

OFF THE HOOF

Cooperative Extension Service
University of Kentucky
Beef IRM Team

KENTUCKY BEEF CATTLE NEWSLETTER SEPTEMBER 1, 2025

Each article is peer-reviewed 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 Cows

- Bulls should have been removed from the cow herd by now! They should be pastured away from the cow herd with a good fence and allowed to regain lost weight and condition. It is a good time to evaluate physical condition, especially feet and legs. Bulls can be given medical attention and still have plenty of time to recover, e.g., corns, abscesses, split hooves, etc. Don't keep trying to get open spring cows bred – move them to fall calving or sell them when they wean this year's calf. If you don't have a bull pen and want to tighten up the calving season, remove the bull and sell him. Plan on purchasing a new bull next spring.
- Repair and improve corrals for fall working and weaning. Consider having an area to wean calves and retain ownership for postweaning feeding rather than selling "green", lightweight calves. Plan to participate in CPH-45 feeder calf sales in your area.
- Limited creep feeding can prepare calves for the weaning process since they can become accustomed to eating dry feed. This will especially benefit those calves which you are going to keep for a short postweaning period – like the CPH-45 program. It's time to start planning the marketing of this year's calf crop.
- Begin evaluating heifer calves for herd replacements – or culling. Each time you put them through the chute you can evaluate them for several traits, especially disposition. Consider keeping the older, heavier heifers. They will reach puberty before the onset of the breeding season and have higher conception rates.
- This has generally been a reasonably good year for pastures, but many parts of the state are starting to get a bit dry. Evaluate moisture condition and consider stockpiling some fescue pastures. It's not too late to apply nitrogen for stockpiling fescue if moisture conditions have improved.
- Stresses associated with weaning can be minimized by spreading-out other activities commonly associated with weaning – like vaccinations, deworming and, perhaps, castration and dehorning (which should have already been done!). Therefore, this month is a good time to do a "preweaning"

working of cows and calves.

- When planning the preweaning working, consult with your veterinarian for advice on animal health products and procedures. One procedure that can be done now is pregnancy checking cows. Early pregnancy diagnosis will allow time to make culling decisions prior to weaning time. Feeding non-productive cows through the winter is a costly venture so pregnancy diagnosis is one of the sounder business decisions a producer can make.

Fall-Calving Cows

- Fall-calving should start this month. Get your eartags ready. Cows should be moved to a clean, accessible pasture and be watched closely. Tag calves soon after they are born and record dam ID and calf birthdate, etc. Castration is less stressful when performed on young animals and calves which are intended for feeders can be implanted now, too.
- If you haven't started calving quite yet, then it's time to get ready. Be sure you have the following:
 - record book or sign up for Stocket (www.Stocket.us or app store). Stocket is a mobile app designed to make record keeping simple and convenient.
 - eartags for identification
 - iodine solution for newborn calf's navel
 - calf puller
 - castration equipment
- Watch for those calves which may come early and be prepared to care for them.
- Be on guard for predators – especially black vultures.
- Move cows to best quality fall pasture after calving. Stockpiled fescue should be available to these cows in November-December to meet their nutritional needs for milking and rebreeding.
- Start planning now for the breeding season. If using AI, order supplies, plan matings and order semen now.

Stockers

- Calves to be backgrounded through the winter can be purchased soon. A good source is Kentucky preconditioned (CPH-45) calves which are immunized and have been preweaned and “boosted”.
- Plan your receiving program. Weanling calves undergo a great deal of stress associated with weaning, hauling, marketing, and wide fluctuations in environmental temperature at this time of year. Plan a program which avoids stale cattle, get calves consuming water and high quality feed rapidly. Guard against respiratory diseases and other health problems.

General

- Keep a good mineral mix available at all times. The UK Beef IRM Basic Cow-Calf mineral is a good choice.
- Do not give up on fly control in late summer, especially if fly numbers are greater than about 50 flies per animal. You can use a different “type” of spray or pour-on to kill any resistant flies at the end of fly season.
- Avoid working cattle when temperatures are extremely high – especially those grazing high-endophyte fescue. If cattle must be handled, do so in the early morning.
- Provide shade and water! Cattle will need shade during the hot part of the day. Check water supply

- frequently – as much as 20 gallons may be required by high producing cows in very hot weather.
- Plan the winter-feeding program. Take forage samples of hay you will feed this winter. Request protein and TDN analysis so that supplemental feed needs may be estimated. Don't wait until you run out of feed in February to purchase extra feed. Plan to minimize hay storage and feeding losses because feed is too expensive to waste.
 - If you have adequate moisture, stockpiling fescue might be a viable option. Nitrogen application to fescue pastures can be made now and allow them to grow and accumulate until November, or when other sources of grazing have been used up. To make best use of this pasture, put fall-calvers, thin spring-calvers, or stockers on this pasture and strip graze.
 - Don't graze sorghum or sudan pastures between the first frost and a definite killing frost because of the danger of prussic acid poisoning. Johnsongrass in stalk fields can also be a problem after a light frost. Grazing can resume after the sorghum-type grasses have undergone a killing frost and dried up.

