

Newsletter

State Cost Share – Stone Co. SWCD

Currently through State Cost Share, the state obligations of \$40 million for fiscal year 2019 have been met. Districts are unable to generate new contracts until our next fiscal year (2020) which begins in July of 2019. There is an exception to this if you are enrolled in the Pest Management or Nutrient Management Incentive Programs. If so, we will move forward with obligating 2020 funds for those practices early this year since they are not claimed until November of 2019 (into our next fiscal year).

We can be planning with you on your farm addressing resource concerns you may have. If you are looking to plan a grazing system, now is a good time to start addressing your ideas. The caps were increased in FY18 to be: For Water Development (well) the new cap is \$110/ac. served by the system, for Water Distribution (pipeline/tanks) the cap is \$120/ ac. served & for Grazing System Fence the cap is \$70/ ac. served by the system. The Southwest Missouri Grazing School schedule should be out in February. We have been working with several landowners on their systems along with implementing fencing for Woodland Exclusions. There are many benefits to both practices; although separate practices.

The policies for our **Streambank Stabilization** practices have been updated & includes components for cedar tree revetments & bioengineering materials and riprap rock. This practice applies to agricultural land along streams where significant streambank erosion problems exist. Eligibility will be determined by the appropriate technical authority. DNR now has two engineers, one that can assist with these plannings / design, having experience in this area. A private engineer can also be used and has been in some neighboring counties. We have contacts for some identified private engineers. A couple I am aware of are retired engineers from NRCS. Hourly engineering incentive if a private engineer is used is: \$3,000 for up to 29 hrs., \$4,000 for 30-39 hrs., and \$5,000 for 40 or more hrs. May not exceed \$5,000 per site. **The Maximum State Cost-Share assistance is \$25,000 per distinct project site annually.** That includes the engineering fee. This policy max increase will be a huge help in implementing these practices to help save you from losing more agricultural land. There have been successful practices completed in Newton County thru the Soil & Water Conservation District office there.

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Poss. pictures here

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Stone County Livestock and Forage Conference

February 7th, 6PM @ First Baptist Church, Crane MO

Conference topics include current research recommendations for tall fescue and calculating the cost of beef production.

There is no charge for the event but you must pre register by February 4 to order your meal. Call 417-357-6812

Spring Forage Conference

February 26th from 8-3:30 @ The Ramada Oasis Convention Center

Keynote Speaker Dr. Pat Keyser, Professor/Director University of Tennessee Center for Native Grasslands "Going Old School for Summer Forage Production-Can Native Grasses Work?"

Register online at www.springforageconference.com

Novel Tall Fescue Workshop

March 18, 8:30am @ Southwest Research Center, Mt. Vernon

This one day workshop will give you the tools and information needed to remove toxic tall fescue and replace with novel tall fescue varieties. Speakers include local producers, company representatives, extension and researchers.

Register online at <http://grasslandrenewal.org/education.htm>

Or call Jendel Wolfe @ 417-466-2148 ext. 21

Grazing School

Now is the time to think about attending one of Stone County's Grazing School. This is an important factor in being awarded State or Federal support. Ozark will be offering a school June 11, 12, and 13. Details on more schools to follow.



Forage Production Planning Guide

February

Start over-seeding of legumes on pastures. Continue to graze or feed hay in order to tread-in seed.

Install changes needed in grazing system.

Attend Stone County Livestock and Forage Conference as well as the Spring Forage Conference in Springfield. See page 2 for details.

March

Apply fertilizer to cool season pastures. Consider later fertilization on spring pastures if unable to keep up with the spring flush. Remember to add fertilizer as recommended by your soil tests!

Finish over seeding legumes.

Continue to graze over seeded pastures for grass growth control.

Consider the addition of magnesium to mineral mixes to offset possible grass tetany.

Apply Lime according to soil test.

April

Prepare to burn warm season pastures and hay fields if needed.

Finish cool season grass and legume plantings for complete reestablishment.

