

WINTER

Newsletter

February 2017

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State Cost Share Funding Available For You

***Grazing Management –Fence & Water *Exclusion of Woods or Stream *Sheet & Rill Erosion-Pasture Planting *Sensitive or critical Areas—Gully Erosion, Well Decommission, Riparian Buffer—Streams, Spring Development**

***Nutrient and Pest Management—incentives paid for management**

Technical assistance always available, Cost Share funding based on first come, first serve. Call or come by the office, we are available for on farm visits to help in your conservation planning needs.

Cowboy Logic: “Where there is a want, a need is born.”

If you have received this publication in error and wish to be removed from the mailing list please call 417-723-8389.

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T-POST DRIVER *Easy & Effective*

New Rhino Gas Powered T-Post Driver

Rental Fees: \$50 daily, \$100 for Weekend, or \$175 for a week. Call to schedule & come by the office for pick up.

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Other Upcoming Events—Mark Your Calendar

<p>87th Annual Stone County Livestock & Forage Conference</p>	<p>Thursday, February 16, 2017 Crane 1st Baptist Church 2/10 mile south of Crane ,Highway 413; 30 Hallelujah Ave.</p>	<p>Form & payment should be received at Extension center by Feb. 13</p> <p>This event will include a ribeye steak dinner, a report from Stone County commissioners, as well as reports from various speakers who will teach about weed and brush control methods, steer feed out programs in relation to our Missouri calf crop, and how Bermuda grass can positively affect our hayfields and pastures. <u>For more information call 357-6812.</u></p>
<p>33th Annual Southwest Mo. Spring Forage Conference</p>	<p>Tuesday, February 28, 2017 8:00-3:30 PM University Plaza Hotel - Springfield, MO</p>	<p>For more information go to www.springforageconference.com</p> <p>While attending the Spring Forage Conference attendees can expect to learn about various topics, including; holistic grazing management, weed management considerations for Missouri pastures, calculating cost of production, livestock watering systems, nitrogen sources for pasture, and electric fence tips. Besides this the keynote address will be given by Dr. Allen Williams! He will be speaking about "The Facts of Adaptive Grazing and Relationship to Soil Health"</p> <p>Fee - \$35.00 (NON-REFUNDABLE), \$45.00 after February 14 or at the door</p>
<p>Novel Tall Fescue Renovation School</p>	<p>Tuesday, March 7, 2017 MU Southwest Research Center 14158 HWY H Mt. Vernon, MO</p>	<p>For more information go to http://grasslandrenewal.org or email ColeE@missouri.edu</p>

Manage More by Distributing Soil Less

Farms are provided with soil, water and sunlight. The challenge is to feed the soil, harvest sunlight and farm sustainably to make a living now and in the future. Tillage, fertilizer, livestock, pesticides, and other management tools can be used to improve soil health, or they can significantly damage soil health if not applied correctly.

Managing for soil health (improved soil function) is mostly a matter of maintaining suitable habitat for the myriad of creatures that comprise the soil food web. This can be accomplished by disturbing the soil as little as possible, growing as many different species of plants as practical, keeping living plants in the soil as often as possible, and keeping the soil covered at all times.

Soil is a biological system that functions only as well as the organisms that inhibit it.

Tilling the soil is the equivalent of an earthquake, hurricane, tornado, and forest fire occurring simultaneously to the world of soil organisms. Physical soil disturbance, such as tillage with a plow, disk, or chisel plow, that results in bare or compacted soil, is destructive and disruptive to the soil microbes and creates a hostile, instead of hospitable, place for them to live and work. Simply stated, tillage is bad for the soil.

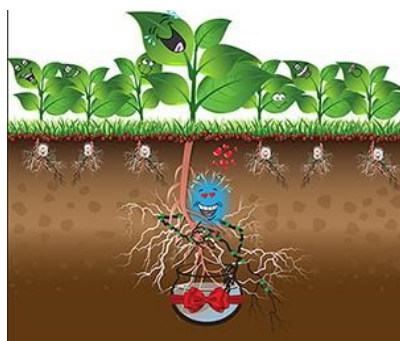
The soil may also be disturbed chemically or biologically through misuse of inputs, such as fertilizers and pesticides. What happens when we supply inputs to the soil? Soil and all the organisms that live and grow in it have been cycling plant nutrients for a very long time without any human intervention. Consequently, soil and plants have very efficient and sophisticated ways of working together to ensure their mutual sustainability. When we add chemical inputs to the soil, we need to understand and respect existing soil and plant relationships, or we might actually be setting the system up to be inefficient, or worse, fail altogether.

If crop nutrients are applied to the soil in excess, plants will not develop associations with soil organisms that help them acquire water and nutrients. After the “party is over” and the synthetic fertilizer is gone, the plants are left “high and dry” with few to no soil factory workers to help them gain access to water and nutrients for the remainder of the growing system. The plants then give up valuable energy (sugars) in attempt to make connections with microbes mid-way through the growing season when the plant should be putting that energy into flowering and seed development to produce a harvestable yield. By applying excess fertilizer, particularly nitrogen or phosphorus, we create plants that are very inefficient as they try to function without the support system of the soil with which they evolved.

