Preventing Grass Tetany

As spring approaches and grass begins to grow, grazing livestock may experience a forage-related problem known as grass tetany, grass staggers, lactation tetany, or hypomagnesemia. Grass tetany is a metabolic disorder caused by reduced magnesium (Mg) levels in the animal’s blood. In cattle, it generally affects older, lactating cows but can also be seen in dry cows, young cows, and in rare cases, growing calves. Symptoms often observed include nervousness, lack of coordination, muscular spasms, staggering, convulsions, coma, milk yield decrease, and death. If you suspect cattle are stricken with grass tetany, a veterinarian should be contacted immediately as early treatment can save animals.

Young cool-season grasses and small grains are commonly associated with this disorder. Grass tetany occurs most frequently in the spring, but may occur in the fall and winter when these forages start growing rapidly again or when cereal grain forages are grazed. High levels of nitrogen (N) and potassium (K) in the soil can increase the risk of grass tetany because they reduce the availability of magnesium to the animal. Farmers should refrain from placing cattle in a field that has been recently fertilized or has resulted in the disease before. Pastures where a significant amount of manure has been applied often have excessive potassium fertility increasing the risk to grass tetany. A farmer can also increase the legume content in his/her pastures with clover or alfalfa since they have higher magnesium levels to compensate for the lack of it in the new lush grass.

Feeding high magnesium or high “mag” mineral supplements is the preferred method to reduce the occurrence of grass tetany. High “mag” mineral mixes are available at most feed stores and contain higher inclusions of magnesium oxide than other complete mineral mixes. Cattle should begin consuming this high “mag” mineral during the late winter months and into early spring when new plant growth is starting. In late spring once temperatures are consistently above 60°F, a producer can quit feeding the high “mag” mixtures. High mag mineral does not need to

Continued on Page 3
Check out these grant opportunities; deadlines coming up soon (from the UK Center for Crop Diversity newsletter)

Kentucky State University offers Small Scale Farm Grants and Farmer Education Grants. Deadlines for both will be coming up on April 1, June 1, August 1, and October 1 in 2018. The Small Scale Farm Grant offers up to $5,000 for individuals and $15,000 for organizations that benefit multiple farmers. Farmer Education Grants offer up to $500 to cover registration fees and some travel expenses to attend workshops and trainings. For details, including links to application forms, visit [http://kysu.edu/academics/cafsss/research-extension/small-scale-farm-grant-program/](http://kysu.edu/academics/cafsss/research-extension/small-scale-farm-grant-program/), or contact Joni Nelson at joni.nelson@kysu.edu.

Renewable Energy for America Grants (REAP) are offered by USDA Rural Development and can help agricultural producers and rural businesses pay for 25 percent of renewable energy and/or energy efficiency project costs. The deadline is March 31 for these grants, which total $1,500 to $500,000. For more information, visit [https://www.rd.usda.gov/programs-services/rural-energy-america-program-renewable-energy-systems-energy-efficiency](https://www.rd.usda.gov/programs-services/rural-energy-america-program-renewable-energy-systems-energy-efficiency).

Seedstock Cattle Symposium: Coming to Shelby County

*Ben Crites, IRM Coordinator, University of Kentucky*

Make plans to attend the inaugural Kentucky Seedstock Cattle Symposium. Speakers from Kansas State University and the University of Kentucky will present timely information to assist producers on bull development and selection practices. Designed for seedstock cattle producers, the program will focus on nutrition strategies for bull development along with several techniques used when making sire selection decisions. These techniques include utilizing Expected Progeny Differences (EPD’s), incorporating genomics technology, and understanding selection indices. The event is scheduled to take place on Wednesday, April 25<sup>th</sup>, at the Shelby County Extension Office. The program will begin at 9:00 am EST with registration. Lunch will be provided to participants and is included in the $25 registration fee.

- **Date:** Wednesday, April 25<sup>th</sup>, 2018
- **Time:** 9:00 am EST
- **Location:** Shelby County Extension Office, 1117 Frankfort Rd, Shelbyville, KY 40065

For more information about the program, please contact Evan Tate (evan.tate@uky.edu), Kevin Perkins (kevin.perkins@uky.edu), Jeff Lehmkuhler (jeff.lehmkuhler@uky.edu), Darrh Bullock (dbullock@uky.edu), or Ben Crites (benjamin.crites@uky.edu).

