

Agriculture & Natural Resources Newsletter October 2022

Cooperative Extension Service
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We are officially having fall weather, which means frost concerns are starting to pop up. Be sure to see the article inside this newsletter about cyanide poison and nitrate toxicities.

This fall we are offering the Fertilizer Academy Program and also the Roadmap to Farm Estate Planning Program.

In November, we will be having our Robertson County Cattlemen's Annual Meeting. If you are not a member, now is the time to join! If you are a returning member, you can pay your dues at this meeting!

I am officially back working full time, so if you have any questions, please feel free to call the office at (606)-724-5796.

Samantha Saunders

Samantha Saunders
Robertson County Agriculture & Natural Resources/
4-H Youth Development Agent

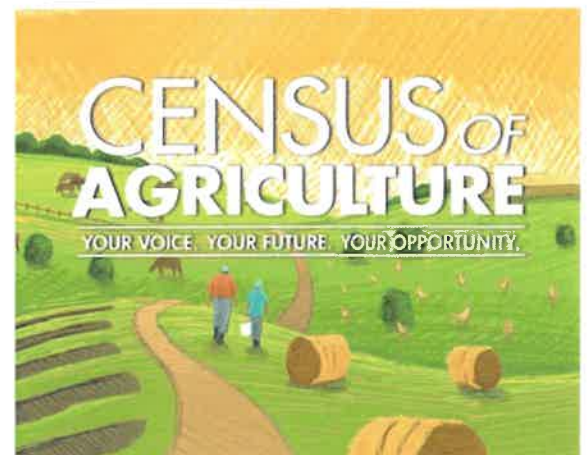
Kentucky's farmers will soon have the opportunity to be represented in the nation's only comprehensive and impartial agriculture data for every state and county. The U.S. Department of Agriculture (USDA) will mail the 2022 Census of Agriculture to 125,000 Kentucky ag producers this fall.

The 2022 Census of Agriculture will be mailed in phases, starting with an invitation to respond online in November. Farm operations of all sizes, urban and rural, which produced and sold, or normally would have sold, \$1,000 or more of agricultural product in 2022 are included in the ag census.

Collected in service to American agriculture since 1840, the Census of Agriculture tells the story and shows the value of Kentucky's agriculture. It highlights land use and ownership, producer characteristics, production practices, income and expenditures, among other topics. For more information visit www.nass.usda.gov/AgCensus.

Inside this edition:

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Robertson County Cattlemen's' Association Annual Meeting



Monday, November 14th

6:00 PM

Robertson County School Cafeteria

Speaker:

Dr. Michelle Arnold—
BVD Vaccinations



Meal will be provided

*Shirt orders will be taken

*Prize drawings for those who have
paid their membership dues for 2023



This meeting fulfills the CAIP
Education Requirement for
2022 program.

Join/Renew your Cattleman's Membership Dues!

Kentucky Cattleman's Membership—\$30/year

Kentucky Cattleman's Couple Membership—Add \$15 to your KCA Membership

Kentucky Junior Cattleman's Membership—We will pay your dues! Just register!

Dues can be brought to the Extension Office or paid at the Annual Meeting



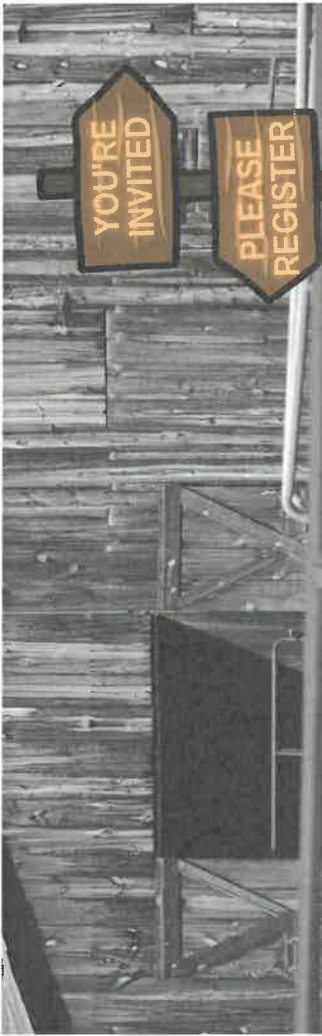
Five Things to Do to Improve the Efficiency of Winter Feeding This Year

*Dr. Katie VanValin, Assistant Professor Beef Nutrition,
University of Kentucky*

Undoubtedly, 2022 has had its fair share of challenges thus far. High input prices likely led to fewer hay acres being fertilized, which with the added pressure of drought, can lead to lower quality and quantity of stored forages moving into this winter. You might be in for sticker shock if you haven't purchased feed recently. It can be easy to get caught up in things we have little to no control over, so here are five things we can do to improve this year's winter-feeding program.



