

Agriculture and Natural Resources Newsletter

December 2024

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A Word from the Agent . . .



Happy Holidays! This has been a strange fall with the warm weather. Most years, I'm talking more about ice and preventing waterers from freezing, but not yet this year.

As of today, I am still receiving questions about johnsongrass and sudangrass producing prussic acid (cyanide). It is still a concern because these plants are still growing, and you should still be cautious until we have a true killing frost. The frost in October did kill some of these summer annual grasses, but many are starting to grow again. If you have these grasses in your stockpiled grazing fields, I can test for the presence of prussic acid with a quick test. Just call to schedule a time to have them tested. Also, now is a good time to start spraying winter annual weeds. Many of those weeds are actively growing and now is a better time to treat them instead of waiting till the early spring.

If you have questions, please feel free to reach out, and enjoy this December newsletter!

Levi Berg



Clark County Extension Agent
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KEEPING YOU Informed

Forage Management Tips for December

- Begin utilizing stockpiled pastures. Graze pastures with orchardgrass and clovers first. Save tall fescue pastures for late winter grazing.
- Using polywire, strip graze stockpiled pastures to improve utilization. Start at the water source and allocate enough forage for 2-3 days. Back fencing is not necessary since pastures are not regrowing this time of the year.
- Make plans to frost seed red and white clover onto closely grazed tall fescue pastures in February. Seed supplies of improved varieties will be tight.
- Begin hay feeding as stockpiled forage is used up.
- Supplement hay with commodity feeds as needed.
- Minimizing waste by utilizing ring feeders.

KEEPING YOU Informed

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<https://www.facebook.com/ClarkCountyExtension>

We will be CLOSED for the Holidays
December 24th thru January 1st

Cooperative Extension Service

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

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

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Disabilities accommodated with prior notification.



Reasons to Test Hay



Most of you recognize the value of testing hay and make sure your livestock are fed the right hay at the right time. If you don't regularly test hay then the following is a list the top ten reasons you should make the effort to test the hay you produce or the hay you are buying.

1. It saves feed costs.

Overwintering costs are the single biggest cost in a cow-calf operation. UK budgets place the hay cost of overwintering a cow at \$150 (2.5 tons at \$60 per ton). Since much of the profit in a cow-calf operation comes from saving money, it makes good sense to know what is in your hay and to not purchase nutrients you don't need.

2. It keeps livestock healthy.

By preventing underfeeding, you keep cows in better condition and they can better handle the disease stresses of winter.

3. It tells you about your legume content.

The calcium to phosphorous ratio will indicate how much legume is in the hay. If calcium and phosphorous are present in similar amounts (in other words the ratio is 1 to 1), your hay is mostly grass. If it is 2 to 1 or greater, you have a significant amount of legume.

4. You get more calves.

In other words, skinny cows don't rebreed. Testing hay and feeding accordingly lowers the risk of cows losing significant body condition over winter.

5. It is a scorecard for your hay program.

Hay quality is something you can do something about but only if you get it tested. Comparing current values to historic values for your hay quality will "red flag" production issues before you find out about them in the form of fewer calves or thin cows.

6. It can make you money.

A hay test can help leverage higher prices for cash sales. Having a hay test says to potential customers that you are a serious forage producer.

7. It can tell you if your hay got hot.

A hay test can tell you if your hay got hot in storage, if you specify the correct assay when you submit the sample. Commonly used acronyms for heat damaged protein are ADICP, ADF-CP, ADIN, HDP and ICP. All of these represent the same thing – the amount of insoluble nitrogen associated with the acid detergent fiber in forage. All forage will have some insoluble nitrogen in the acid detergent fiber, but if it is more than 10% of the total, then you have heat damaged protein and you may need supplement.

8. It helps you use your hay efficiently.

You will be able to feed the best hay to the livestock that need the most nutrition.