*See Page 5 for more information!!*
Continued from Page 1

be fed year round, but is not problematic if it is. Free-choice high mag mineral should contain 12 to 15% magnesium from magnesium oxide. Cattle need to consume four ounces of the mineral supplement daily. Magnesium oxide is unpalatable, which can result in low mineral intake. Co-product feedstuffs such as dried distillers grains, molasses or a flavoring agent is added to the mineral mix to increase palatability.

If free-choice mineral is not a viable option, producers can also mix their own supplement by adding the appropriate amount of magnesium oxide to another palatable feedstuff, i.e. feeding in or with 1 to 2 lbs. of corn or other by-product that provides 20-25 grams of magnesium. For dairy cows, magnesium oxide can be added to the grain mix to provide an intake of 20 g of magnesium per cow per day. Magnesium oxide may be routinely used as a buffer in these grain mixes for dairy cows, so producers should check with their nutritionist to make sure adequate amounts and proper sources are being used to prevent grass tetany.

Besides magnesium oxide, another source of Mg is magnesium sulfate, which is more palatable than magnesium oxide. The downside to feeding magnesium sulfate is it can be an issue where cattle are consuming high sulfate water or other feedstuffs high in sulfur. Producers that are feeding corn co-products (distiller’s grains or corn gluten feed), adding additional sulfur to the diet in the form of magnesium sulfate, or have high sulfur water could create a sulfur toxicity.

Grass tetany blocks provide magnesium similar to that of a mineral supplement. The major disadvantage of this method is that all the animals may not consume an adequate amount of the block. Multiple blocks should be available with one block per ten cows.

The season for grass tetany will be developing as temperatures rise and grasses begin to grow. To reduce health problems and livestock death to this disorder, it is important to provide a quality high “mag” mineral or supplement containing Magnesium oxide.
Providing Water for Beef in Rotational Grazing Systems with Tire Waterers

by Steve Higgins -

Despite its importance, water is often the most poorly addressed component of animal nutrition on the farm. It is essential that livestock have easy access to plentiful, clean water within every paddock of a rotational grazing system to realize maximum efficiency and production. Although water may be available to cattle, the sources vary significantly within and among farms. Sources for water on farms range from full access to streams and ponds to city water-fed troughs located throughout the operation. The quantity, quality, and location of the water supplied can greatly influence feed intake, forage utilization and persistence, herd behavior, and manure distribution. Factors, such as relative humidity, type of animal, shade availability, and distance to water, play important roles in determining the water intake rates of cattle.

Location of a watering source is critical. Watering sources can influence grazing, compaction, and manure/nutrient deposition patterns. An optimized rotational grazing system should be designed to provide water so that cattle do not have to travel more than 800 feet to water, if possible. Waterers should be placed on summit positions because a high site should contain well-drained soils. Choose a location that isn’t heavily erodible, to minimize excessive mud and runoff that can pollute nearby water sources.

High volume tire waterer tanks can be utilized for water on farms range from full access to streams and ponds to city water-fed troughs located throughout the operation. The quantity, quality, and location of the water supplied can greatly influence feed intake, forage utilization and persistence, herd behavior, and manure distribution. Factors, such as relative humidity, type of animal, shade availability, and distance to water, play important roles in determining the water intake rates of cattle.

Location of a watering source is critical. Watering sources can influence grazing, compaction, and manure/nutrient deposition patterns. An optimized rotational grazing system should be designed to provide water to service multiple pastures within a rotational grazing system. Figure 1 illustrates how one tire waterer can serve as a watering hub for multiple pastures. With a large surface area and volume of water available for livestock, tire waterers can provide plentiful, high quality water to multiple animals at once and still have additional volume available for the rest of the herd. These structures can be reliable, high durability, low cost alternatives to traditional limited access watering solutions. Tire waterers can by plumbed with city water, harvested water, or a hybrid of both. A concrete pad or other all-weather surface should be installed around the tank to prevent mud and erosion from developing. If
animals are observed getting into the tank, exclude animals with a cross member attached to the top of the tire tank or fence across the structure. Figure 2 illustrates both of these design concepts. Like any waterer, regular cleaning and periodic maintenance will be necessary.

![Figure 2: Large volume tire waterer tank installed in heavy-use area.](image)

Rotational grazing systems are not effective if water is not readily available to every paddock. If the watering source is of poor quality, improperly located, or a limited resource due to inadequate flow rates and space limitations, then production may become limited. Taking a thoughtful approach to water quality, quantity, and location may help cattle producers achieve their long-term goals of increased production and profitability. For questions or more information regarding providing water in rotational grazing systems with tire waterer tanks, please contact Steve Higgins at shiggins@uky.edu.
Refine plans for pasture use for the upcoming grazing season; consider fencing, seeding, fertilization, herbicide applications, water and shade availability.