1. **Body condition score the herd:** Calves should be weaned from the spring calving cows (or will be very soon). It's easy to get caught up focusing on the weaning weight of the calves or managing a pre-conditioning program but don't forget about the cows. Now is the time to assess the body condition score of the herd. Spring calving cows will have their lowest nutrient requirements of the entire year shortly after weaning the calf. Now is the time to efficiently add condition to thin cows to set them up for success during the 2023 breeding season. Sorting cows by body condition score can allow for more efficient herd management and for those thin cows to receive the extra nutrition they require without overfeeding them in adequate condition. It is much more challenging to add condition to cows as they approach calving or have a calf at side. The ideal body condition score for mature cows is 5, while targeting younger females to a BCS 6 can ensure they have the extra condition required to meet their additional nutrient requirements for supporting growth.
2. **Test your hay:** This is something we always recommend, but in years like 2022, this becomes even more important. Hay tests provide valuable information about the energy and protein concentrations in the sample. All lots of hay should be tested, and a lot is defined as hay harvested from the same field on the same day and stored under the same conditions. Testing all lots of hay allows producers to match lots of hay to the herd so that the lowest quality hay is being fed when the cows' nutrient requirements are the lowest while saving the best quality hay for when nutrient requirements are their highest. Feeding the right hay to the right cow at the right time can drastically decrease the amount of supplement required to maintain body condition.
3. **Evaluate supplement costs:** At some point throughout the year, some supplementation is likely required to meet the energy and protein requirements of the herd. Using hay test results can help determine the most efficient supplement to match the energy and protein deficits in the hay. The University of Kentucky Forage Supplement tool is a simple-to-use online tool that provides recommendations for supplementation based on hay test results. Also, reach out to your local county extension agent or nutritionist to assist in interpreting hay test results. Now is the time to sharpen the pencil and determine which supplement options will be the most economical to pair with available forage. Remember, the feed that was the most economical last year may not be the most economical choice this year. Just because one feed costs more on a \$/Ton basis does not mean it is the most expensive supplement to feed. The amount of a particular supplement required must also be considered.
4. **Feed hay efficiently:** Regardless of quality, when the quantity of hay is tight, available hay stores must be fed efficiently. Research has shown that feeding hay in a hay ring prevents feeding waste, especially rings that contain a solid skirted bottom. Hay feeding pads and fence line feeders can also reduce hay feeding losses. While these measures will not completely reduce hay feeding losses, these losses can be reduced from 45% to as little as 6% by using hay rings. Moving hay rings or utilizing bale grazing can help to limit trampling damage around these hay feeding sites and help to distribute manure evenly across the feeding area.
5. **Stockpiling forages:** Although nitrogen application can increase the amount of stockpiled forage available to graze during the winter, tall fescue can still stockpile even without a nitrogen application. Closing off certain fields during the fall growing season can allow the forages in these fields to stockpile, which can then be grazed during the late fall and early winter. While the nutrient quality of stockpiled fescue declines over time, nutrient content can remain adequate for supporting dry cows. Consider setting up a simple strip grazing system using temporary electric fencing to prevent trampling losses when turning cattle out on stockpiled forages.