Don't Forget Beef Bash!

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

Just a friendly reminder that Beef Bash will occur on September 20th at the C. Oran Little Research Center located at 4410 Frankfort Road, Versailles Kentucky. Please enter the farm through the Frankfort Road (US 60) exit. Registration will begin at 9 AM and the educational sessions will run from 10 AM to 2:30 PM. This year we will have educational sessions for youth as well as adults. Sessions will discuss nutrition, forages, fescue toxicosis, reproduction, precision agriculture, and a great session from our Foods group and KBC on preparation.

We prefer preregistration so we can prepare for the meal. Costs are \$15 for adults and \$5 for kids which includes the meal ticket. The link to preregister is below:

<https://www.eventbrite.com/e/beef-bash-2025-registration-tickets-1478821267219?utm-campaign=social&utm-content=attendeeshare&utm-medium=discovery&utm-term=listing&utm-source=cp&aff=ebdsshcopyurl>

We hope to see you there!

Frequently Asked Questions about Harmful Algal Blooms (HABs) in Farm Ponds used to Water Livestock

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

Water is the most essential nutrient in the diet of cattle and during hot and dry weather, it is especially important to monitor water quality if using farm ponds for livestock.

What is a “harmful algae bloom” or “HAB”? During periods of hot and dry weather, rapid growth of algae to extreme numbers may result in a “bloom”, which is a build-up of algae that creates a green, blue-green, white, orange, or brown coloring on the surface of the water, like a floating layer of paint (see Figure 1). Blooms are designated “harmful” because some algal species release toxins (poisons) when stressed or when they die. The majority of HABs are caused by blue-green algae, a type of bacteria called “cyanobacteria” that exist naturally in water and wet environments. These microorganisms prefer warm, stagnant, nutrient-rich water and are found most often in ponds, lakes, and slow moving creeks. Farm ponds contaminated with fertilizer run-off, septic tank overflow or direct manure and urine contamination are prime places for algae to thrive. Although blooms can occur at any time of year, they happen most often in hot, sunny weather with little wind and little recent rainfall, typically between June and September when temperatures reach 75 degrees or higher and ponds begin to stagnate. HABs can reduce water quality and intake, but more importantly, they can be deadly when ingested by livestock. Windy conditions can push algal blooms along water edges, increasing the risk for livestock to ingest algae when they drink.



Figure 1: Pond in Scott County-Photo courtesy of Dr. Michelle Arnold, University of Kentucky

Are all algal blooms poisonous to cattle? Of the more than 2000 species of blue-green algae identified, at least 80 are known to produce toxins that can affect animals and humans (see Table 1). Blue-green algae toxins are released when algal cells are damaged and die in the water (for example, after water is treated with an algacide such as copper sulfate), or when ingested water reaches the animal’s digestive tract and algal cells are disrupted, releasing the toxins. The most common genera of blue-green algae in North America associated with livestock poisoning are *Anabaena* (also known as *Dolichospermum*), *Aphanizomenon*, *Oscillatoria*, and *Microcystis*. *Microcystis* is the most common bloom-forming genus, and blooms are typically a greenish, thick, paint-like (sometimes granular) material that accumulates along shores. If an algal bloom is observed, testing water samples is recommended to confirm it is blue-green algae. Be aware that having an algae bloom present in a pond does not automatically mean toxins are being produced but it is best to assume the water could be deadly if used for livestock drinking water.

Table 1 Cyanotoxin structures, toxicological effects, and known producers

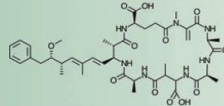
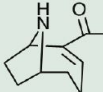
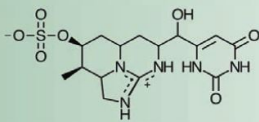
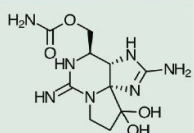
Toxin	Structure	Organ	Genera
Microcystin		Liver (possible carcinogen)	<i>Microcystis</i> <i>Anabaena</i> <i>Planktothrix</i> <i>Anabaenopsis</i>
Anatoxin - a		Neurotoxin (nerve synapse)	<i>Anabaena</i> <i>Planktothrix</i> <i>Aphanizomenon</i> <i>Cylindrospermopsis</i>
Cylindrospermopsin		Liver (possible kidney, genotoxic and carcinogen)	<i>Cylindrospermopsis</i> <i>Aphanizomenon</i>
Saxitoxin		Neurotoxin (sodium channel blocker)	<i>Anabaena</i> <i>Aphanizomenon</i> <i>Cylindrospermopsis</i> <i>Lyngbya</i> <i>Planktothrix</i>

Table 1 From : A Water Utility Manager’s Guide to Cyanotoxins. Accessed 8/5/2025 at <https://www.epa.gov/sites/production/files/2016-06/documents/water-utility-managers-guide-cyanotoxins.pdf>

