

OFF THE HOOF



Cooperative Extension Service
University of Kentucky
Beef IRM Team

KENTUCKY BEEF CATTLE NEWSLETTER OCTOBER 1, 2024

*Each article is peer-reviewed by UK Beef IRM Team and edited by Dr. Les Anderson,
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This month's newsletter includes:

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Timely Tips

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

Spring-calving herds

- Schedule a pregnancy examination of cows if not done previously. Winter feeding costs can be minimized by eliminating open cows prior to winterfeeding. Pregnancy status (pregnant versus open) can be determined using palpation, transrectal ultrasonography, or blood sampling. Stage of pregnancy can only be determined by palpation or ultrasonography (performed by your veterinarian). A new chute-side blood sampling kit (Alertys from IDEXX) is available for use. It provides yes/no pregnancy data in 20 minutes for about \$8-10 per cow.
- Evaluate the body condition of your cows and improve their condition prior to winter. It takes about 75 pounds to increase body condition a full score.
- If you have already done a preweaning working, revaccinate (booster) calves as needed. Treat calves for internal and external parasites. If you vaccinate calves yourself, be sure to store, handle, and administer vaccines properly.
- Wean calves before cows lose body condition.
- Obtain weaning weights of your calves and remember weaning is the time to do your first round of culling and selecting breeding stock. You can eliminate obviously inferior calves, especially those with wild or nervous dispositions. Consider the number of heifers that you will need to save for your cow herd. Bulls that are old, unsound, roguish, etc. can be culled now. It is not too early to begin thinking about replacements.

Fall-calving herds

- The calving season should be in full swing for fall-calving cows. Check cows frequently. Identify calves and commercial males should be castrated and implanted.
- Take accurate records of calving and calving performance. Our new app (Stocket at Stocket.us) makes data collection and reporting simple, easy, and convenient.

- Put fall-calving cows on accumulated pasture before the breeding season. Be sure to save some grass in the breeding pastures.
- It is time to get everything ready for the fall-breeding season, too. Line-up semen, supplies, etc. now and get your bulls ready to go (don't forget their breeding soundness evaluation). Breeding soundness exams are a vital component to reducing the risk of reproductive performance and need to be conducted 30-45 days before EVERY breeding season. Contact your herd veterinarian to schedule the exams.
- Obtain yearling measurements (weight, hip height, scrotal circumference, etc.) on replacement animals - especially for registered ones.
- Contact your herd veterinarian and schedule pelvic area examinations and reproductive tract scores for your potential replacements. Use pelvic area to identify larger heifers with smaller than normal pelvic areas so you can remove them from the breeding pool. Reproductive tract scores can be used to identify immature heifers for culling. Typically, heifers with a reproductive tract score less than 3 have limited ability to conceive early in the breeding season.

Stockers

- If you are purchasing weaned/stressed calves, have your receiving/feeding program in place. Feed a stress ration which contains at least 13% protein and is fairly energy dense.
- Manage to keep newly weaned and/or purchased calves healthy. Calves should be penned in a small lot with adequate feed, water, and shade to reduce stress. Careful handling and comfortable, uncrowded conditions can decrease stress.
- When newly weaned calves are purchased in the fall, sickness and death loss can be a big problem. Work with your veterinarian on a health and receiving program. Consider purchasing CPH-45 feeder calves that are preweaned, vaccinated, bunk-adjusted and treated for parasites.
- Watch calves closely for a few weeks after their arrival. Calves will normally break (get sick) 5-7 days after arrival, but they can break up to 14 days after they arrive. Have a treatment program ready for any health problems. Early recognition of sick cattle improves their chance of recovery. Watch for drooped ears, hollow appearance, reluctance to rise, stiff gait, coughing and dull or sunken eyes. A good "receiving" program is essential to profitability.

General Reminders

- Avoid prussic acid poisoning that can happen when frost ruptures the plant cells in sorghums, sorghum-sudan hybrids, sudangrass, and johnsongrass releasing prussic (hydrocyanic) acid. Fields can be grazed after the plants have dried up after a frost. New growth that occurs in stalk fields is potentially dangerous whether frosted or not.
- Take soil samples for soil analysis to determine pasture fertility needs. Apply phosphate, potash, and lime accordingly.
- Test hay quality and make inventory of hay supplies and needs. Adjust now - buy feed before you run out in the winter.
- Do not harvest or graze alfalfa now so the plant can replenish its root reserves.
- Remove fly-control eartags from all animals, dispose of according to instructions on package. Treat for grubs/lice.

