

David Hallauer  
District Extension Agent, Crops & Soils

### **Broomsedge Bluestem – Fertility Management Considerations**

There's a statement in a USDA Plant Fact Sheet on broomsedge bluestem stating: *On infertile soils, broomsedge is a long-lived competitor.* If your end of year forage management includes pricing or applying fertilizer to a cool season grass stand, keep broomsedge bluestem management in the back of your mind.

Why? Broomsedge continues to be an increasing species of interest in cool season grass stands, and fertility management plays a big role in whether it gets a foothold or not. Other factors contribute as well (harvest management comes to mind...), but because the competitive nature of cool season grasses depends heavily on fertilizer, fertility management, particularly lime and phosphorous, can be a great way to help manage broomsedge to a degree. One example comes from the results of a 2008 study at the University of Missouri evaluating the response of cool season grass (fescue) stands with broomsedge in them to fertilizer applications. Their research showed the addition of fifty pounds of phosphorous per acre plus lime increased fescue stand composition from less than 15 percent to over 35 percent, while *slightly* reducing the broomsedge composition of the stand. Bottom line: it's a slow process, but fertilizer can help.

*This research does not suggest potassium and nitrogen fertilizers aren't important. In fact, potassium levels in many forage stand soil tests continue to decline, warranting a second look at K applications. As in this study, we know pH and phosphorous levels have long been a concern and are contributors to the broomsedge issues we currently have.*

If 50 pounds per acre of phosphorous fertilizer makes you cringe a little, a second look at actual soil fertility levels versus a 'blanket' approach to application might be in order, and that's best done with a soil test. Conditions can make it tricky this time of year, but if you can get a probe in the ground (to a six-inch depth) and don't mind variable weather during sampling, a good soil sample can provide a lot of information to guide fertilizer applications. We have good numbers for N/P/K removal in cool season grasses, but soil testing becomes particularly important when determining the need for lime applications.

If soil testing isn't in the cards, keep this P number in mind: 12. That's the phosphorous removal number we use for every ton of cool season grass. For example: if a hay field yields two tons per acre, the amount of phosphorous needed to 'replenish' that removed P would be 24 pounds per acre. In the absence of a soil test, consideration should at least be given to application of a crop removal rate to keep soil test levels from falling further.

The acres taken over by broomsedge bluestem continue to increase. Plan now for a fertility management program to keep it from getting worse. If you want to discuss fertility (or other management) programs further, feel free to drop me a line.

Ross Mosteller  
District Extension Agent, Livestock & Natural Resources

## Is Limit Feeding an Option?

Coming out of the Thanksgiving holiday and heading into Christmas candy season, you might think this is a human healthy eating article; believe me, I'm the last person who needs to discuss healthy eating! I'll leave that topic for my co-workers to discuss and focus on ruminant nutrition feeding today. Limit-feeding is not a new concept, however the current forage prices relative to grain or by/co-products may make this practice an attractive alternative to feeding high roughage growing diets to calves, or even utilized to dry lot cow herds through winter.

Cattle producers who have the equipment and facilities to feed in a bunk, would be likely candidates for limit-feeding a high energy diet as a cost-effective option for growing calves this late fall and winter. Just because a ration worked in the past, it may not be the most economical today. The current situation is mostly due to a short national forage supply and declining commodity grain prices. For example, hay priced at \$175/ton with a total digestible nutrients (TDN) value of 52% equates to approximately \$0.17 per pound of TDN. However, \$4.75/bu corn (88% TDN) calculates out to about \$0.10 per pound of TDN. This scenario only looks at the energy values, but protein has a big impact on this discussion as well.

Research at [Kansas State University](https://www.k-state.edu) has looked at limit-feeding calves a high energy diet at 2.2% of body weight compared to a full-fed high roughage diet (2.8% of body weight) for a 90 day backgrounding period. Both diets included 40% wet corn gluten feed (dry matter basis) and varying amounts of corn, alfalfa, prairie hay, and a supplement. Stockers limit fed the high energy diet were more efficient and gained 2.5 lb/d whereas stockers full-fed the high-roughage diet gained 2.9 lb/d. Backgrounding system had little to no effect on finishing performance or carcass characteristics.

What are the advantages of high energy, limit-fed diets? There can be the direct ration cost reduction, but here are a few of the additional benefits that feeders need to evaluate when looking at this type of feeding approach.

- Reduced mixing time and loads of feed due to less forage in the diet.
- Less feed falling out of bunks and being wasted, reducing rodent issues.
- More efficient use of bunk space, as the feed delivered is typically cleaned up faster.
- Improved health management of calves. Healthy calves will be eager to get to the bunk at feeding time, making lethargic, sick calves easier to spot.
- Improved pen conditions and maintenance due to less manure. Research from Kansas State University has shown a 40-45% reduction in manure output when limit feeding.

When getting calves started on feed, place long stemmed hay in bunks prior to arrival. Start calves at an intake of approximately 0.75% of body weight (dry matter basis) and work up to 2.2% of body weight within a two-week window. Consistent daily feeding time and adequate bunk space, at least 15 inches per head, are critical components of this approach that can help prevent digestive upsets and set calves up for success.