Implement grazing system

Check warm season grass fields for weed competition and spray appropriate chemicals if needed.

Install above ground watering system. Check existing ones.

Check over seeded legumes for grass completion. When livestock have grazed the grass canopy down to where they are biting off the legumes give the pasture a rest.

Remember: legume plants need sunlight to survive!



Practice Spotlight: Animal Waste Management

Animal waste management is a practice that is available to landowners. It has been utilized several times in Wright & Texas Counties. The purpose is to manage waste from agricultural production in a manner that prevents or minimizes degradation of soil & water resources. Such systems are planned to preclude discharge of pollutants to surface or ground water & to recycle waste (manure) through correct soil application to agricultural land. There will need to be a certified nutrient management plan (CNMP) prepared by an approved Technical Service Provider. Soil tests will need to be taken under this CNMP using University of Mo. Testing Lab. An incentive of \$2,000 is available to defray this cost if follow through with the feeding facility. Cost Share is authorized for 65% of:

- Whole barn excluding feed bunk areas & bedding areas of the barn
- Floor space utilized to store dry waste from paved feedlot
- Roof to cover dry storage area. The square footage of the roofing must equal the square footage of floor space
- Wall necessary to enclose dry storage area
- Collection gutter or basin from feedlot to storage area
- Critical area seeding

Any additional elements required to meet the NRCS Standards and specifications are at the cooperator's expense.

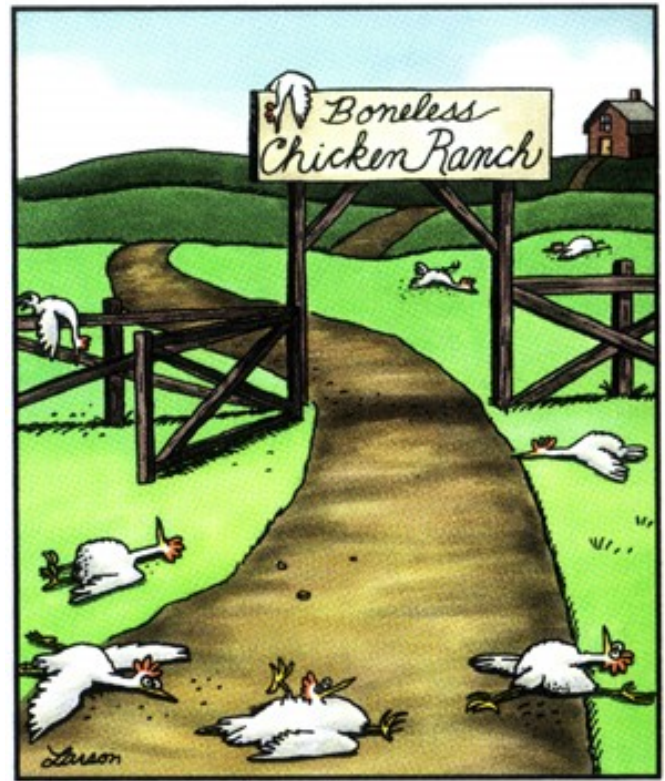
Call us if you have an interest or need for practices addressing your resource concerns.

417-723-8389.

The time has come for our Second Annual Life on the Farm Photo Contest. Your imagines can inspire us all! Friends have shared favorite photographs from around the farm: animals, kids, landscapes, and wildlife. The last day to enter was February 1. We have been sharing the photos on Facebook and plan to share at the Stone County Livestock & Forage Conference. The photo with the most “likes” on Facebook and votes at the conference will be the winner.

The winner will be notified February 8th, and will receive a \$50 Visa Gift Card sponsored by American Family Insurance, Bradley Smith. Thank you Bradley!

Also if you have not “Liked” us on our Facebook page yet please do so: Stone County Soil & Water Conservation District.