What are the most common signs of poisoning in cattle from blue-green algae? Livestock are most at risk when drinking contaminated water or licking algae from their hair coat. Cyanobacterial toxins

(“cyanotoxins”) primarily target the liver or nervous system and have been implicated in both human and animal illnesses and deaths worldwide. Some algae produce potent neurotoxins (toxins affecting the nervous system), most often the toxin Anatoxin-A, that may cause cattle to exhibit muscle tremors, difficulty breathing, wobbly gait, seizures, profuse slobbering, diarrhea, and rapid death within minutes to hours. Others produce hepatotoxins (toxins affecting the liver), most commonly the microcystin toxin, that can cause sudden death or a more delayed onset of death after signs of liver failure develop such as lethargy, diarrhea, and weakness. Cattle that survive the acute stages of liver damage may develop photosensitization, a skin condition in which white (light or non-pigmented) areas of skin along the back, face, udder, muzzle, underside of tongue, eyelids, and ears will become red and swollen then will become crusty and peel. The only treatment for exposure to any cyanotoxin is supportive care and medications to help alleviate the symptoms.

Are humans affected by these toxins, too? Human poisoning associated with cyanotoxins most commonly occur after exposure through drinking contaminated water or after participating in water recreational activities. Exposure can result in a number of symptoms in people including skin rashes; eye, nose, mouth, or throat irritation; allergic reactions; headache and malaise; and gastrointestinal upset including abdominal pain, nausea, vomiting, and diarrhea. In humans, it is believed the toxin must be ingested for fatalities to occur. For protection of human health from exposure to the algae and any of the toxins, many states use the World Health Organization (WHO) guideline level of 100,000 algal cells/ml water or a microcystin toxin level of 6 parts per billion (ppb) for a Recreation Advisory and beaches will be closed if the microcystin toxin level reaches 20 ppb. For more information regarding human drinking water, visit the EPA website to view “A Water Utility Manager’s Guide to Cyanotoxins” at <https://www.epa.gov/sites/production/files/2016-06/documents/water-utility-managers-guide-cyanotoxins.pdf>

How do I test water for blue-green algae toxins?

Unfortunately, testing water for the actual toxin is problematic because toxins are not uniformly distributed in the water source, toxin testing can be quite expensive, and there are many blue-green algae toxins for which no diagnostic tests exist. The Kansas State Veterinary Diagnostic Laboratory accepts water samples for blue-green algae identification by microscopy and, if positive, the lab can do further testing for cyanotoxin concentration. When sampling water, make sure to wear gloves and collect at least 500 mls (16 ounces) of water approximately one inch below the water surface. Samples should be refrigerated before and during shipping but do not freeze. Please visit https://bookstore.ksre.ksu.edu/download/identification-and-management-of-blue-green-algae-in-farm-ponds_MF3065 for further information regarding sampling and shipping guidelines.

The Indiana Department of Environmental Management maintains an excellent website on all things associated with blue-green algae at <https://www.in.gov/idem/algae/>. A very useful tool is the description of the “Jar and Stick” tests a pond owner can do to quickly assess the likelihood of blue-green algae in the water. A quick guide is also



Figure 2: From: The Indiana Department of Environmental Management website, accessed 8/5/2025 at <https://www.in.gov/idem/algae/>

available to compare the appearance of non-toxic algae and plants from potentially toxic cyanobacteria blooms (Figure 2). Additional field images are available at the US Geological Survey website for cyanobacteria identification: <https://pubs.usgs.gov/of/2015/1164/ofr20151164.pdf>

Remember that field tests and observations are not 100% accurate so follow-up testing is recommended to definitively determine what algae species are present.

How do I prevent poisoning from Blue-Green Algae? For livestock and pets:

1. Always assume that a blue-green algal bloom is toxic.
2. Provide constant access to clean, clear fresh water and fence off or otherwise prevent access to stagnant, scum-covered ponds.
Fencing off surface water sources and providing alternative clean water sources is the best option for healthy cattle for many reasons, not just HABs.
3. Do not allow animals to contaminate the water with feces and urine.
Prevent fertilizer or manure runoff from entering water sources.
Phosphorous is particularly important in fueling cyanobacteria growth (see Figure 3).
4. If a water source is treated with an algacide such as copper sulfate, prevent animal access to the water for at least 2 weeks or longer to allow degradation of any released toxins in the water. It is best to wait until the pond is no longer stagnant and test the water before allowing animals to drink from it.
5. Creating and maintaining natural buffers such as grass strips, trees and shrubs between farmland, housing developments and waterways can help filter out excess nitrogen and phosphorus before they reach the water.
6. A short-term solution to prevent algae blooms is installing solar-powered aerators to keep water moving and mixing.