Reviving Drought Stressed Pastures

Dr. Chris D. Teutsch, UK Grain and Forage Center of Excellence, Princeton, KY

A very hot and dry early summer combined with overgrazing has significantly reduced pasture growth and vigor in many areas of Kentucky. The good news is that drought stressed pastures often look worse than they really are. This is especially true for pastures that were well managed prior to drought. In many cases pastures can be revived without reseeding. The key element is rainfall. On the flipside, pastures that have been grazed closely and continuously prior to drought often do not fare as well during and after drought. The following are some considerations for reviving drought stressed pastures.

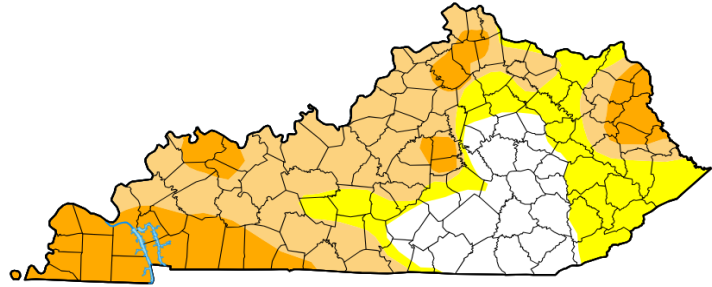


Figure 1. As of July 5, 2022, more than 78% of Kentucky was experiencing abnormally dry (yellow) to moderate drought stress (tan) (The National Drought Mitigation Center, University of Nebraska-Lincoln, Lincoln, NE).

Rest pastures during and after drought. Close the gates! The worst possible thing that we can do during and after a drought is to allow livestock access to all the pastures. During a drought, confining animals to one pasture and feeding hay limits damage to a single pasture and allows the other pastures to adapt to the drought stress. Following a drought, it is important to keep those animals confined to the sacrifice while other pastures recover. This allows pasture plants to rebuild their photosynthetic factory (leaf canopy) and store up sugars and carbohydrates before the winter months. The stockpiled growth that accumulates during this recovery period can then be used for grazing during the winter months after plants have gone dormant.

Fertilize pastures according to soil test. Fertilizing pastures this fall can help to strengthen plants and get them ready to grow next spring. Adjust the soil pH to 6.0 to 6.4, apply phosphorus and potassium according to your soil test, and apply 60-80 lb nitrogen/A in mid-August to mid-September for stockpiling. Alternatively, a smaller amount of nitrogen (30 to 40 lb/A) in November or early December can be applied (see last month's article). This late-season nitrogen application will not produce a great deal of fall growth, but it will stimulate tiller production and root growth. Pasture growth will start earlier in the spring stands will be thicker.

Interseed legumes into thin stands. Legumes such as red and white clover, and alfalfa are important components of sustainable grassland ecosystems.



Figure 2. Recent research at the USDA Food Animal Production Unit located in Lexington, KY, found that compounds in red clover can reverse vasoconstriction caused by the toxins in endophyte tall fescue.

They form a symbiotic relationship with rhizobium bacteria in which nitrogen from the air is fixed into a plant available form. They also dilute the toxin in tall fescue infected with the toxic endophyte and in some cases may even reverse the negative effects of the endophyte. Pasture sod suppressed by drought and overgrazing provide a perfect opportunity for interseeding clover and alfalfa. Legumes can be either drilled in the fall or spring or frost seeded in late winter. Frost seeding works best with red and white clover and annual lespedeza. Alfalfa is better established using a no-till drill. For more information on selecting varieties and overseeding contact your local extension agent or visit the UK Forages Webpage at <http://forages.ca.uky.edu/>.



Figure 3. Winter annuals such as small grains and annual ryegrass can be interseeded into drought stressed pastures that have than stands of perennial cool-season grasses.

Plant winter annuals. In some cases, drilling cool-season annuals, such as small gains, annual ryegrass, and brassicas into dormant sods can be cost effective. In this situation, sods are normally in very poor condition and there are simply not enough remaining plants to actively compete with the cool-season annuals. However, interseeding cool-season annuals into a dormant sod that was well managed prior to the drought does not normally work as well as expected. This is due to the fact that the ground is very dry and when the rain finally comes the seed not only starts to germinate and grow, but so does the dormant sod. An established fescue sod has an extensive root system that competes well for limited moisture. On the other hand, newly established seedlings have a very small root system and are at a serious disadvantage when competing for water and light with an established fescue sod. The best place for cool-season annuals is on cropland or areas that had summer annuals that has already been harvested or grazed. In general production on these areas will be greater due to the absence competition. In order to optimize late fall and early winter production, these mixtures should be seeded in mid to late-August, given soil moisture is adequate for germination and emergence. Seeding recommendations can be found in Table 1.