Detecting and Understanding Stray Voltage

Stray voltage is unintentional, undesirable, and extremely common. Improper grounding, weak or failed connection, old and fraying wires might all lead to stray voltage. Stray voltage may come as a surprise, such as a heifer stepping into water that is spilling from a trough-with stray voltage running through it. This could cost her life. Stray voltage may also be known, but just not yet fixed, such as a grinder that has a short. This could cost a farmer's life. Stray voltage is a problem that should be addressed immediately, in order to ensure the safety of both livestock and machinery on a farm.

Stray voltage can come from any electrical device that is malfunctioning. Even properly installed wiring or devices can be damaged by moisture, lighting, or mice, squirrels, and rats. Most commonly afflicted are barn fans in the summer and water tank heaters in the winter. There can often be problems coming onto your farm from the utility service. Wherever the source, proper diagnosis is a critical starting point. Consider spending some time evaluating your property and equipment.

Symptoms can be mysterious. Electricity is essentially invisible and we can't see the problem! Electrical engineers, including agricultural engineers, are trained to see electrical current wherever it is, quite like the rest of us might see water flowing.

If you think there may be an electrical issue on your land, consider hiring a professional. They can diagnose and cure most stray voltage issues within a few hours, and often less.

“Detecting and Understanding Stray Voltage” December 4, 2018: [Eco Farming Daily](#)



by Tim Schnakenberg: Agronomy Field Specialist,
University of Missouri Extension

Limiting Broomsedge—Lime or Phosphorus?

Broomsedge (often called “sage grass”) has been a steadily growing problem in Southwest Missouri pastures for many years. I receive calls on how to deal with the problem nearly every month. Broomsedge is a native, perennial warm-season grass that is found throughout Missouri. Even though it is a native species, it has a reputation for low quality and having an invasive nature. There is a common belief that broomsedge in a field means it needs lime. That belief was put to the test several years ago in an MU research project.

A study was conducted by Dr. Dale Blevins, et al, during 2005-2008 at the Southwest Center in Mt. Vernon to determine the effect of lime or phosphorus (P) on a broomsedge population in a tall fescue stand of grass (soil test level = pH—4.6; 6 lb/a Bray 1

P). The treatments included: 1.) liming; 2.)P fertilization, and; 3.)liming plus P fertilization. Lime was applied at 0X, 0.5X, 1X and 2X the soil test recommendation (0-7.3 tons of lime/acre). Plant counts of fescue and broomsedge were estimated over the time-span. The following observations were found after three years:

- Without P fertilization, broomsedge doubled.
- P fertilization effectively maintained broomsedge at the initial level.
- P treatments doubled the tall fescue count, but without P, tall fescue counts remained at the initial level.
- Broomsedge increased nearly threefold without lime.
- Tall fescue more than doubled with the two highest lime treatments.
- The no lime treatment resulted in no increase in tall fescue.
- Lime and P combined limited broomsedge increase to the greatest degree and produced the greatest increase in tall fescue. It is believed that the fescue outcompeted with the existing broomsedge.

It's clear from this study that both lime and P can be very useful in limiting broomsedge in fields. Both independently have an effect, but together, they can help in a fescue stand to compete with broomsedge. I caution you to exercise patience in the process. It can take some time. Unfortunately, I am not aware of a “silver-bullet” spray that will immediately eliminate the problem in a fescue

Two tall fescue pastures at the University of Missouri. The pasture on the left had received no P fertilizer while the pasture on the right had received P fertilization (Lock et al., 2002).



Soil Carbon Dynamics

Carbon is an often overlooked but a very important part of the soil. We know how to manage and amend soil as needed for many other minerals; including nitrogen, phosphorus, and potassium, but changes in soil carbon status are generally much slower and effects less obvious in the short term. Nonetheless, Carbon is necessary for healthy soil!



Soil on the right has been in hay production. The soil on the left is the same, but had been converted to a well managed pasture the year before.

