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Crops & Soils/Horticulture

Liming Acid Soils

Fall is a great time for soil testing – providing we get some moisture to allow us to get a soil probe in the ground. While much of our focus centers on nitrogen, phosphorous, and potassium, don't overlook the soil pH number that's a part of most soil test analyses.

A soil test pH value is only going to tell part of the story, with measurement for buffer pH critical to determining the needed lime application level. Soils with higher clay contents and organic matter levels will have greater acidity at a given pH, and will require more lime/ECC (effective calcium carbonate) to reach a target pH than a sandy soil. This is why two soils may have the same soil pH but have different lime requirements.

Lime rates are given in pounds of effective calcium carbonate (ECC) per acre, so knowing the ECC value of your liming material (they vary widely) is key to applying an appropriate rate. All lime materials sold in Kansas must guarantee their ECC content, with measurements such as the chemical neutralizing value of the lime material relative to pure calcium carbonate, and the fineness of crushing, or particle size, of the product factoring in to the product's ability to correct soil pH. The combination of ECC level needed to correct pH as well as a product's ECC analysis helps to determine how much of one product you might need versus another, as well as the rate that needs applied.

Some products may be marketed as pH correction products but are not. Research has clearly shown that a pound of ECC from agricultural lime, pelletized lime, water treatment plant sludge, fluid lime, or other source is equal in neutralizing soil acidity. Thus, the cost per pound of ECC applied to your field is a primary factor in source selection. Products *without* an ECC value – even if they include calcium – won't be effective at pH correction. Gypsum or liquid calcium products (calcium chloride or calcium nitrate, for example) fall in to this category.

Soil pH is an important facet of a balanced nutrient management program. For best results, always start with a good soil test and then correct with an appropriate product to make that nutrient management program work effectively, efficiently, *and* economically.

Quality Grass Seed

As fall grass seeding/overseeding approaches, be cautious about what you are purchasing. Many high-quality mixes cost a little more, but also may include higher quality varieties as well as less potential for weed or other crop seeds.

Other crop seed may seem harmless and sound like it shouldn't be a problem. Grasses like some of the bluegrass species or even a pasture grass like orchardgrass fall in to this category. Unfortunately, they can become weedy species in a lawn, growing at a different rate, or being a different color than desired. Weed seed percentage should be considered as well, with the noxious weed seed percentage at zero. Its highly likely you'll pay a little more to get 'pure' seed, but you'll likely see a better end product as a result.

Trying to determine what bluegrass or fescue varieties to plant? A listing of various Kentucky Bluegrass cultivars can be found at <https://tinyurl.com/zh456xvv> . The recommended for Kansas Tall Fescue cultivars can be found at: <https://tinyurl.com/zh456xvv> . Both lists are also available upon request from any District Extension Office.

Ross Mosteller
District Extension Agent
Livestock & Natural Resources

Take Away from a Trip to Nebraska

If you know me, you know I have great appreciation for the ruminant animal and their ability to convert sunlight into food through the power of the rumen, arguably as effectively as any agriculture system. This week I attended the Nebraska Grazing Conference in Kearney, which has the wheels in my mind spinning on several of the topics and how to implement them for Meadowlark producers. Over the next couple weeks, I plan to address some of these, but will do a quick summary of emergent topics discussed. WARNING, I'll give the same disclaimer as speaker Steve Kenyon gave, some of this might offend the reader. That's not my goal, but hopefully, it helps you think deeper and/ or broader. So, what were some of the emergent issues?

Grasslands Biome Collapse. The great plains have some of the last remaining, wide-spread grassland ecosystems in the world and they are in trouble! The greatest threats to the grassland biome are: land use (tillage and housing development namely) and woody encroachment. There is little doubt that tackling the first can get me into trouble, even with good friends, so my focus in the future will be on the woody encroachment side. Estimates are that 132 million acres in the Great Plains are in a direct threat from woody invasion, most notably eastern red cedar. Next week we'll pick back up on this topic, but I came home wanting to cut down the cedar trees in my windbreak, write a burn plan and already long-hated honey locust!

Old World Bluestem and other invasive species. Some producers are very well acquainted with some of the non-native, bluestem grass species. Yellow Bluestem, Caucasian Bluestem, Broomsedge Bluestem are all common terms to describe the class of problematic introduced plants. Like many non-natives, these are grasses introduced into the United States with the hope of serving specific purposes, but for one reason or another, they have negative side-effects and out compete our natives. There is encouraging news in fighting Old World Bluestems, much of which comes from work at the K-State Research Center in Hays. This crowd also considered smooth brome as invasive, so guess it's all in your perspective! The first two topics are a bit negative and scary, the next two have more of an optimistic look.

Collaborative Adaptive Management Strategies. Simply defined, this is a "learn by doing, with structured decision making" approach to land management. Some interesting research was shared from both the University of Nebraska and USDA Agriculture Resource Service in Colorado. The big picture of the research, was long-term sustainability of grazing systems, focusing on: pasture evaluation, woody encroachment control, heterogeneity of plant species, livestock performance and building soil.

Regenerative Agriculture. Steven Kenyon, Alberta, Canada, challenged many traditional production practices and schools of thought on topics ranging from; the most important ranch employees are insects, microbes and other 'critters', monocultures are ugly, predators are beneficial, fertility comes from air not soil and many other thought-provoking topics. Being part of a researched based system, I always want to see replicated data, but what was shared was very interesting, delivered in an entertaining way and has me wanting to try some practices.