Nitrogen fertilizer should be applied in late February to promote early grass growth.

Before applying Nitrogen: Soil test pastures and use results for application of fertilizer and lime.

Renovate high traffic areas and bare areas to reduce erosion.

Purchase seed, inoculant, and fertilizer for upcoming season.

Check equipment and make repairs where needed.

During wet periods, consider moving livestock to a barn or sacrifice lot to protect pastures.

Continually move feeding area to reduce mud, erosion, compaction, and damage to forages.

Do not graze pastures before cool-season forages reach approximately 6 inches to allow for adequate growth and maximum forage production for the remainder of the grazing season.

Provide animals with easy access to complete mineral feeders at all times. Supply a mineral high in magnesium (a high “Mag” mineral) to prevent grass tetany in the early spring.
The CPH Report – 2017 Summary

Kevin Laurent, Extension Associate, University of Kentucky and Tim Dietrich, Kentucky Department of Agriculture

The CPH Report expands the analysis of CPH-45 sales to estimate the economic value of preconditioning calves prior to marketing. This analysis consists of two main components. First, is the CPH Advantage – which compares prices received in the CPH Sale to the average weekly statewide prices reported by the Market News Service of the Kentucky Department of Agriculture. The second component is the Estimated Net Added Return – which compares the CPH Sale value of the calf to the estimated value of the calf at weaning. In these estimates we use a 60 day preconditioning period and an average daily gain of 2.5 lbs. per day. Costs incurred during the preconditioning period such as feed, health program, interest, death loss and differences in sales commission are subtracted from the added value to arrive at an estimated net added return per head. The following table is an analysis of all fifteen CPH-45 sales of 300 head or more held in calendar year 2017. Sales were held in Guthrie, Lexington (including Stanford location), Owensboro, Springfield, Paris, and Richmond. Several items to note:

Owensboro sells with a 2% pencil shrink.

Owensboro, Guthrie and Springfield charge less commission for CPH calves.

Only weight classes of 20 or more head were used in comparisons.

Steers with weaning/starting weights of less than 350 pounds were not included in the analysis.

More details on how these figures were calculated can be found in the column definitions below. Also, visit the CPH-45 website at www.cph45.com. If you are interested in selling in a CPH-45 sale, contact your local County Extension Agent for Agriculture and Natural Resources.

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>No. Head</th>
<th>Wean Weight (lbs)</th>
<th>Wean Price ($/cwt)</th>
<th>CPH Weight (lbs)</th>
<th>CPH Price ($/cwt)</th>
<th>State Avg. Price ($/cwt)</th>
<th>CPH Advantage ($/cwt)</th>
<th>Feed Cost ($/lb gain)</th>
<th>Net Add Return ($/head)</th>
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<tbody>
<tr>
<td>Guthrie</td>
<td>1/23/2017</td>
<td>556</td>
<td>510</td>
<td>115.62</td>
<td>660</td>
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<td>736</td>
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<tr>
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<td>858</td>
<td>516</td>
<td>121.19</td>
<td>683</td>
<td>125.31</td>
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<tr>
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<td>3/14/2017</td>
<td>361</td>
<td>473</td>
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<td>623</td>
<td>148.91</td>
<td>142.48</td>
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<tr>
<td>Lexington</td>
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<td>491</td>
<td>147.69</td>
<td>636</td>
<td>143.38</td>
<td>141.71</td>
<td>7.67</td>
<td>0.49</td>
<td>124.51</td>
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| Average        |            | 10,585   | 495               | 142.16           | 641              | 143.28          | 137.29                 | 5.99                 | 0.51                  | $112.85                |
| Weight Avg.    | 10,585     | 601      | 142.65            | 647              | 142.83           | 136.71          | 6.11                    | 0.52                 | $107.46                |

Column Descriptions

| Wean Weight     | CPH weight minus 150 lbs. (minus 100 lbs for cattle less than 500 lbs at the CPH sale) |
| Wean Price      | average price of LM 1-2 calves at the calculated weaning weight 60 days prior to the CPH sale as reported by KDA |
| CPH Weight      | average weight of calves at the CPH sale |
| CPH Price       | average price of LM 1-2 calves at the CPH sale |
| State Avg. Price| average price of LM 1-2 calves as reported by KDA during the week of the CPH sale |
| CPH Advantage   | CPH price minus state average price |
| Feed Cost       | average feed cost per pound of gain using current feed prices for the 60 day preconditioning period prior to the CPH sale |
| Net Add Return  | net return per head after feed, vet($12.00), mineral($3.75), interest(5%), mortality(0.5%) and commission(varies by sale) |
2018 Annual Conference

Tues., April 3 | 8:30am - 3:30pm
Fayette County Extension Office
Lexington, Kentucky

Mark your calendars for the 4th annual Kentucky Hemp Industries Association (KYHIA) Conference! This is your opportunity to network with industry peers, discuss hot topics and enjoy presentations from University researchers and leading industry experts.