But, what exactly is healthy soil? Soil health, also referred to as soil quality, is defined as the continued capacity of soil to function as a vital living ecosystem that sustains plants, animals, and humans. The common thread in all of these areas is soil carbon, the major component of soil organic matter. It is what gives healthy soil its dark brown color and rich, earthy smell. Soil Organic matter is typically a small percentage of the soil but has a very important role to play. There are many soil functions that are directly or indirectly affected by soil carbon.

- Soil microbial activity — plant nutrient availability, degradation of pollutants and disease suppression.
- Soil structure — water infiltration, rooting depth, resistance to erosion and compaction, and oxygen availability for roots and microbes.
- Water-holding capacity — drought resistance and water storage.
- Crop quality and yield — disease resistance, seed germination, root development, and plant growth.

As one can see, soil is a living system! Changes in amount of soil carbon are one of our biggest opportunities for soil improvement.

Soil microorganisms like nematodes, bacteria, and fungi rely on organic matter as a food and energy source. These microbes break down complex carbon based molecules in crop residues and manure. As a result, nutrients are made available to plants, and carbon dioxide is released as a byproduct. The bacteria responsible for the most rapid organic matter decomposition are aerobic, meaning they require oxygen to live.

For example, tillage introduces oxygen into the soil and stimulates microbial activity. This burst of microbial activity leads to increased rates of organic matter metabolism in the soil and subsequent loss of soil carbon as carbon dioxide. **This is why tillage is a primary factor in loss of soil carbon and declining soil health.**

Understanding soil health means assessing and managing soil so that it functions optimally now and is not degraded for future use. By monitoring changes in soil health, a land manager can determine if a set of practices is sustainable. Are you managing your land for healthy soil?

To learn more, start here: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/mgmt/>
January 23, 2019 in Eco Farming Daily

STONE COUNTY SOIL & WATER CONSERVATION DISTRICT

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Forage Testing– A Good Investment!

Forage testing is one of the cheapest and best investments for a livestock producer when it comes to nutrition and their herd. The minimal cost of this test will give you the information needed to develop a supplement to meet the livestock's needs. Like testing anything, useful results only come from a good sampling process. Always use a hay probe and take a core sample for your test rather than a simple "grab and go" where you pick a handful from a few bales and call it good. The core sample should be taken from the round side of a round bale or the end of a square bale, going straight toward the center so you get a good representation of the entire bale. You will need to probe somewhere between 10 and 20 bales and have a sample that weighs about a pound to get a good representative sample. Sort hay into "lots" by hay type and harvest window and test each individual lot. When you get the results back from the lab, you will find two columns listed on the results, one labeled "As fed" and one labeled "Dry Matter". The As fed column is exactly that, how the hay was received at the lab and how it will be fed to the livestock. The dry matter column shows values with the samples dried down and all the moisture removed. We generally use the "Dry Matter" column for comparing feed stuffs and developing rations because it takes the moisture factor out of the equation. The "as fed" column is primarily used to look at the moisture in a feedstuff and to determine how much is actually required in a ration. For dry hay samples, the moisture content should be below 20% for proper storage. Haylage on the other hand should be between 45 and 60% moisture for proper fermentation and storage.

Values for several nutrients will be listed under both columns. Generally the first listed is % Crude Protein. Next you will find values for Acid Detergent Fiber (ADF) and Neutral Detergent Fiber (NDF). Fiber levels are used to determine the digestibility of forages and how much an animal will be able to consume. Total Digestible Nutrients (TDN) represents the total of all digestible protein, carbohydrates and fats in the sample. TDN is commonly used in beef rations to represent the energy content of the feed. The next step is to weigh the information against the requirements of the animal being fed.

Type of cattle	# Dry Matter/ Day	% Crude Protein	% TDN
1200# cow 2 nd period	21	7.1	50
1200# cow 3 rd period	24	7.9	54
1200# cow mod milk	30	9.8	58
1200# cow heavy milk	32	10.5	59
1100# heifer 3 rd period	23	8.9	58
1100# heifer mod milk	27	10.4	62
500# steer 1.5#/d gain	12.6	11.2	64
500# steer 2#/d gain	12.7	12.8	69