ROAD MAP TO FARM ESTATE PLANNING

HOSTED BY THE DISTRICT 1 UNIVERSITY OF KENTUCKY COOPERATIVE EXTENSION OFFICES

2022 DATES & TOPICS

PREVIOUS SESSIONS HAVE RECORDINGS AVAILABLE FOR VIEWING

- JANUARY 13 TAXES
- JANUARY 27 BASICS OF ESTATE PLANNING
- FEBRUARY 10 WILLS, POWER OF ATTORNEY
- FEBRUARY 24 TRANSITIONING THE FARM & FAMILY PROPERTY
- NOVEMBER 3 FARM LEASING
- NOVEMBER 17 TRUSTS
- DECEMBER 1 LIFE INSURANCE & FUNERAL EXPENSES
- DECEMBER 15 END OF LIFE CARE

ZOOM & IN-PERSON VIEWING OPTIONS**

**Options may differ by location

Each session begins at 6:00PM

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Cooperative Extension Service

Cooperative Extension Service
Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, or physical or mental disability. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.
LEWISTON, KY 40546



Disabilities
accommodated
with prior notification.



To register scan the QR
code above OR call:

**Robertson County Extension
Office (606)-724-5796**

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Cooperative Extension Service

FERTILIZER ACADEMY

HOSTED BY THE DISTRICT 1
UNIVERSITY OF KENTUCKY COOPERATIVE EXTENSION OFFICES

10/25 | 11/1 | 11/8 | 11/15

6:00PM

SCHEDULE

- 10/25: THE BIG 3: N-P-K
- 11/1: ROLE OF MICRONUTRIENTS & CEC
- 11/8: LIME & pH
- 11/15: SPREADING YOUR FERTILIZER \$\$

ZOOM & IN-PERSON VIEWING OPTIONS**

**Options may differ by location

REGISTRATION DEADLINE: 10/24/22

OR CALL YOUR LOCAL EXTENSION OFFICE AT:
(606) 724-5796

TO REGISTER:
USE THE QR CODE BELOW



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LEWISTON, KY 40546



Disabilities
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with prior notification.

Congratulations!

2022 Farmer of the Year

Christina Price

This person is voted on by Robertson County

Cattlemen's Association Members



Fall is a Key Culling Decision Time for Cow-calf Operations

By: Kenny Burdine, University of Kentucky

Being an extension economist in a feeder cattle state, I don't know how many times I have said, "This calf market needs some green grass!" Nothing fuels calf prices like spring pasture and the opposite typically occurs in the fall. As pasture growth comes to a close, the full impact of feed prices are felt and calf prices almost always pull back. With spring feeder cattle futures in the \$190's back in late summer, I was optimistic that calf prices might hold serve as we moved into fall. But, those spring futures prices have declined by about \$15 per cwt and the calf market has dropped by a bit more than that. This can be easily seen in the price chart below. Seasonal lows in calf markets typically occur in October or November, so we are likely approaching that point as I write this.

In addition to approaching the time when most spring born calves are sold, we are also approaching the time when most producers make culling decisions for their cow-calf operations. Drought in much of the country has already forced significant culling this year. A quick look at the drought monitor below shows continued drought in the West and Southern Plains. But, over the last several weeks conditions have worsened in the Northern Plains and the Southeast. This has impacted fall pasture growth and hay supply and will also be on the minds of producers as they decide how many cows to carry into 2023.

I don't know when I first heard someone reference culling the 3 O's, but I mention it a lot in extension presentations. This refers to producers considering culling cows that are open, old, and ornery. As a general rule, I can't argue with considering these three categories of cows as culling candidates. But, I also like to mention two other categories of cows to consider when one is looking at potential cows to cull.

First, I encourage producers to look at their late calving cows. Producers that capture weaning weights will likely notice these cows as they will tend to wean smaller calves, simply due to the calves being younger at weaning time. But, the lost value is really even more significant as there usually will be fewer of these late born, lighter calves. This means that when the calves from these cows are sold, they will be sold in smaller groups and take an additional discount for that reason. The number of calves that are sold in one group (often referred to as lot size) has a huge impact on price. The combination of weaning a smaller calf and having that calf sell in a smaller group can greatly impact the revenue associated with a late calving cow.

Secondly, I like for producers to consider the size of the cow when they look at their weaning weights. Again, records are key to being able to do this, but the concept is what is most important. Most costs are going to be higher for larger cows, which means they have to wean larger calves to offset those additional costs. Sometimes comparing cows based on the weaning weight of their calves, as a percent of their body weight, can provide a bit more perspective on which cows may be candidates for culling.