Include brassicas in mixture. Rape and turnips can be planted in late summer to provide late fall and early winter grazing. All brassicas require well-drained, fertile soils and a near neutral pH for optimum production. Strip grazing is needed to maximize utilization of brassicas. Brassicas can be 90% digestible and can cause health disorders if not properly managed. Problems can be avoided by following several commonsense recommendations: 1) introduce animals to brassica pastures slowly, 2) never turn hungry animals that are not adapted into brassica pastures, 3) brassicas should not make up more 75% of diet, and 4) plant a mixture of brassicas and cool season annual grasses, 5) allow access to grass pasture or dry hay at all times. Seeding recommendations can be found in Table 1.

Table 1. Cool season annual seeding recommendations.

Forage or Mixture	Seeding Rate	Seeding Depth	Notes
Annual ryegrass	25 lb/A	½ in	
Barely	90-150 lb/A	1-2 in	
Oats	60-100 lb/A	1-2 in	
Triticale	90-150 lb/A	1-2 in	
Wheat	90-150 lb/A	1-2 in	
Turnips	3-6 lb lb/A	¼ in	Small box on drill
Hybrid rape	3-6 lb/A	¼ in	Small box on drill
Oats + Annual ryegrass + hybrid rape	50 + 15 + 3 lb/A	½ to 1 in for ryegrass and small grain and ¼ inch for rape	
Other small grain + annual ryegrass	90 + 15 lb/A	½ to 1 in for annual ryegrass and small grain	
Oats + Annual ryegrass + turnips or hybrid rape	50 + 15 + 3 lb/A	½ to 1 in for annual ryegrass and small grain and no deeper than ¼ in for brassicas	Use large box for small grain and annual ryegrass and small box (legume) for brassicas.
Other small grain + annual ryegrass + turnips or hybrid rape	90 + 15 + 3 lb/A	½ to 1 in for annual ryegrass and small grain and no deeper than ¼ in for brassicas	Use large box for small grain and annual ryegrass and small box (legume) for brassicas.

Late planted summer annual can provide emergency forage. Pearl millet can be planted in mid to late summer, given adequate soil moisture. The yield potential will be less than earlier plantings, but they could yield in the range of 1-2 ton/A. Since the planting time is not ideal, use the higher end of the recommended seeding rates, 40-50 lb/A for sorghum-sudangrass and 20-25 lb/A for the pearl millet. Graze at 20 inches and harvest at 40 inches.

It is important to remember that drought alone rarely kills well managed pasture plants. In most cases pastures can be revived with rain, rest, and a little fertilizer. Weakened sods provide a prime opportunity for incorporating legumes in established pastureland. With a little tender loving care and rainfall this year's drought stressed pastures will be next year's green meadows.

More information on reviving drought stressed pastures can be found on the [UK Forages webpage](#) or by visiting your [local extension office](#).

The Asian Longhorned Tick and Theileria Orientalis Ikeda – What have we learned in the last 2 years?

Dr. Michelle Arnold – DVM, MPH UK Ruminant Extension Veterinarian

In late June 2022, the UKVDL received a yearling Hereford bull for necropsy with a history of “symptoms of pneumonia.” At necropsy, the sclera (white of the eye), mucus membranes, and fat were yellow. Serologic (blood) testing for *Anaplasma sp.* was negative and PCR testing for *Anaplasma marginale* was also negative. A sample of spleen submitted to the Virginia Tech Animal Laboratory Services (ViTALS) was positive for *Theileria orientalis*. Further genotyping confirmed the genotype as Ikeda. This was the first known case of “bovine theileriosis” diagnosed in Kentucky, a tickborne disease caused by the protozoan blood parasite *Theileria orientalis* Ikeda. *Theileria* sporozoites (the infective stage) are primarily transmitted to susceptible cattle through the bite of an infected Asian Longhorned Tick (ALHT). In 2022, ALHT had been identified in 16 states, including Kentucky, and the list has now grown to 22 states and Washington DC (Figure 1). While cattle deaths in KY due to theileriosis have been limited in number, they continue to occur, especially as diagnostic capabilities improve. So, the question becomes, what have we learned about this disease and the tick responsible for spreading it since its arrival in 2022?

