seeing that yet.

While this month's article was focused on the May Cattle on Feed report, a lot of related issues were discussed in the video that Josh Maples, James Mitchell, and I recorded on Friday afternoon. Josh discussed weather and grazing conditions, James discussed corn markets and impacts, and I discussed management considerations given current market conditions. Here is the link: https://www.youtube.com/watch?v=UVuyC9euRqM


CATTLE ON FEED
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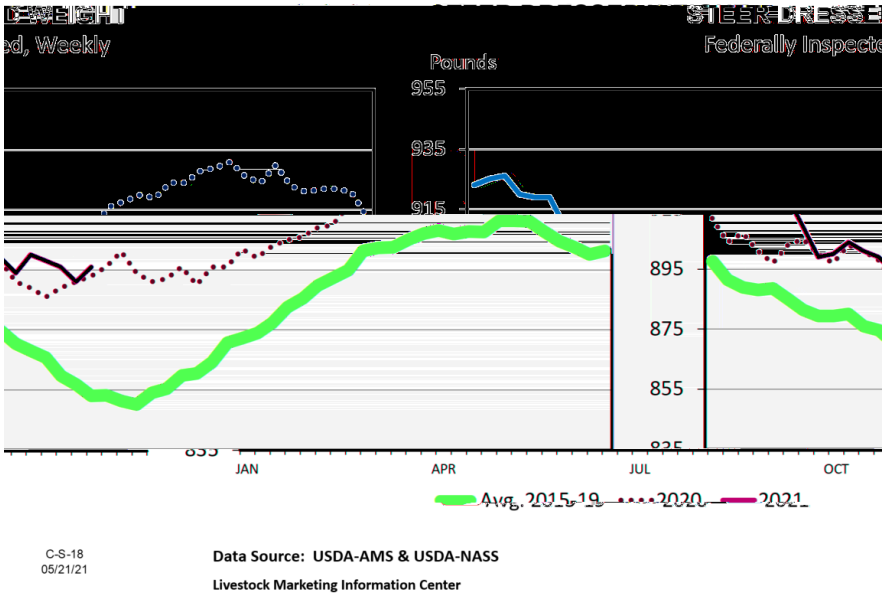
Data Source: USDA-NASS
Livestock Marketing Information Center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Data Source: USDA-AMS & USDA-NASS
Livestock Marketing Information Center