Plus, don't miss a special presentation by KY Ag Commissioner Ryan Quarles!

Early Bird Pricing:
KYHIA Members: $45 | Non-Members: $70

REGISTER NOW!

Contact info@kyhia.org for sponsorship opportunities
2018 Sheep Shearing School
University of Kentucky
March 20 and 21, 2018
Sheep Unit, C. Oran Little Animal Research Center, Versailles, KY
Sponsored by the Kentucky Sheep and Wool Producers Association
in Cooperation with the University of Kentucky Cooperative Extension Service

PURPOSE
The shearing school is designed for beginner or experienced shearsers. Professional sheep shearer Steve Kennedy will teach the most current shearing methods. An important aspect of the school is learning about maintenance and care of shearing equipment.

YOUTH SCHOLARSHIP
This school is not designed for young children; participants must be at least senior 4-H (high school) or FFA members. The Kentucky Sheep and Wool Producers Association and the University of Kentucky do encourage participation by senior 4-H and FFA’ers and will pay the registration fee for the first 6 senior 4-H or FFA registrants.

SCHEDULE

**Tuesday, March 20**
8:30 a.m. - Registration
9:00 a.m. - Equipment discussion
10:30 a.m. - Begin shearing
12:00 p.m. - Lunch (provided from registration fee)
1:00 p.m. - Continue shearing

**Wednesday, March 21**
8:30 a.m. - Equipment maintenance, wool care
9:30 a.m. - Trimming stand shearing
12:00 p.m. - Lunch (provided from registration fee)
1:00 p.m. - Continue shearing
3:00 p.m. - Summary/wrap-up

INSTRUCTORS
Ende Fink, Manager of the UK Sheep Unit, will be the lead instructor. He will be assisted by Frank Berry, Research Coordinator at the UK Sheep Unit, and Warren Adcock, graduate of the UK Sheep Shearing School.

Tips for participants
1. Wear “old clothes”
2. Exercise a few weeks before coming to the school
3. Bring your own shears, if possible (not required)
4. Study the steps in shearing a sheep
5. Must not have been outside the U.S. in the last 7 days

REGISTRATION
Facilities will limit participation in the Shearing School to 12 students. Selection of students will be based on the earliest postmarked registrations. A $150 registration fee is required.

To participate, the registration form and fees must be received by March 16, 2018.
To register, complete the form and send it, plus $150 fee, to: Dr. Donald G. Ely
Room 904 Garrigus Bldg.
University of Kentucky
Lexington, KY 40546-0215

More information, and the registration form, can be found at http://afs.ca.uky.edu/files/2018sheepshearingschool.pdf
When is On the Table?
• Wednesday, March 28, 2018

What is On the Table?
• One-day event for community conversation and reflection
• People gather around tables to talk in an informal setting
• Conversation starters are provided
• Feedback is captured

Who can participate?
• Everyone!
• Anyone can host a table
• Anyone can join in a conversation
• Participation is free of charge

How can I get involved?
• Register to be a host or a guest at www.bgcf.org/onthetableFRANK

Where can I participate?
• Sign up to host and choose your own location
• Dozens of locations around the city and county will be available
• Find an open event near you at www.bgcf.org/onthetableFRANK

Why should I participate?
• Your input will inform:
  ■ Community investment and direction
  ■ Planning for city and county growth
  ■ The needs of rural communities and land use/preservation
  ■ We will share what is important to you with local decision makers

Join thousands of local residents on March 28, 2018 — over breakfast, lunch, dinner, a coffee break, or any time in between — to lend your voice to discussions that will help shape the future of our community.
on the table
your voice matters.

WHAT IS ON THE TABLE?
On the Table is a one-day opportunity to gather around a table with friends, neighbors, colleagues and maybe even a few people we are meeting for the first time to share a meal and have a real conversation about what’s important to us.