The ALHT, scientifically known as *Haemaphysalis longicornis*, requires warm-blooded animals such as humans, wildlife (white-tailed deer, raccoons, birds), and domestic animals to feed on for survival. Only parthenogenetic strains of ALHT exist in the USA, meaning male ticks are not required for reproduction. In the US, all ALH ticks are female, and each can produce 1,000-2,000 female offspring, allowing the tick population to rapidly explode. This means an individual animal could host hundreds to thousands of ticks and a severe infestation can kill the animal from

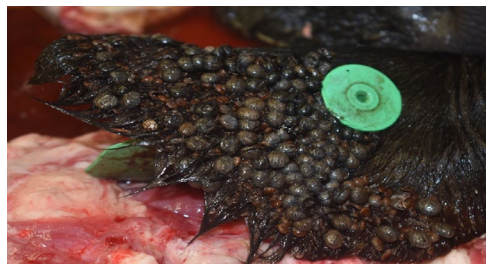


Figure 1: ALHT in the US as of 8/1/2024. A minimum observation period of 1 year is necessary to determine if this tick species can survive and thrive throughout the various local and seasonal changes. The critical environmental factors involved in establishment of the ALHT are climate, habitat suitability and host availability.

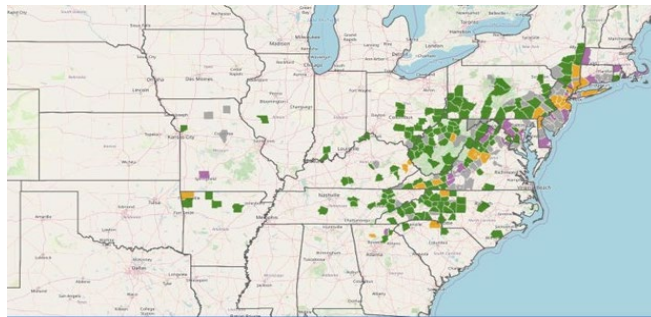


Figure 2: Asian longhorned ticks on the ear of a cow that died due to anemia from the massive tick infestation (Photo courtesy of the UKVDL).

excessive blood loss (Figure 2). The ALHT is a “three-host” tick species, meaning they seek a new individual animal on which to feed for each life stage. The tick lifecycle consists of four consecutive stages – eggs hatch into larvae, larvae feed on blood (from Host #1), fall off and molt to nymphs, nymphs feed on blood (from Host #2), fall off and molt to adults, and adults feed on blood (from Host #3) then lay eggs. All tick stages live at the base of pasture plants and “quest” (search) for a host by climbing up plant stems and attaching to a passing animal. Blood-feeding lasts anywhere from 5 to 14 days, longer with older life stages. In the United States, host-seeking nymphs are most active in the spring, adults in the summer, and larval stages in the fall but all stages may be observed questing throughout the warm seasons. Cattle begin to show signs of disease 4-6 weeks after infected ticks take their blood meal. Keep in mind that wildlife can serve as tick hosts and accelerate their spread in the absence of cattle. Ticks can remain infective on pasture for up to 2 years under favorable conditions so removing cattle from infested pastures for extended periods will not remove ticks from the area.

Regardless of life stage, whether larva, nymph or adult, the ALH tick acquires the *Theileria orientalis* blood parasite when it feeds on blood from an infected cow and the tick remains infected throughout its life stages. Fortunately, an infected adult tick cannot pass the *Theileria* organism to her eggs so newly hatched larvae can only acquire the parasite with their first meal. Therefore, only the nymphs and adult ticks can infect naïve cattle with *Theileria orientalis* and cause disease. Infected nymphs that go dormant during winter (known as “diapause”) in the grass and woods can transmit the disease to cattle the following spring. It is also possible for eggs, larvae and adults to survive mild winters and resume development when the weather warms. The *Theileria orientalis* organism is a protozoon that infects and destroys red blood cells, causing anemia in infected cattle. This disease, called “bovine theileriosis”, is often mistaken for anaplasmosis, another tick-borne disease caused by a blood bacterial parasite, *Anaplasma marginale*. Clinical signs seen in both *Theileria*-infected cattle and *Anaplasma*-infected cattle are due to severe anemia and include lethargy, anorexia, fever, exercise intolerance, difficulty breathing, foamy nasal discharge, an increased incidence of abortion, pale mucous membranes or jaundice, aggression, and death. Most theileriosis cases occur between April-June and September-November but can be seen year-round and in all ages of cattle. After initial infection, animals that survive become chronic carriers and can relapse during periods of stress. Anaplasmosis, on the other hand, usually occurs in the fall (September-November), only affects adult cattle, and cattle tend to show more aggressive behavior. There is no effective treatment for Theileriosis or vaccine to prevent infection. *T. orientalis* Ikeda is not a public health concern and contact with affected cattle does not pose a human health risk.