Focus on this article has been on growing calves, but as stated earlier, a limit feeding approach can be utilized for cow herds as well. The cow herd discussion can be an article all on its own. To learn more about this work, recorded informational zooms can be found at: [www.ksubeef.org](https://www.ksubeef.org)

Laura Phillips  
District Extension Agent, Horticulture

### **Caring for your Christmas tree**

December is here and many of us will start bringing evergreen trees into our home for the Christmas season. Often, people wonder, how do I make my Christmas tree last longer? Luckily, there are a few things you can do to prolong the life of your Christmas tree, allowing it to last up to five weeks.

When picking out a tree, first think about the trunk. The trunk should be straight so that the tree does not lean when you put it up. The diameter of the trunk at the base also needs to be small enough to fit into your tree stand. Whittling or cutting the sides of the trunk to make it fit into a small stand will prevent it from being able to take up water. It is a good idea to measure your tree stand and take the measuring tape with you to the tree farm.

Next, make sure the tree is fresh. Run your hands over the branches, and if needles fall off or break look for a different tree. A fresh tree will have pliant needles that bend and stay onto the branch. Try bending a branch and see if it snaps. Brittle branches are a sign of an older tree, while bendy branches indicate freshness. Lastly, you can lift the tree a few inches and drop it so the base of the trunk hits the ground. If a lot of needles fall off, this indicates an older tree.

When you bring home the tree, the first thing to do is cut at least  $\frac{1}{2}$  inch off the bottom of the trunk. When a cut has been exposed to the air for more than 6 hours, the cells on the cut become blocked and cannot take up water. A fresh cut ensures that your tree is able to absorb water and live longer. Do not try to angle the cut or create a v-notch on the trunk. It does not increase water uptake and a flat cut across the bottom provides more stability. If you need to store your tree for a few days before setting it up, place it in an unheated garage or shed where it is protected from wind and freezing temperatures. Place the freshly cut butt of the trunk in a bucket of water.

When setting up the tree, make sure it is not near heat sources or drafts. A heat source near the tree can be a fire hazard, and warm drafts will cause the tree to dry out faster. Check that your tree lights are approved for use on live trees and produce little heat. It is also a good idea to check the lights for any damage to the cords to prevent risk of fire.

Your tree stand should ideally be a sturdy material that can hold enough water for your tree; a general rule of thumb is either a gallon of water or one quart of water per inch diameter of the tree. Use cool water and make sure to never let the tree run out of water. Depending on the size of the tree, it may use over two quarts of water a day during the first week. It is normal for the tree to take up less water overtime. Start by checking water levels twice a day for the first two weeks, then check at least daily. While there are additives for Christmas tree water meant to provide nutrients, research shows that plain water is sufficient, and additives offer no real benefit. In some cases, they can even harm the tree. If you have trouble getting to the base of the tree once its full of ornaments and surrounded by presents, you can use a funnel to make the process easier.

Lastly, make sure to monitor your tree for dryness and brittle needles, as these are signs that the tree should be removed. A dry tree can easily become a fire hazard and put a damper on your Christmas festivities.

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Teresa Hatfield  
District Extension Agent, Family and Community Wellness

No article this week

Cindy Williams  
District Extension Agent, Family & Community Wellness

### **Finding Time for Fitness Over the Holidays**

Trying to find time to fit “in” the holiday parties, shopping, baking, cleaning, entertaining and of course work may lead to some stressful times. What about eating healthy and physical activity? Finding time for fitness over the holidays may be hard because of the cooler weather and busy schedules. Including physical activity during the holiday season can help you prevent weight gain and release stress. Here are three tips to help you fit in fitness over the holiday season.

**Tip #1: Schedule activity into your daily routine** - Schedule your physical activity in advance by putting it on your calendar and treating it like an important appointment. Incorporate physical activity you enjoy doing at the most convenient time to accomplish your fitness goals during the busy holiday season.

The Physical Activity Guidelines for Americans recommend adults aim for at least 150 minutes of moderate-intensity aerobic activity and 2 days of muscle-strengthening activity each week. Anything that gets your heart beating faster and activities that make your muscles work harder than usual counts as physical activity. If you are short on time, start with just 5 minutes. Set a reachable goal and work up toward the recommended amount. Just remember to move more and sit less during the day.

**Tip #2: Incorporate easy activities to get moving during the holidays**

Including these activities will help achieve your physical activity goals:

- Park at the far end of the parking lot.
- Take extra laps around the store before checking out.
- Use the stairs instead of escalators.
- Include mall walking to enjoy the decorations while window shopping.
- Dance to your favorite holiday music.
- Work out at home to an exercise video.

**Tip #3: Create healthy holiday traditions**

Adding seasonal activities to your holidays can be fun and also create healthier holiday traditions. Walk around your neighborhood instead of riding in your car to look at holiday lights and decorations. Incorporate winter activities such as sledding, ice skating, snow skiing, or taking a winter nature hike. After a holiday dinner, organize a walk, basketball or football game to catch up with family members while incorporating some fun physical activities.