Lexington held the first On the Table event in Kentucky, presented by Blue Grass Community Foundation, on March 15, 2017. Over 11,000 participants came together around 1,100 tables throughout Lexington to discuss not only what’s great about the city, but ways to make it even better.

This year the Franklin County Community Fund, in partnership with the Frankfort Area Chamber of Commerce, is bringing On the Table to Franklin County. We’ll share our experiences and hear other people’s perspectives. We’ll learn about what matters to each of us. We’ll talk about ways to build and maintain the neighborhoods and community we desire.

On the Table is a first-of-its-kind community engagement initiative in Franklin County. The conversations we have will inform decision making about planning, development, investment, social services, rural lands, and the environment. By empowering people’s voices, we will collectively help improve the quality of life in Frankfort and Franklin County.

WHY ON THE TABLE?
We know that big ideas can spring from small conversations and that people invest in what they help create. At Blue Grass Community Foundation and our affiliate, the Franklin County Community Fund, we are committed to bringing people together to create a more generous, vibrant and engaged community.

The Franklin County Community Fund, a local, permanent, charitable endowment for the perpetual benefit of Franklin County, was established by local residents in 2015.

The Fund is governed by a local board of advisors and chaired by Layne Wilkerson. Franklin County Community Fund, in partnership with the Frankfort Area Chamber of Commerce, is proud to collaborate on this exciting initiative.

On the Table conversations are meant to encourage everyone to think about the issues they care about while adding a diversity of voices to the discussion of who we are, where we’re going and what we can do, together, to get there. The goal is to discover how each of us can join with the hundreds of people and organizations that make our community a better place for all.

WHEN: Wednesday, March 28, 2018

WHO: Do you live, work or attend school in Franklin County? You are invited to participate by hosting or attending an On the Table conversation. Register online at bgcf.org/onthetableFRANK.

WHERE: Anywhere! Mealtime conversations — breakfast, lunch, dinner and everything in between — can be hosted in homes, schools, restaurants, places of worship, libraries, offices, parks and other community locations. Meals can be sit-down, catered, picnic, brown bag or potluck. It’s entirely up to the host.

AFTER MARCH 28: All On the Table participants will be invited to complete a short email or paper survey about their conversation, covering important issues and themes, big ideas and what matters most to them. We want to hear every voice! From these responses, the Community Foundation will issue a report highlighting the ideas, conversations, themes and outcomes that emerge from On the Table to help inform efforts to improve Franklin County.

Join thousands of local residents on March 28, 2018 — over breakfast, lunch, dinner, a coffee break, or any time in between — to lend your voice to discussions that will help shape the future of our community.
Green Bean and Ham Soup

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 cups fresh green beans,</td>
<td>3 whole carrots, peeled and sliced</td>
</tr>
<tr>
<td>trimmed and cut into 1-inch pieces</td>
<td>1 pound fully cooked ham, cut into bite-sized pieces</td>
</tr>
<tr>
<td>3 cups russet potatoes, unpeeled and cubed</td>
<td>9 cups water</td>
</tr>
<tr>
<td>2 small onions, thinly sliced</td>
<td>1 teaspoon salt</td>
</tr>
<tr>
<td></td>
<td>¼ teaspoon black pepper</td>
</tr>
<tr>
<td></td>
<td>1 teaspoon garlic powder</td>
</tr>
<tr>
<td></td>
<td>1 cup half and half</td>
</tr>
<tr>
<td></td>
<td>2 tablespoons corn starch</td>
</tr>
<tr>
<td></td>
<td>¼ cup cold water</td>
</tr>
</tbody>
</table>

Place green beans, potatoes, onions, carrots, ham and the nine cups water into a large soup pot; cover and bring to a boil. Reduce heat to medium and simmer, uncovered, about 45 minutes or until the vegetables are tender. Remove the pot from the heat and add the salt, black pepper, garlic powder and half and half. Return to heat and bring to a simmer again. Combine corn starch and the ¼ cup cold water in a small bowl. When simmer begins, combine the corn starch mixture into the soup and stir well. Allow the soup to remain on the heat for 5-7 more minutes while it thickens.

Yield: 12, 1 cup servings

Nutritional Analysis: 140 calories, 4.5 g fat, 2 g saturated fat, 25 mg cholesterol, 670 mg sodium, 14 g carbohydrate, 3 g fiber, 3 g sugar, 10 g protein

Emergency Weather Closing Protocol
The Extension Office will follow the extreme weather closing policy of Kentucky State University.

Keenan Bishop
County Extension Agent for Agriculture and Natural Resources Education