At the UKVDL, diagnostic testing for detection of *T. orientalis* in live animals is performed on whole, anticoagulated bovine blood (collected in purple top blood tubes) or from the spleen collected at necropsy. A duplex PCR, the “Anaplasma/Theileria Tick Panel PCR” (\$68.50 + Accession fee) can detect both of the blood-borne organisms that cause anemia, *Theileria orientalis* and *Anaplasma marginale*. There are 11 different genotypes related to *T. orientalis* so a second test, the “Theileria Duplex Real-time PCR” (\$40 + Accession) is necessary to confirm the Ikeda genotype.



Photo credit: CDC and Tick and Hand Photo credit: Michael Greenwood

Figure 3: Top: Asian longhorned ticks are light brown in color and are very small, often smaller than a sesame seed, as seen in the photo on the fingernail. Bottom left: The nymph and adult stages (a dime is in the background). Bottom right: The adult female is only about the size of a pea when it is full of blood.

Because ALHT can vector *Theileria* to cattle and can cause extreme blood loss in farm animals, careful monitoring of livestock and use of tick prevention methods is highly recommended. Routinely inspect livestock, pets, and humans for ticks. In cattle, check the head, neck, ears, flanks, armpit, groin, udder and under the tail (areas where the skin is thinner). Cattle that seem lethargic or unthrifty should be closely inspected for ticks. The most common areas on cattle that ticks will be found are around the tailhead, on the udder, inside the legs, on the brisket, in the ears (particularly near the insertion sites of ear tags) and occasionally on the face and neck. Tick identification is helpful for both disease diagnosis and premises assessment. Laboratory identification is the best way to confirm the identity of ALHT. The ticks are light brown and often smaller than a sesame seed. The adult female is about the size of a pea when full of blood (Figure 3). If concerned about the identification of the Asian longhorn tick, or if you find an unusual tick species on an animal, it can be submitted to the National Veterinary Services Laboratory, and they will appropriately identify the tick. Contact the UKVDL for further information.

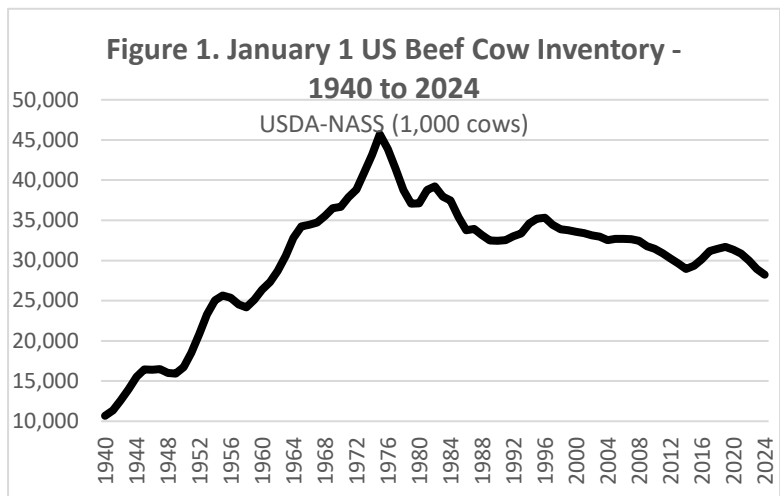
Tick control should be approached from both the animal and the environmental perspectives. Integrated tick management includes a combination of tick surveillance, altering tick habitat, strategic application of insecticides to cattle, and careful management of cattle movement. Currently there are no known “acaricides” (tick pesticides) labeled for use against the ALHT. The use of pesticide impregnated ear tags, pour-ons, sprays, and back rubs labeled for control of the American dog tick and the Lonestar tick should also provide beneficial ALH tick control. Employing more than one control method for cattle (such as using ear tags and back rubbers) will yield better results. Control through treating cattle with acaricides alone is difficult due to the limited time ticks are attached to the host as ticks spend nearly 90% of their lifetime in the environment. The main environmental goals are to modify the habitat so ticks are unable to survive there, and hosts are not present in the tick-infested areas. Environmental control involves mowing pastures, especially overgrown grasses and weeds, and for extreme numbers of ticks, acaricides can be applied to vegetation. Apply acaricide using label instructions to sections of pasture with the highest number of ticks, such as woodland edges and grassy patches, during times when ticks are most actively seeking hosts. Although it varies by year, ALH ticks are generally active from March to November, with chemical applications on vegetation most successful in the spring. Perimeter fencing of a minimum of 20 feet from wooded areas will also help reduce cattle contact with ticks in the pasture. Perimeters can be treated with pyrethroid products (such as bifenthrin) though this should not be done to entire pastures. Bifenthrin 2E®, Paradigm VC®, (pyrethroids), and Sevin SL®, (carbaryl insecticide) are approved for pasture applications in certain states; check with your local county agent or regulatory official before using any pesticide.