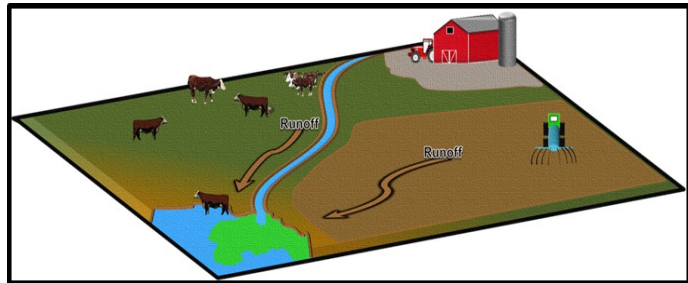


Figure 3 : Cattle contribute excess nutrients to surface water by urinating and defecating in or around ponds and streams. Excess nutrients can also enter waterways as runoff from fertilized fields or manure laden pastures. Figure by Donnie Stamper, Biosystems and Agriculture Engineering, University of Kentucky.

Humans:

7. Do not swim or allow children or pets to swim in water with scum layers or blooms. Avoid jet-skiing, windsurfing, tubing, or water-skiing over scum or blooms.
8. Do not use untreated water for drinking, cleaning food, or washing camping gear.
9. Do not boil water to remove blue-green algae; this will not remove algal toxins.
10. If you come into contact with a bloom, wash your skin and hair thoroughly. If your pet comes into contact with a bloom, wash it thoroughly with clean water to prevent blue-green algae ingestion when your animal licks itself.
11. Do not eat fish or shellfish caught or harvested in a bloom area.

Respect any water body closures by public health authorities.

Someone Call 911: Resuscitating Drought Stressed Pastures!!!

Dr. Chris Teutsch, UK Research and Education Center, Princeton, KY

Every spring since I have been in Kentucky, I have written an article about getting ready for the next drought and every year we have had good rain. So, this spring I decided NOT to write an article on drought because I was beginning to feel like the boy that cried wolf. I think I jinxed us! In many parts of Kentucky two distinct dry periods, one in early summer and one in late summer combined with overgrazing significantly reduced summer and fall pasture growth and decreased pasture vigor. The good news is that pastures that were well managed prior to the drought seem to be recovering well. The bad news is that not all pastures were managed well prior to the drought. The objective of this article is to provide some practical suggestions for resuscitating pastures that may have been abused last summer.

Rest pastures this fall and next spring. The saying is that “time heals all wounds” and this includes pastures. However, the deeper the wound, the longer it is going to take and some of our pastures have pretty deep wounds that may need a little salve. At this point it is important to give pastures a little extra to recover this fall and coming spring and that is going to involve a little bit longer hay feeding period. So, as pastures start to green up, it is going to be important to restrict grazing as long as you can. Choose your worst pastures and feed some hay on those accepting that they will likely need to be reseeded this fall. By delaying grazing, you are giving your pastures time to rebuild their photosynthetic factory (leaf canopy) and store up sugars and carbohydrates before the stress of next summer begins. This also helps to reduce summer annual weeds by allowing cool-season grasses to form a canopy and shade the soil.

Don't graze closer than 4-5" inches this summer. Close summer grazing weakens cool-season grasses and opens sods up allowing weeds to germinate and become established. Leaving as little as 4-5 inches of residual forage decreases soil plant crown (growing point) temperatures during the summer months and helps to keep summer annual weeds from germinating. So close the gates and feed a little hay. This will restrict overgrazing to a small area of the farm.

Fertilize pastures according to soil test. Poor soil fertility imposes an additional stress upon cool-season grass stands that are recovering from drought. So, it is important to adjust the soil pH to 6.0 to 6.4, apply phosphorus and potassium according to your soil test, and consider applying 40-50 lb nitrogen/A in early spring as cool-season grasses initiate growth. Early nitrogen will stimulate tillering, green up, and canopy closer.

Note: Under normal circumstances, spring nitrogen on pastures is discouraged since it tends to stimulate more growth when you already have too much. However, in the case of pastures recovering from drought spring nitrogen can be beneficial.

Interseed legumes into thin stands. Legumes such as red and white clover, and alfalfa are important components of sustainable grassland ecosystems. 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 1. 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.

Plant cool-season perennials grasses. Pastures can be thickened by seeding cool-season grasses or a mixture of grasses and legumes. Ideally this done in late summer or early fall. Interseeding into dry soil and praying for rain is truly a leap of faith that can pay off in big ways, but does involve risk. While you can seed in the spring, results are usually less than spectacular in most years. In many cases seedings get delayed until late spring or early summer. Consequently, seedlings do not have time before the hot summer months set in. The second reason is that summer annual weed pressure is usually very high. Summer annuals weeds like foxtail, goosegrass, spiny pigweed, cocklebur, and others actively compete with cool-season grass seedlings for light and water, often causing stand failures. Fall seeding of cool-season grasses is the best option since it avoids these pitfalls.

Table 1. Seeding rates for perennial cool-season forage species planted ALONE or in a MIXTURE.