Cyanide poisoning and nitrate toxicity – Do you know the difference?

Forage Doctor Column - September 29, 2022 for October 6, 2022 Issue

Some aspects of forage management are just confusing enough that the same questions come up every year. Take the forage disorders, cyanide poisoning and nitrate toxicity, for example. Questions on these disorders come up anytime forages from the sorghum family (which includes johnsongrass) are grazed. Questions arise especially often in the fall as we begin to experience light frosts. This article gives a quick reminder about these two forage disorders of cattle. (Cyanide toxicity is also called prussic acid toxicity or poisoning).

But first, you have to take a test. What follows is taken from an exam given to juniors, seniors and graduate students who took the UK Forage Management and Utilization class. Ready? Okay, here you go:

Please indicate whether the description below is true of cyanide or nitrate toxicity. In some cases either choice will be correct. (Answers below the 'quiz').

- Dissipates in hay
- A problem when leaves of freshly frosted johnsongrass or young tender regrowth of sorghums is grazed
- Causes suffocation
- Never a problem with pearl millet
- Usually detoxified by the ensiling process
- Can be avoided by waiting until sorghums are 24 inches tall before grazing
- High rates of nitrogen and drought

So what do you think? Easy? Hard? My students had a bit of a problem with it the first time (just might have been the instructor, I am afraid). Here are the answers and some explanations.

Dissipates in hay: Cyanide. Cyanide is released as a gas as sorghums (sudangrass or sorghum sudangrass or johnsongrass) dry out during haymaking.

A problem when leaves of frosted johnsongrass or tender regrowth of sorghums is grazed: Cyanide. In both cases these forages will have high levels of cyanide-producing compounds in their leaves. When consumed by ruminants, cyanide is released in the rumen. Please note that cyanide risk can be several times greater in johnsongrass than the sorghums; some estimate it to be three to five times as toxic. Toxicity with johnsongrass is most frequent in freshly frosted forage, and especially in the new growth that may start after a non-killing frost, similar to the photo above.

Causes suffocation: Cyanide and nitrate. Both of these toxic chemicals react with the oxygen transport in the blood. Blood from ruminants exposed to high nitrates will be brown. Cyanide toxicity causes the blood to be bright red.

Never a problem with pearl millet: Cyanide. Pearl millet does not contain cyanide-generating compounds like the sorghums. For this reason, many prefer pearl millet over the sorghums for supplemental grazing.

Usually detoxified by the ensiling process: Both cyanide and nitrate. Significant amounts of cyanide and nitrate are either evolved as a gas (cyanide) or metabolized during ensiling (nitrates). Generally, the ensiling process will detoxify forage that would be harmful if consumed fresh. If nitrate toxicity is a concern, collect a sample after a month of ensiling and test for nitrate concentrations. Although nitrate toxicities are infrequent, it always pays to be prudent and test.

Can be avoided by grazing sorghums after they reach 24 inches: Cyanide. Young plants of the sorghums have high concentrations of the cyanide-generating compound dhurrin. Concentrations of this compound are diluted as sorghums grow to 24 inches.

High rates of nitrogen and drought: Nitrate. When heavily fertilized with nitrogen (usually above 80 lb N/A) and under drought stress, the sorghums AND pearl millet (and many other plants) can accumulate toxic levels of nitrate in their stems. The concentration of nitrate is higher near the soil and gets lower as you move up the stem. UK ag agents have access to test strips that can indicate if high levels of nitrate are present in stems. If this quick test is positive for nitrate, submit a sample for analysis to measure actual concentrations present.

How did you do? Pretty well I hope. As you might imagine, there is much more information available on the production of summer annuals, and toxicities of cyanide and nitrate. To learn more, please see UK publications AGR 229 "Warm Season Annual Grasses in Kentucky", ID 220 "Cyanide Poisoning in Ruminants" and ID 217 "Forage-related Cattle Disorders: Nitrate Poisoning."

Happy Foraging.