Lastly, remember that when animals move, ticks move with them whether it is across state lines or across personal properties. When rebuilding or expanding herds, learn something about the source area and make sure to inspect and treat new purchases to remove ticks, quarantine them for observation and ask your veterinarian to conduct appropriate diagnostic tests before mixing the new cattle with the home herd. Virginia Cooperative Extension has produced a fact sheet entitled “Managing the Asian Longhorned Tick: Checklist for Best Management Practices for Cattle Producers” that covers animal inspection, chemical control, and herd management options. It may be downloaded at https://www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/ENTO/ento-382/ENTO-382.pdf Figures 1 and 3: Accessed from <https://www.aphis.usda.gov/livestock-poultry-disease/cattle/ticks/asian-longhorned/asian-longhorned-tick-what-you-need-know>

A Look at the Cattle Markets Going into Fall

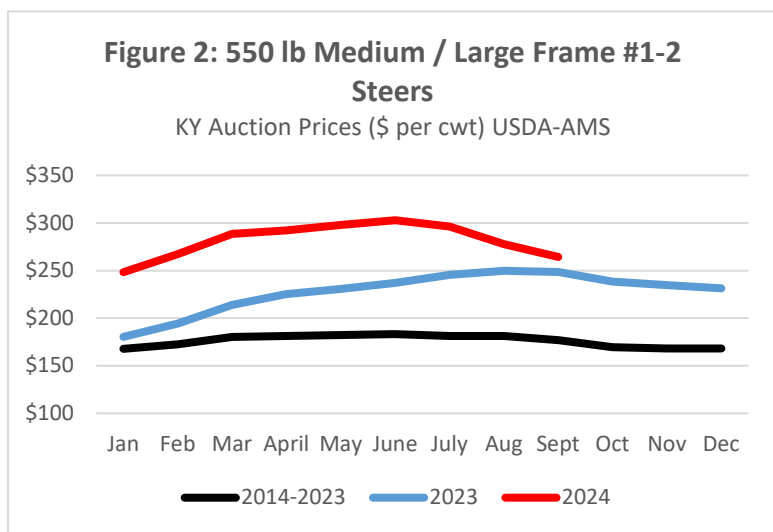
Dr. Kenny Burdine, University of Kentucky

The expansion phase of the current cattle cycle began in 2015. Drought in the Southern Plains from 2011 to 2013 expanded the liquidation phase of the previous cycle and brought beef cow inventory to levels not seen since the early 1960's. From those 2014 lows, the cow herd grew by more than 9%, reaching its high for the current cattle cycle in 2019. Liquidation began in 2020 and appears to be ongoing as I write this in early September. As can be seen in figure 1, 2024 beef cow inventory was actually below 2014 levels, checking in as the smallest cowherd on record since 1961.

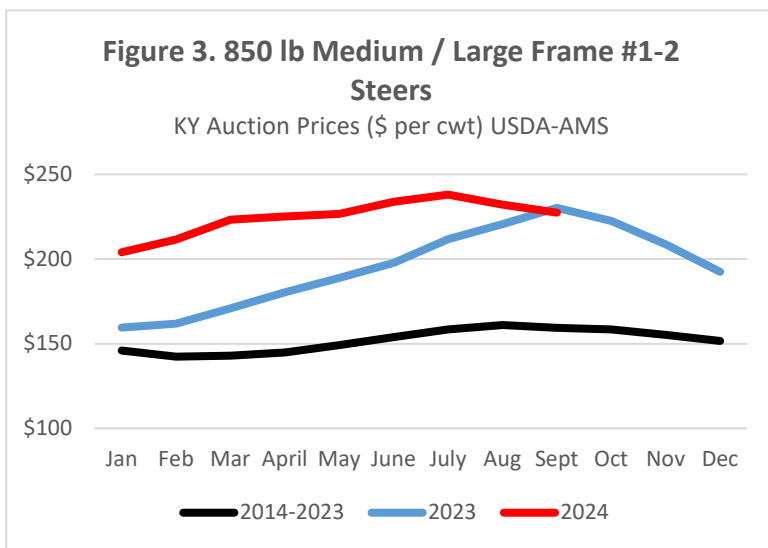


The lag between beef cow numbers and beef production has also made this a unique cycle. Holding everything else constant, one would have expected beef production to peak the year following the 2019 highs in beef cow inventory as that calf crop would have been harvested the following year. However, COVID pushed some 2020 production into 2021 and widespread drought led to significant heifer and cow slaughter in 2022. So, despite the fact that the cowherd reached its relative peak in 2019, we didn't see a year-over-year decrease in beef production until 2023.