Species	Seeding Rate (lb/A)	
	Alone	In a Mixture
Tall fescue	20-25	10-15
Orchardgrass	15-20	6-8
Perennial Ryegrass	20-25	10
Kentucky Bluegrass	NR [†]	4-6
Red clover ^{††}	NR	6-8
White clover ^{††}	NR	1-2

[†]NR, not recommended

^{††}Do NOT include red and white clover if herbicides will be used to control broadleaf weeds.

Expert tips: 1) Plant as early as possible, 2) plant in two directions, and 3) leave legumes out to allow for broadleaf herbicide use.

Fall and Spring planted winter annuals. The best time to plant winter annual is late summer or early fall. Earlier planting will provide more fall/winter grazing if we get some rain. However, planting winter annuals in early spring could provide some late spring grazing. They will normally produce between 0.5 to 2.5 ton/acre depending on the species and competition of the existing sod. Spring oats has the best yield potential when planted in early spring and winter wheat the worst (Figure 2). Competition from established sods can also limit winter annual growth. In general, the best place for cool-season annuals is on cropland or areas that had summer annuals last season. Production on these areas will be greater due to the absence competition.

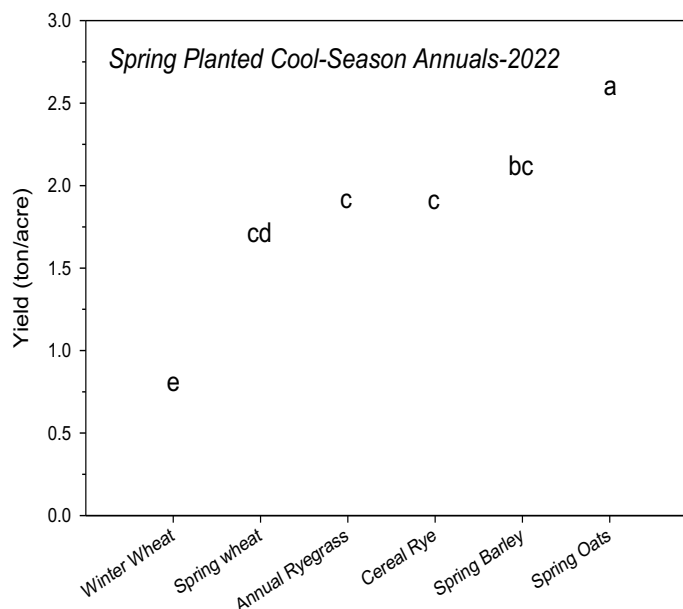


Figure 2. Spring planted cool-season annuals will yield between 0.5 and 2.5 ton/A with spring oats being the most productive. Bars with the same letter are not statistically different according to Fisher's protected least significant difference ($P \leq 0.05$).

Plant warm-season annual grasses. This strategy involves planting a summer annual grass in late spring or early summer and has a much higher probability of success than planting cool season grasses in the spring. Summer annual grasses, especially sorghum-sudangrass or sudangrass, have very rapid emergence and canopy closure. This will prevent summer annuals weeds from germinating and provide forage for grazing or harvesting during the summer months. Perennial cool-season grasses can then be reseeded under more ideal conditions in late summer or early fall. For a more information on summer annual grasses, see [AGR-229 Annual Warm Season Grasses in Kentucky](#).

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 last year's drought stressed pastures can be resuscitated!

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

FORAGE MANAGEMENT TIPS	
✓	Soil sample and apply any needed lime and fertilizer.
✓	Plant annual and perennial cool-season grasses and legumes. Consider incorporating novel endophyte tall fescue into your grazing system.
✓	Harvest late summer hay as needed. Do not harvest alfalfa after mid-September.
✓	Do NOT overgraze perennial pastures in late summer and fall. Pasture plants accumulate energy reserves in the fall that are used to overwinter and regrow in the spring.

✓	Feed hay and allow cool season pastures to stockpile for winter grazing.
✓	Rest native warm season pastures until after frost to enhance winter survival and subsequent productivity.

Market Opportunities During this Dry Spell

Kevin Laurent, Extension Specialist, Department of Animal and Food Sciences, University of KY

Seems like every time I log on to social media there is another post about a record selling lot of cattle. We are definitely experiencing a most interesting time in the cattle market that I don't think anyone could have honestly predicted. These high prices coupled with dry conditions throughout most of the state have got some producers rethinking their weaning and marketing strategies this fall. As a result, I'm starting to get several phone calls from producers asking if it's worth weaning and preconditioning these calves prior to marketing.

First things first, if your pastures are deteriorating and you are starting to feed hay it may be best to consider weaning the calves. Dry cows eat less, require less nutrient dense feed and quite frankly can maintain or even gain weight on average quality hay. Generally, hay testing higher than 7% protein and 50% TDN will maintain a dry cow, whereas a lactating cow will require hay testing 10-11% crude protein and nearly 60% TDN to maintain condition, not to mention the 5-7 month old calf at her side will need more than just mothers' milk to continue to gain efficiently. It's simply more efficient when feed or pasture is limited to wean the calf and feed it separately from the cow.