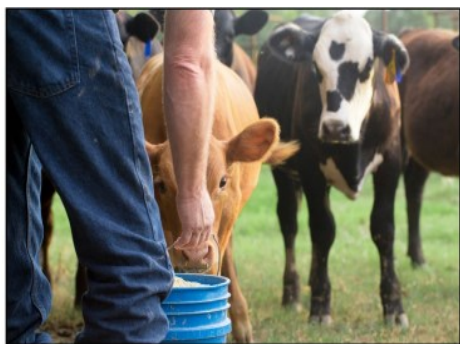
9. It helps diagnose storage problems.

Getting around to all your hay barns and storage locations will give you a chance to make note of any barn leaks, water encroachment from poor drainage, and other problems.

10. It will impress (and maybe shock) your county agent, your ag dealer and even your neighbors.

Minerals: To Much of a Good Thing

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



Minerals are an essential nutrient for beef cattle. This means like protein and energy, minerals must be supplied in the diet, however minerals make up a very small portion of the total diet.

Many feedstuffs are deficient in one or more essential minerals which is why mineral supplementation is a critical component of meeting the nutritional needs of the herd. So, this begs the question, "if a little is good, isn't more better?". The truth is we can have too much of a good thing when it comes to minerals, and this can lead to serious and sometimes fatal consequences.

• Sulfur

The sulfur requirement for beef cattle is 0.15%, with maximum tolerable concentrations of 0.3% in high concentrate diets (15% roughage or less), and 0.5% in high roughage diets (40% or greater roughage). By-product feeds including corn gluten feed and distillers grains can be high in sulfur content. According to the Nutrient Requirements of Beef Cattle (NASEM, 2016), sulfur content of corn gluten feed, dried distillers grains, and distillers' solubles averaged 0.58%, 0.66%, and 0.82% S, respectively. Sulfur content of forages also need to be accounted for and can range between 0.15-0.20% S. Lastly, sulfur content of water can vary greatly from one source to the next but can also add to the total S intake of the animal. Thus, it is possible to overfeed sulfur if careful consideration is not taken when formulating the diets, especially when utilizing by-product feeds. When sulfur is fed above the maximum tolerable concentrations, it is possible for cattle to develop sulfur toxicity which causes Poldioencephalomalacia (PEM), a neurological disorder resulting in blindness, ataxia, seizures, and death.

By-product feeds can be a great asset to the feeding program, but care should be taken to avoid complications from over-feeding. Just because a feed ingredient is "free" or "cheap" does not mean we should be feeding as much as the cow wants to consume. Unfortunately, it is not all that uncommon to see rations with sulfur concentrations above maximum tolerable levels, and this is often caused by over feeding of by-product feeds.

• Calcium and Phosphorus

Calcium and phosphorus requirements vary depending on stage of production, but in general the requirements of calcium compared to phosphorus are a 2 to 1 ratio. However, many concentrate feed stuffs such as corn or distillers

grains actually have an inversed calcium to phosphorus ratio, meaning they are higher in phosphorus than calcium. Evaluating the calcium to phosphorus ratio of the diet is an important step, when developing a feeding program because when calcium in the diet is low and phosphorus is high, cattle are at risk of developing urinary calculi or stones. A simple solution is to feed a co-product balancing mineral product which will have higher levels of phosphorus and lower levels of calcium compared to a more typical or 2:1 cow-calf mineral.

• Selenium

Initially, selenium was known for its toxic effects and negative impacts on human and animal health. It was not until 1957 that selenium was recognized as an essential nutrient, and research was conducted to understand the dietary selenium concentrations needed to prevent deficiency and toxicity in livestock. It was not until 1978 that the FDA approved feeding supplemental selenium to beef cattle. Mineral tags will often include verbiage stating that this product was formulated to provide 3 mg of selenium per head per day, which is the maximum level allowed by the FDA. This means that for a free-choice mineral product with a target intake of 3 oz. per head per day the selenium concentration shall not exceed 35.2 ppm, and for a target intake of 4 oz. per head per day selenium concentrations shall not exceed 26.4 ppm.

Regulations on the selenium content of mineral supplements, help to prevent selenium toxicity, and instead we often talk more about selenium deficiency. In Kentucky and other parts of the southeast it is not uncommon for forages to be deficient in selenium, making a good mineral program that includes selenium an important management practice. However, other parts of the world have areas where selenium concentrations in plants can be quite high, resulting in selenium toxicity. For this reason, selenium is another example of a mineral where a little is good, but more is not always better.