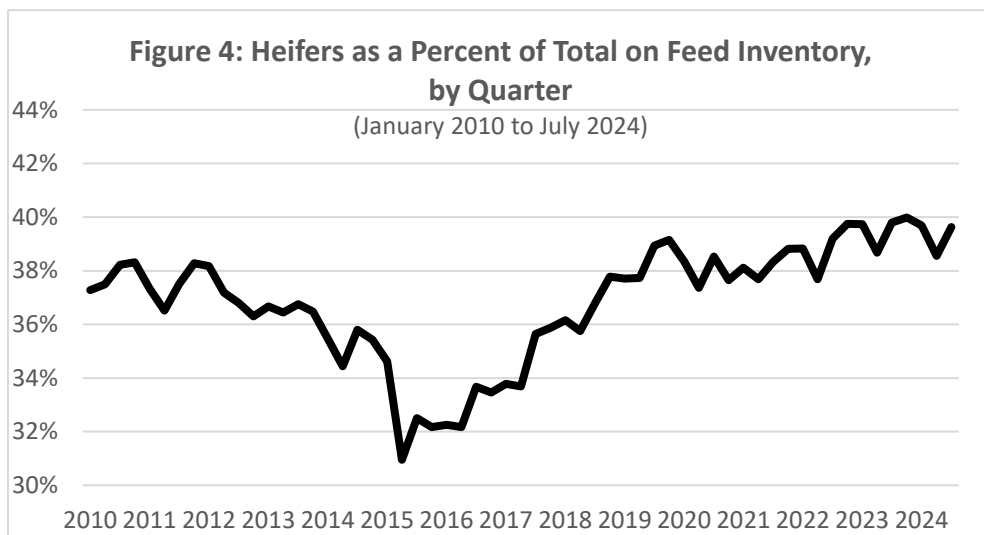
Lower beef production levels and tighter feeder cattle supplies resulted in sharply higher cattle prices in 2023 and 2024. There has absolutely been volatility and frustrating downturns along the way, but the general price improvement can't be denied. On a state average basis, 550 lb M/L #1-2 steer prices increased by \$50 per cwt in 2023 and are on track for a similar sized increase for 2024. The increases have not been quite as high for heavy feeders, but they have posted gains in each of the last two years as well. Monthly Kentucky auction prices through August 2024 can be seen in figures 2 and 3.



The monthly charts don't do a very good job describing the changes in cattle markets in late summer. Fall feeder cattle futures fell sharply beginning in late July. By the end of August, calf prices were off \$30-40 per cwt from their early summer highs. The decline has not been quite as steep on heavy feeders, but they have pulled back as well. The late summer drop reminds me a bit of what we saw in the fall of 2023, it just seemed to come a little earlier this year. While supply fundamentals remain encouraging, the cattle complex seemed to respond negatively to some macroeconomic data that raised questions about meat demand going forward. The market is also likely trying to process the impact of expanded Avian Influenza testing and uncertainty about the upcoming presidential election.



Despite the volatility, calf prices have been high enough to start watching for early signs of cowherd expansion. Tracking this was a bit harder this year since USDA-NASS did not release a July Cattle Inventory report. The best indicator we have is the share of heifers on feed, which is estimated once per

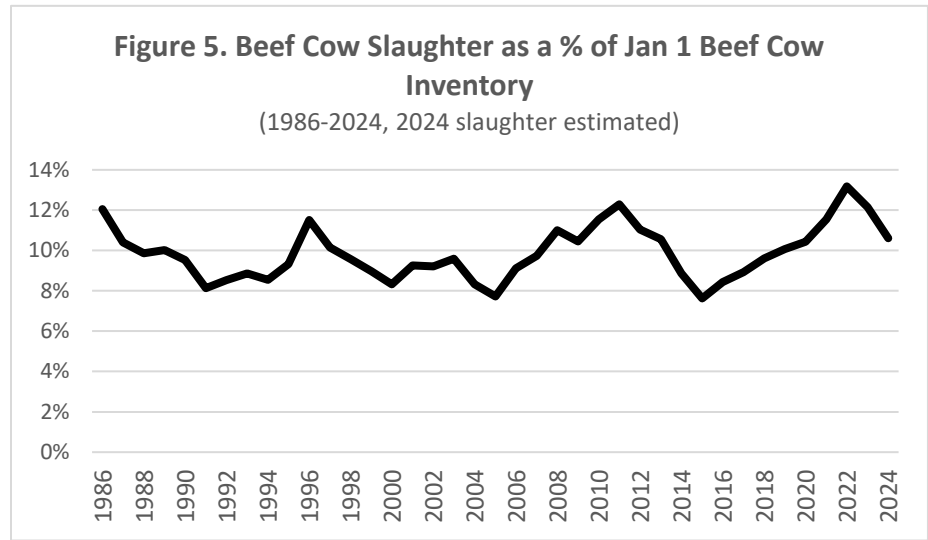


quarter in the Cattle-on-Feed report. During expansionary times when large numbers of females are being held for beef cow replacement, heifers as a percent of total on-feed inventory is typically in the low-30% range. This can be seen in 2015-2017 in figure 4 and contrasts to the more recent estimates which place the heifer percentage very near 40%. The most recent data is from July 2024; additional estimates will be made in October and January.