So, if we decide to pull the calves what do we do with them? Do we sell off the cow and take advantage of these high prices or do we precondition? From a short-term economic standpoint, I can't argue with anyone who chooses to cash them in. But there may be an opportunity to add additional value through a precondition program. There are several things to consider in making this decision. For sake of brevity, I will assume that there are adequate facilities and feed resources to background 90-100 days, and that the decision is based primarily on current market conditions. Following is a chart of selected calf prices from the KY Weekly Livestock Auction Summary for the week of August 24 -August 30. I chose the starting weights of 375 and 475 pounds in these examples due to the assumption that earlier weaning may result in lighter weight calves. Non-value added prices were used to establish initial value of the 375- and 475-pound calves assuming these calves would be bawling calves straight off the cow. The value of these lighter calves was compared to the value of both non-value added 575- or 675-pound calves and value-added calves. It should be noted that the premium reported for value added calves that week for 575- and 675-pound steers and heifers ranged from \$25 to \$42 per cwt. I chose a more conservative premium of \$20 for steers and \$15 for heifers.

You can see from the chart that the value of an additional 200 lbs. ranged from \$328 to \$596 per head depending on the class of cattle. That calculates a breakeven of cost of gain in the range of \$1.64 to \$2.98 per pound ($\$328/200=\1.64), again depending on class of cattle and if the heavier calves sell at a value-added price. To put this in perspective, a producer would have to put the additional gain on for less than the breakeven prices for the preconditioning to be profitable. I ran these numbers through Dr. Kenny Burdine's backgrounding decision aid spreadsheet, with feed at \$250/ton, hay at \$125/ton, 6% interest, and a \$15/head health cost. I used a feeding program of 2% bodyweight of concentrate and 1% body weight of hay, and an average daily gain of 2.2 for steers (90 days) and 1.9 for heifers (105 days). The breakevens calculated in the \$0.87 to \$0.95 range resulting in estimated net added values of

approximately \$180 to \$350 per head over selling off the cow. Additionally, actual on farm data from the Advanced PVAP Program from 53 closeouts using similar feed prices but feeding heavier calves indicate a cost of gain of \$0.96.

So will it pay to feed these lightweight calves post weaning? Current market conditions suggest that there is an excellent opportunity to add real value. Obviously, market conditions can change and there is always inherent risk in any feeding program, but I always like to remind cow calf producers that the best place for a calf to be castrated and weaned is on the farm it was born. Here's to fall rain and continued strong markets.

Value of Additional 200 lbs. Pay weight (\$/head)				
KY Weekly Livestock Summary (August 24-August 30)				
Weight/Class	\$/cwt	\$/head	Difference in \$/head 375 steer vs 575 steer	Difference in \$/head 375 bull vs 575 steer
375 bull	\$455	\$1,706		
375 steer	\$474	\$1,778		
575 steer	\$374	\$2,151	\$373	\$445
575 steer (\$20 premium)	\$394	\$2,266	\$488	\$560
375 heifer	\$408	\$1,530		
575 heifer	\$346	\$1,990	\$460	
575 heifer (\$15 premium)	\$361	\$2,076	\$546	
Weight/Class	\$/cwt	\$/head	Difference in \$/head 475 steer vs 675 steer	Difference in \$/head 475 bull vs 675 steer
475 bull	\$406	\$1,929		
475 steer	\$434	\$2,062		
675 steer	\$354	\$2,390	\$328	\$461
675 steer (\$20 premium)	\$374	\$2,525	\$463	\$596
475 heifer	\$377	\$1,791		
675 heifer	\$331	\$2,234	\$443	
675 heifer (\$15 premium)	\$346	\$2,336	\$545	

Strategies for Managing Beef Cattle in Drought

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

Over the last 25 years, Kentucky has seen an increase in annual rainfall and at the same time an increase in prolonged dry periods or drought. While seemingly counterintuitive, an increase in rainfall intensity is to blame for an increase in precipitation and drought at the same time. The last three years have seen a drought set in during late summer and early fall. As of late August, a portion of 109 out of Kentucky's 120 counties are at least "abnormally dry", with 22 counties at least partially considered to be in a D1 Drought according to the U.S. Drought Monitor. Meaning perhaps now more than ever, we should be thinking about ways to make our farms drought ready. Here are a few tips to consider when managing through a drought.

- 1) Inventory current pasture and stored forages: It's important to know what resources are available before deciding how to add to them or utilize them. Assess current pasture conditions and estimate how much grass is available, keeping in mind that overgrazing drought stressed pastures

can slow recovery once rain returns. Take stock of hay inventory, considering not just quantity but also quality. Knowing the nutrient content of hay or other stored forages will help match feed resources with the nutritional needs of cattle on your operation.