Feed Price Implications for Fall Feeder Cattle Markets

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

As we move into fall, we have a pretty good feel for the size of the 2022 corn crop. Acreage is down significantly from last year and yield projections were reduced almost 3 bushels this month to 172.5 per acre. After spending some time below \$6 per bushel this summer, CME© December corn futures are in the upper \$6 per bushel range. Barring a major shock on the demand side, feed prices are going to be a challenge for cattle operations this winter. So, I wanted to briefly talk through some implications of high feed prices on feeder cattle markets.

Perhaps the most important thing to remember is that cost of gain and value of gain are correlated. Feedlots prefer to place heavier feeder cattle when feed prices are high, so the price discount on higher weights gets smaller. This narrowing of price slides increases the value of additional pounds when feeder cattle are sold. I hear a lot more discussion of feed prices than value of gain when producers discuss cattle feeding programs. In truth, opportunities can still exist in high feed price markets depending on cattle price dynamics. So, producers need to push the pencil on post-weaning feeding programs to determine if opportunities exist this fall and winter. Generally speaking, there is more feed flexibility for growing programs than finishing programs. Producers may find that opportunities to grow feeders still exist, especially if they can efficiently make use of alternative feeds.

Along those same lines, producers need to make sure they distinguish between cost of feed and cost of gain. Cost per ton of feed really does not tell me much unless I know something about that feed's (or ration's) ability to put weight on cattle. There are lots of ways to lower feed cost per ton, but I must make certain that I am not losing more value of gain than I am saving in cost per ton. This is why I tend to lean towards cost of gain when comparing programs and prefer to run multiple programs through a full backgrounding budget to compare expected profit.

Finally, there are also implications for fall grazing. A quick glance at the drought monitor reveals how much variation exists across the county. But, if you are in an area that has had good moisture conditions and is getting solid pasture growth, make certain to utilize that to the extent possible. While grazing costs have increased recently as well, they have certainly not increased as much as purchased feed. So, fall pasture is likely the most attractive feed that you have to utilize to add pounds. The current market also increases incentives to incorporate rotational grazing or strip grazing to increase the utilization of those forages.

Twice-Baked Acorn Squash

- **2 medium** acorn squash (1 - 1 1/2 pounds)
- Nonstick cooking spray
- **2 cups** fresh spinach, chopped
- **4 strips** turkey bacon, cooked and crumbled
- **1/2 cup** grated parmesan cheese
- **1** thinly sliced green onion
- **1 tablespoon** olive oil
- **2 teaspoons** garlic powder
- **1/2 teaspoon** salt
- **1/4 teaspoon** black pepper
- **1/4 teaspoon** nutmeg

Wash hands with warm water and soap, **scrubbing** for at least 20 seconds. **Preheat** oven to 350 degrees F. **Cut** squash in half; **discard** seeds. **Place** squash flesh side down on a baking sheet **coated** with nonstick cooking spray. **Bake** for 50 to 55 minutes or until tender. **Carefully scoop out** squash, leaving a 1/4-inch-thick shell. In a large bowl, **combine** the squash pulp with the remaining ingredients. **Spoon into** shells. **Bake** at 350 degrees F for 25 to 30 minutes or until heated through and top is golden brown. **Store** leftovers in the refrigerator within two hours.

Yield: 4 servings.
Serving size: 1/2 of an acorn squash.

Nutrition Analysis: 210 calories, 9g total fat, 3g saturated fat, 25mg cholesterol, 710mg sodium, 27g total carbohydrate, 4g fiber, 1g total sugars, 0g added sugars, 9g protein, 0% DV vitamin D, 15% DV calcium, 15% DV iron, 20% DV potassium.





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Robertson County Agriculture & Natural Resources Newsletter— October 2022

Forage Timely Tips—October

- Feed hay to allow cool-season pastures to accumulate forage growth for winter grazing.
- Do NOT harvest or graze alfalfa fields until after killing frost (<26 degrees).
- Inventory and test each hay lot for nutritive value and consult a nutritionist to design a supplementation program as needed.
- Remove ruminants from pastures that contain sorghum species when frost is expect to avoid prussic acid poisoning (forage sorghums, sorghum-sudangrass hybrids, sudangrass, and johnsongrass). Even small patches of johnsongrass that have been frosted can be toxic. Leave off until plants have dried down.
- Begin strip grazing early planted small grain and brassica (turnips and rape) mixes late this month.