Minerals have many complex interactions with one another, which can make understanding and developing mineral requirements difficult. At the same time, it is possible to overfeed certain minerals in the diet which can result in serious complications. For this reason, it is recommended to work with a nutritionist to develop a feeding program to meet the needs of your herd while minimizing the potential for negative or unintended complications. For most herds a good quality, complete free-choice mineral is a great starting point for ensuring the mineral needs of the herd are being met, but if concentrates or by-product feeds, a co-product balancing mineral might be recommended.

For questions regarding mineral supplementation, call the Clark County Extension Service at 859-744-4682.



Martin-Gatton
College of Agriculture,
Food and Environment
University of Kentucky.

*Join us for an
evening of all things
hay!*

CENTRAL KENTUCKY HAY PROGRAM

PROGRAM FEATURES:

- ✓ Central KY Hay Contest Awards
- ✓ Understanding your forage test results
-Dr. Jimmy Henning, UK Extension Forage Specialist
- ✓ Determining quality horse hay
-Dr. Bob Coleman UK Extension Equine Specialist
- ✓ How I make quality hay: Tips for Success
-Producer panel



When: Monday, December 16th, 2024

Where: Fayette County Extension Office,
1140 Harry Sykes Way, Lexington, KY 40504

Time: 6:00 - 8:00pm

Dinner will be served so please RSVP to the Fayette County Extension Office at 859-257-5582 before December 9th!

Streamside Buffers: A Simple Solution for Cleaner Water and Healthier Livestock

Source: Amanda Gumbert, Water Quality Extension Specialist

In Kentucky, it's common for livestock to drink directly from streams, which can lead to water contamination and damaged ecosystems. Implementing streamside buffers—vegetated areas next to streams that protect water quality and improve livestock management—should be considered to lessen negative environmental effects. August is the perfect time of the year to begin planning for site preparation.

What is a streamside buffer?

A streamside buffer, also called a riparian buffer, is a strip of land with plants like trees, shrubs and grasses located along streams or rivers. These buffers act as a protective barrier between water bodies and the land used for agriculture or other activities. They help filter out pollutants, stabilize stream banks and provide habitat for wildlife.

Benefits of streamside buffers:

1. **Water quality:** Buffers trap sediment and filter out pollutants from runoff, keeping streams cleaner.
2. **Erosion control:** Plant roots hold soil in place, preventing erosion of stream banks.
3. **Flood control:** Buffers slow down and absorb floodwaters, reducing flood damage.
4. **Wildlife habitat:** The mix of trees, shrubs and grasses supports a variety of wildlife.

The width of a streamside buffer can vary, but even a narrow buffer of 15 feet on each side of a stream can protect stream banks. Wider buffers (over 100 feet) are more effective in filtering out pollutants like nitrogen.

The USDA recommends three zones for an effective buffer:

- **Zone 1:** Closest to the stream, consisting of undisturbed forest.
- **Zone 2:** Managed forest area extending further from the stream.
- **Zone 3:** A grassy area that helps control runoff and sediment.



Benefits to farmers:

For farmers, streamside buffers offer numerous advantages. They reduce land loss from erosion, protect water resources and increase land value. Buffers also create habitats for wildlife, which can boost opportunities for hunting and fishing. Additionally, there are government programs that provide financial support for establishing streamside buffers.

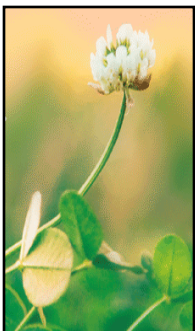
Cattle prefer streamside areas due to water availability and lush vegetation. However, their presence can lead to soil compaction, vegetation damage, and stream contamination. Excluding cattle from these areas improves water quality and pasture utilization. Implementing practices like fencing and providing alternative water sources and artificial shade can help manage cattle more effectively.