- 2) Stretch pastures strategically: One mistake that I think we often make during a drought is waiting too long to act- sometimes out of optimism, hoping the rain will come any day now or thinking conditions are not “bad enough” yet. If you have plenty of hay, consider feeding it in a dry-lot or strategically on pastures using a method like bale grazing. Remember, if given the choice, cattle will prefer grazing over poor-quality hay, which can lead to overgrazed pastures. In that case, it might be better to confine cattle or “shut the gate” and feed hay in a smaller area, giving the rest of the farm time to rest.

If stored forage is limited, the strategy looks different. Purchasing supplemental feeds may be more economical than buying more hay. On a cost per pound of energy (TDN) or protein (CP) basis, commodities such as soyhulls, dried distillers grains, corn gluten feed, or corn are often cheaper than hay, especially when demand for hay is high. Limit feeding a mix of low-quality hay and supplement may stretch resources further than relying on purchased hay alone. Assume a 1300 lb. lactating cow can eat roughly 2% of her body weight in hay on a dry matter basis that is ~26 lbs. of hay on a dry-matter basis or ~29 lbs. as-fed per day. While average quality hay may still require supplementation to meet the nutritional needs of a lactating cow this might typically look like 5-6 lbs. of soy-hulls, whereas in a limit fed scenario, only 5-7 lbs. of hay would be fed per day along with 12-15 lbs. of soy-hulls.

- 3) Monitor water sources closely: Keep a close eye on water sources, especially when relying on natural water supplies that can dry up quickly in a drought. Quality of natural water sources may deteriorate as droughts continue. Look for signs of excessive algae growth, sediment, or debris. Research shows that cattle prefer clean drinking water, and dirty water sources can limit water intake. Decreased water intake can contribute to poor performance, health challenges, and is an animal welfare concern. This is especially true when drought occurs during times of the year when heat stress is also a factor. Be sure to check water sources daily and have a plan for getting water to cattle if resources become limited.
- 4) Maintain Body Condition: When pasture quality deteriorates or feeding conserved forages, it is possible for cattle to lose condition. Ideally, cows should maintain a body condition score of 5-6, as cows with a body condition score < 5 have a longer post-partum interval, lower conception rates, and decreased pregnancy rates. Additionally, cows that have a longer post-partum interval or get bred later in a breeding season will have younger and lighter calves when weaning their next calf. Regardless of where cattle markets are, getting cows bred, and especially earlier in the breeding season is a critical part of a profitable herd. This becomes especially apparent though, when we are looking at historic cattle prices. We can afford to feed cattle through this drought if we must, and that is a better investment in the long run vs. allowing cattle to lose condition leading to decreased reproductive efficiency.

For spring calving herds, dry cows can maintain and in a lot of cases gain condition on moderate quality grass hay alone. For fall calving herds supplementation is likely required to meet the nutritional needs of a cow in early lactation. Regardless of your calving season, keep a close eye on the herd and consider separating off thin cows and young cows or heifers that have higher nutrient requirements and managing this higher-maintenance group separately from the rest of

the herd. Remember, failing to maintain condition now affects not only the current calf but also the next one. A mistake today can be costly 18-20 months from now.

5. One way to lessen the impact of drought on the herd is to reduce the number of mouths that need fed, either through culling or weaning. Use caution with extreme culling, as cows producing and raising live calves are valuable in the current market. However, culling unproductive cows such as older or open cows can help reduce pressure on drought-stressed pastures. Chute-side pregnancy test kits can help identify open cows.

Weaning calves is another option for managing drought. While extreme early weaning (<100 days) can work, it is generally better to wait until calves are a bit older. For droughts occurring in late summer or early fall weaning can be a viable strategy for spring-calving herds. Feeding a dry cow and her calf separately can be more efficient than keeping the calf on the cow. Although selling calves at weaning may be tempting to capture the current market, pre-conditioning (castration, vaccination, and feeding for at least 60 days) can add value, especially with low cost of gain. Limit-feeding hay and supplement in a dry lot can stretch feed resources while reducing stress on pastures, assuming the hay supply is adequate. Weaning also benefits the cow, since a dry cow eats less and requires a less nutrient-dense diet than a lactating cow.

Drought management will look different from operation to operation, and from year to year varying on the severity and timing of the drought. It is important to have a plan and be prepared to act but also be cautious not to overreact with aggressive culling decisions that may be impactful in the future. Keep a watchful eye and reach out to your local county extension office with any additional questions or concerns you have as we continue through this dry spell. Here's hoping rain finds its way to your farm soon and eases these dry conditions.