Outside of the conference itself, although we need another round of rain, I felt blessed to see how good things look at home compared to most of my drive across northern Kansas and southern Nebraska. If you've read this far, I appreciate you hanging with me on this different approach to a news article, as promised, more to come on some of the topics above. Like my Dad always used to say, "you never learn anything staying at home" and I've appreciated the opportunities Extension provides to continually learn. If you want to review proceedings from the Nebraska Grazing Conference, please visit: <https://grassland.unl.edu/nebraska-grazing-conference>

Teresa Hatfield
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Family and Community Wellness

Why Do You Need a Durable Power of Attorney for Healthcare?

We have all heard stories about people who can't speak for themselves in a healthcare crisis. We have listened to family members' disputes about how to make the best decision for a family member. If you can't make the decision for yourself, who makes it? If there is a dispute about your care the courts may make the decision.

Advance directives are legal forms you complete when you engage in advance health care planning. These legal documents allow you to voice your wishes regarding future medical care and treatment if you cannot do so for yourself. Less than one-quarter of U.S. adults have an advance directive in place. The main reason is that they are not aware that they need one. All competent adults have the right to make their own decisions if something happens to them. If you suffered a crisis tomorrow, who would speak for you?

One of the best documents for everyone to have in place is the Durable Power of Attorney for Healthcare. With this document, you can appoint someone to speak on your behalf if you are incapacitated. This person is called your "health care agent" or "proxy." This person can decide what kind of treatment you receive, who is treating you, make decisions regarding organ donation, and what to do with your body after death.

You should appoint someone you trust, as they will be expected to carry out your healthcare wishes. You should communicate those wishes to the person you designate. This person needs to be someone you know well and that you can trust to follow through with your wishes, even if it is not something they would want for themselves. In Kansas, this person must be at least 18 or older and cognitively competent. This person cannot be your healthcare provider, an employee, owner, or director of your treating healthcare provider unless that person is related to you by blood, marriage, or adoption.

Appointing your agent is easy. The state of Kansas offers a fill-in-the-blank form. You will fill in your name and contact information and get the document signed by a notary or by two witnesses. Witnesses must be 18, cannot be related to you, are entitled to your estate, and have direct financial responsibility for your health care. Please remember that the Power of Attorney for Healthcare is not the same as a General Power of Attorney; this type of document needs to be drawn up by an attorney.

Store your documents in accessible places. Keep a copy in your house; you might want to put a copy on your refrigerator. You could also keep a copy in your car and give copies to family and friends. Be sure to provide a copy to your doctor and the person you have assigned as your healthcare agent. DO NOT store your document in a safe deposit box at your local bank. If no one can get to the form, it is useless.

If you haven't completed a Durable Power of Attorney for Healthcare, you can find the documents on the Meadowlark Extension District website at <https://www.meadowlark.k-state.edu/family-community-wellness/index.html> or at the Meadowlark Extension District offices.

Cindy Williams
District Extension Agent
Family & Community Wellness

Champion 4-H Foods Announced

As an annual tradition, I share, along with the permission from the members, their “winning” champion recipe. This year is no exception. This year we had a sister duo that sweep the top honors in foods.

The Overall Grand Champion Food winner was an entry from Lauren Conser of Valley Falls. Lauren’s cake was a Chocolate Chiffon Cake and was also named champion in the Advanced Foods for members (12-14). She is the daughter of Holly and Andy Conser. Her 4-H age is 13 and she is an active member of the Prosperity 4-H Club. Some of her other projects include: Dog Care and Training, Goats, Arts and Crafts, Photography and Clothing Buymanship.

Chocolate Chiffon Cake

½ cup cocoa	1 ¾ cup sifted cake flour
¾ cup boiling water	1 ¾ cup sugar
8 eggs (separated)	1 ½ teaspoons baking soda
½ teaspoon cream of tartar	½ cup salad oil
1 teaspoon salt	2 teaspoons vanilla

Mix cocoa with boiling water. Beat egg whites with cream of tartar until very stiff peaks form. Sift together dry ingredients into mixing bowl. Make a well in the center. Add oil, egg yolks, cocoa mixture, and vanilla. Beat well. Fold in egg whites. Pour into ungreased 10-inch tube pan. Cut through batter with spatula. Bake at 325° for 55 minutes. Increase temperature to 350° and bake 10 more minutes. Allow to cool completely before removing from pan.

Coming up as Reserve Overall Grand Champion in Foods was Lauren’s older sister, Grace. Her winning entry was a Peppermint Chiffon Cake and it was also named champion in Senior Advanced for member 15 years and older. Grace is 17 and she is also an active member of the Prosperity 4-H Club. Andy and Holly Conser are her parents and she is a recent high school graduate. Some of Grace’s other projects include: Goats, Clothing Buymanship, Photography and Dog Care and Training.

Peppermint Chiffon Cake

2 ½ cups cake flour	½ cup water
1 ½ cups white sugar	½ teaspoon cream of tartar
3 teaspoons baking powder	1 ½ teaspoons peppermint extract
1 teaspoon salt	½ teaspoon vanilla extract
½ cup vegetable oil	15 drops red food coloring
7 eggs	

Separate the eggs—the whites from the yolks. Sift the cake flour, sugar, baking powder, and salt into a large bowl. Make a well in the center and add the oil, egg yolks, water, peppermint extract, and vanilla extract. Beat with mixer on low for 1 minute.

Beat egg whites with cream of tartar until stiff peaks form. Gently fold the whites into the yolk mixture. Pour 1/3 of the batter into a separate bowl and tint with the food coloring.

Alternate large spoonful of red and plain batter into an ungreased tube pan. Run a knife or spatula through the batter to make a swirled effect.

Bake at 325° for 55 minutes. Increase heat to 350° and bake for an additional 15 minutes or until done. Let cake cool in pan up-side-down. Remove the cake from pan when completely cool.

Thank you, Lauren and Grace Conser, for sharing your “winning” recipes with us!!

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