On the surface, it seems strange that we are not seeing any signs of heifer retention given the strength of calf prices and more favorable weather conditions in the current year. But I think it is important to remember that we are not that far removed from much lower prices as fall 2022 calf prices were well south of \$2.00 per lb. In fact, the years 2016 through 2022 were very difficult for the cow-calf sector as farmers faced stagnant calf prices and rising production costs. In truth, most cow-calf operations have only sold one calf crop in the new market environment.

While calf prices and weather conditions have improved over the last 2 years, there still seems to be some hesitancy to hold back heifers with expansion in mind. I think this hesitancy starts with understanding that producers would be holding back some of the most valuable heifer calves they have ever produced. That does not mean that expansion doesn't make sense for some producers, but I do think it is causing a few to pause a bit longer than usual. The higher interest rate environment of today also is a consideration as higher interest rates increase the preference for money today (heifer calves) over money in the future (future calves).

Finally, I think one has to acknowledge the impact of the cull cow market on beef cow inventory. As strong as calf and feeder prices have been, a case could be made that cull cow prices have been even more impressive. Cull cows running through KY auctions this summer sold for \$400-\$500 more than 2023 and \$600-\$700 more than 2022. Still, beef cow slaughter is down by almost 15% year-over-year through the first



seven months of 2024. That is definitely noteworthy, but it is also a bit misleading. The last several years have been high cow slaughter years, so the baseline for comparison is high. For some additional perspective, I like to look at beef cow slaughter as a percentage of January 1 beef cow inventory. Extrapolating a bit to estimate the rest of 2024, I am projecting beef cow slaughter to be around 10.6% of this year's beef cow inventory. While that is down from the last three years, it is not a number that speaks to the cowherd getting larger, especially given the large share of heifers on feed this summer (see figure 5).

For margin operators, 2024 will be remembered as a mixed bag. The timing of the market drop in late summer hit a lot of producers as they were starting to move large numbers of feeders. Increased use of risk management tools offset these losses for some of these operators, but many did not protect themselves due to general market optimism and the cost associated with price protection.

The feed price environment also changed a great deal over the course of 2024. On one hand, cheaper feed is a welcome change for feed-based growing operations as cost of gain will be lower going forward. But those same high feed prices also worked to keep value of gain high as feedlots preferred to place heavier feeders. This is a dynamic that will be different for the balance of 2024 and into 2025. In Kentucky, we have the ability to utilize a wide range of feedstuffs, which should continue to work to our advantage. But the value of lbs added prior to feedlot placement will likely be lower because feedlot cost of gain will be lower.

Impacts will also be seen in the spring as stocker operators place calves into grazing programs. For several years, cost of gain on feed has greatly exceeded cost of gain on grass. This really limited interest in placing calves into feed-based spring in the spring and resulted in attractive stocker margins. With cheaper feed, that cost of gain differential will be smaller and feed-based operations will be more aggressive in calf markets. I still think opportunities will exist, but stocker budgets likely won't look quite as attractive at placement in 2025.

Looking ahead, seasonal calf price declines are still very possible as we move into fall and larger numbers of calves start running through markets. But lower feed prices should help calf demand to some degree and wheat grazing conditions will also play a role. I don't see prices falling anywhere near as far as they did last fall. As is so often the case, spring pasture will likely be the best medicine for the calf market and I look for a spring market similar to 2024.

I am still optimistic about the overall cattle market for the next couple of years. Vulnerabilities remain on the demand side with questions about the labor market, interest rates, inflation, etc. But from a supply perspective, the cattle market should have good support. My initial guess would be that beef cow inventory will be down another 0.5% to 1.5% to start 2025. The rest of this year will be critical as fall is when most calves are weaned, and most culling decisions are made. If weather conditions are favorable, I would not be surprised to see cow slaughter pull back even further in the 4th quarter. There is also potential for some increased heifer retention of the 2024 calf crop to start showing up by year-end. But the 2025 calf crop will be smaller than 2024. And once expansion does begin, the decreased number of females coming into the markets will tighten supply and further support prices. While the volatility has been frustrating, I think the cow-calf sector will remain in the driver's seat for a bit longer.