Add Value by Adding Pounds

Dr. Jeff Lehmkuhler, Extension Professor and Beef Cattle Specialist

This year has been a year of extremes for precipitation. I pulled up the KYMesonet data from the Franklin County location. The total recorded precipitation was 10.9" for April, 8.8" in May, 7.3" in June, only 3.6" in July and a meager 0.5" in August. If we go a few miles east to the Lexington Mesonet recording station April was similar at 10.1", 7.6" in May, June was 3.3" while July and August recorded only 2.0" of monthly precipitation. The high levels of precipitation in the spring made hay harvesting a challenge. This concerns me as most of the first cutting hay was cut late at a mature stage. Late-cut hay will have lower than normal nutritional value. I encourage you to work with your county extension agent or nutritionist to get your hay tested for nutrient content. The low levels of precipitation in July and August has led to much of the state experiencing abnormally dry to moderate drought conditions which can be shown by the US Drought Monitor map below. A bit of relief has come to some areas this week, but hopefully more rain will come to get some grass growth yet this fall.

The current forage conditions combined with the high feeder cattle prices and low grain/commodity feed prices have aligned in a manner that signals creep feeding to be profitable. As calves reach two months of age, they are fully functioning ruminants. As calves get older and heavier, the calves rely more on the forage available to them to supply the nutrients for growth as their dam's milk supply declines. Limited forage growth will reduce availability and quality. Further, cows may be producing less milk if forage

resources are limited and they are in a negative plane of nutrition. These conditions may lead to reduced weight weaning and less value at marketing.

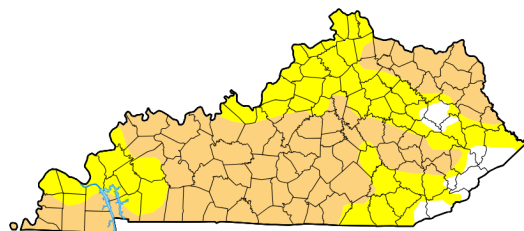
Creep feeding with a commodity mix or commercial creep feed can provide supplemental nutrition to nursing calves. Research has demonstrated

that creep supplementation replaces forage intake nearly pound per pound while milk intake remains constant. Substitution of grain for forage increases nutrient intake to support greater growth. The efficiency of creep feed to the added pounds can vary greatly. When calves are older and heavier, creep intakes can be quite high while the feed efficiency is poor if intake is not limited. Limiting creep intake has been shown to give better feed efficiency, but this leads to less additional gain.

Many factors need to be considered when deciding to creep feed. Creep feeding can reduce weaning stress when the same creep supplement is offered during the weaning period as the calves are accustomed to the grain mix. Hand-feeding creep provides you the control over how much feed is offered. Hand-feeding also gets calves familiar with you being near them and they learn to eat from a bunk. Other factors such as feedstuffs, nutrient levels, length of time creep is offered and the market slide for heavier calves need to be considered.

Published research on creep response and feed conversion combined with market prices can be used to help evaluate whether creep will be profitable. I ran the scenario shown below using a shorter creep feeding period of 60 days where the creep feed is \$275/ton. The creep is expected to provide a 0.5 lb daily gain response on a 9:1 partial feed conversion. The recent market report suggests that the slide between 5 and 6 weight calves is between \$20-\$25/cwt. I pulled the market price for 5 weight steers to use as the base price.

The outcome modeled shows calves would be 30 pounds heavier at weaning with the creep feed. The market price for the additional weight is \$7.50/cwt lower for the heavier feeder calves at \$382.50. Creep feed cost is calculated to be just over \$37. The added value from the additional pounds marketed leads to a positive return of \$40/head. Again, this is a simulation to show how using market information and current conditions can help make management decisions. Returns of this magnitude are rarely forecast



Map released: Thurs. September 4, 2025

Data valid: September 2, 2025 at 8 a.m. EDT

Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

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for creep feeding but are not surprising considering high feeder calf values and the current cost of feed inputs.

The current situation with low forage availability, late cut hay, high feeder calves and lower feed costs all point towards value addition through added pounds using creep this year. Be sure you work with a nutritionist to obtain a creep that works for your level of management. Avoid creep feeds with high levels of starch

from grains such as corn to lower the risk of acidosis and foundering calves. Highly digestible fibrous coproducts such as soybean hulls, corn gluten feed, dried distillers grains, rice bran, beet pulp and others should be considered in the mix. When possible, use of roughage feedstuffs such as cottonseed hulls or a low amount of ground hay can also help lower the risk of acidosis but these feedstuffs can lead to issues of feed compacting in the feeder. Manage the doors to keep them low and reduce sorting by calves. For more information, reach out to your local Extension office.

Creep Feeding Decision Aid

Starting Weight	lb	375	Base End wt	lb	507
Creep duration	days fed	60	Creep End wt	lb	537
Base ADG	lb/d	2.2	Creep Consumed	lb/period	270
ADG increase	lb/d	0.5		lb/d	4.5
Creep Efficiency	lb/lb	9	Creep Cost	\$/hd	\$ 37.13
Creep feed cost	\$/ton	\$ 275.00	Base Feeder Value		\$ 1,977.30
Feeder Slide	\$/cwt	\$ 25.00	Slide Adj Feeder Value		\$ 382.50
Base Price	\$/cwt	\$ 390.00	Creep Feeder Value		\$ 2,054.03
			Partial Net Value		\$39.60