Implementing streamside buffers:

1. **Identify the area:** Look for flood-prone areas near streams for buffer placement.
2. **Prepare the site:** Treat areas with invasive grasses before planting.
3. **Select and plant vegetation:** Use native plants suited to local conditions.
4. **Maintain the buffer:** Regularly check and manage the buffer to ensure its effectiveness.
5. **Install fencing:** Protect the buffer by limiting livestock access.

More information about streamside buffers can be found at <https://bit.ly/46zdvhe> and <https://bit.ly/4fnn4nr>.

For information on developing streamside buffers, contact the Clark County Extension Service at 859-744-4682.



First Herbicide Registered Safe for White Clover

Corteva just announced that the U.S. Environmental Protection Agency (EPA) has approved the registration of NovaGraz™ herbicide, the only pasture herbicide in the U.S. that offers broad-spectrum weed control while preserving white clover and annual lespedeza for grazing. NovaGraz™ herbicide was previously referred to in technical

communications as ProClova.

NovaGraz will be available for the 2025 application season, pending state registrations. In the meantime, visit NovaGraz.us and NovaGraz.us/bythenumbers to learn more about this exciting new solution that cattle producers have been needing and asking for. Look for additional information from Corteva Range & Pasture on NovaGraz in the coming weeks.

BEEF MANAGEMENT WEBINAR SERIES

If you are interested and would like to be registered send an email to dbullock@uky.edu with Beef Webinar Series in the Subject and your name and county in the message to receive a Zoom link and password. You will receive an invitation and password the morning of the presentation.

December

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Winter Feeding Strategies to Extend Short Hay Supplies

Dr. Lawton Stewart, Professor, University of Georgia

January

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Important Traits for Bull Selection in Kentucky

Dr. Matt Spangler, Professor, University of Nebraska

February

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Marketing Opportunities for the Spring

Dr. Kenny Burdine, Professor, and Kevin Laurent, Extension Specialist, University of Kentucky

March

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Preparing for a Successful Spring Breeding Season

Dr. Les Anderson, Extension Professor, University of Kentucky

April

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Health Update and Internal Parasite Field Study Results

Dr. Michelle Arnold, Extension Veterinarian, and Dr. Jeff Lehmkuhler, Extension Professor, University of Kentucky

If you have any questions or need additional information please email dbullock@uky.edu. If you are already registered you will get a Zoom invitation the morning of each session with the link and password.

RECIPE

Venison Stew



Source: Adapted from Venison Recipe Collection, Compiled by Becky Nash, Extension Agent for Family and Consumer Sciences

Ingredients:

Servings: 6

Serving Size: 2 cups

- ½ teaspoon black pepper
- 1 teaspoon salt
- ½ teaspoon garlic powder
- 2 tablespoons flour
- 1 pound venison, cubed
- 1 tablespoon oil
- 3 cups water
- 1 onion, chopped
- 4 potatoes, cubed
- 3 carrots, sliced
- 3 stalks celery, chopped
- 2 bay leaves
- 1 tablespoon dried parsley

Directions:

Combine pepper, salt, garlic powder, and flour in a plastic bag or large bowl. Add cubed venison and shake bag or toss to coat meat. Brown meat in hot oil, in a large, heavy saucepan. Stir in water. Add remaining ingredients and cook on high until it begins to boil. Reduce heat and simmer for approximately 1 hour. To thicken, in a small mixing bowl, stir ½ cup warm water into 2 tablespoons of flour. Add mixture into stew. Stir until thickened and bubbly. Cook an additional 30 minutes or until vegetables and meat are tender.

Alternative to stove-top cooking: use slow cooker set on low for 8 hours.

Nutrition facts per serving:

270 calories; 4.5g total fat; 1g saturated fat; 0g trans fat; 65mg cholesterol; 490mg sodium; 36g carbohydrate; 5g fiber; 5g sugars; 22g protein; 0% Daily Value of Vitamin D; 6% Daily Value of Calcium; 20% Daily Value of Iron; 25% Daily value of Potassium



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Find this Cook Wild Kentucky recipe and others for Fish, Venison, Rabbit, Dove, Frog Legs, and more at: <https://planeatmove.com/recipes/>, then browse by Category, and choose Cook Wild Kentucky.