By applying only the needed nutrient inputs, (following a soil test) we can take advantage of the nutrient cycles in the soil to supply crop nutrients and allow plants to make essential associations with soil organisms.

This ensures that plants are able to achieve their full potential, and the soil is allowed to perform all of its desired functions to its full potential

If we acknowledge the complex life in the soil and work with it instead of disturbing it, we will harness a tremendous engine for biological production (growing crops).



The ‘soil factory’ workers can be most productive when they have a good soil working environment with an ample supply of energy. When they are most productive the farmer is most profitable.





Evaluation of Pasture Health

May we be reminded that forage production on our pastures is not a guarantee, and that we should manage our livestock enterprises in such a manner that when drought strikes we are prepared in minimizing the damage to our forage base.

The productivity of our pastures is directly related to how rainfall is actually captured to replace soil moisture. The greater the raindrop impact and the faster the water moves, the more soil will be dislodged and carried away.

The amount of rainfall that moves into the soil profile is affected by the type and density of vegetative cover, intensity of the rainfall event, amount of moisture in the soil before the rain event, the capacity of the soil to hold water, and land slope. While you cannot change some of these factors, management of your pasture will help determine the condition of the soil and vegetation that can make a difference in capturing rainfall. So, evaluating your pasture conditions and then adjusting management decisions could help protect forage and soil resources.

Evaluation of your pastures should include monitoring both current and changes over time to determine if damage to the soil, water, and plant communities is occurring. **The first indicator** of pasture health is vegetative cover—both the amount and species composition. Good vegetative cover, with little bare ground, slows the movement of water across the land and lessens the impact of raindrops on the soil surface. The greater the raindrop impact and the faster the water moves, the more soil will be dislodged and carried away. The slower the movement of water, the more time there is for it to soak into the soil. **The second indicator** of the health of your pasture is the soil surface. Large areas of bare ground, pedestal plants, litter dams, rills and gullies are signs that rainfall is running off the land rather than infiltrating the soil.

Another danger sign is stream bank erosion, which often occurs when riparian vegetation (the vegetation along rivers and streams) is inadequate to stabilize the bank against flowing water. Riparian vegetation is important for maintaining natural stream channels. Closely checking stream bank stability and riparian zone vegetation can help you recognize a problem with the land upstream.

So as we survey our pastures this spring, look for signs of increasing bare ground, reduced litter, changing plant species, and stream bank erosion. All of these signs indicate that rainfall is not being effectively captured and perhaps you should consider altering your management plan, like reducing stocking rates, before the next drought or storm degrades your property.



New option for controlling “summer slump” on infected fescue pastures

Reprinted with permission from “BEEF”

“I can run a sprayer cheaper than a brush hog.” That’s Jason Locke’s summation of how he deals with what seems like never-ending acres of endophyte-infected fescue pastures on the West Ranch, a part of Circle Angus Ranch in Missouri.

One common way of dealing with the effects of fescue toxicity in cattle is to mow pastures as seed heads appear. That’s because the seed heads are the most toxic part of the plant, containing 3 to 6 times as much ergot alkaloid as do the leaves. But most fescue pastures have to be mowed two to three times a year. And at about \$15 per acre per mowing, that adds up.

“I can run a sprayer cheaper than a brush hog.”

However, four years ago, Locke heard of a new approach to managing infected fescue pastures — spraying with a herbicide primarily designed for weed and brush control. Locke ran his own independent trials using the herbicide (Chaparral) and hasn’t looked back.

The reason seed heads are critical in creating the problems that occur in cattle grazing infected fescue is because the cattle will eat the seed heads with enthusiasm as they begin to form, thus getting a strong dose of the ergot alkaloids that are toxic to cattle. The alkaloids help the plant prosper and withstand heavy grazing, but present big problems for cattle producers because they constrict blood flow to the extremities.

Those problems primarily manifest themselves as heat intolerance. During the heat of the summer, infected cattle will seek out water holes and shade instead of grazing. Weight gain in calves is reduced and pregnancy rates are less when breeding occurs on infected fescue. The reduced production is estimated to cost the beef industry \$1 billion per year.

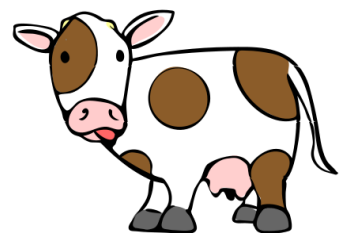
The herbicide, however, when applied from when seed heads start to emerge through the boot stage, suppresses the formation and production of the seeds. But it will cause some yellowing in the fescue and stop growth for several weeks after it’s applied, so pasture management becomes critical, says Scott Flynn, field scientist with Dow AgroSciences.

However, it prevents cattle from selectively grazing the seed heads, he says. And since the plant isn’t putting resources into reproducing, it produces higher quality forage later into the season once it’s suppressed. According to Flynn, crude protein jumps 40% in treated pastures, dry matter digestibility jumps 11% and water-soluble carbohydrates increase 9%.

According to Glen Aiken, a researcher with the ARS Forage-Animal Production Research Unit in Lexington, Ky., suppressed fescue can be managed either with rotational grazing or continuous grazing. If you want to increase other grasses, continuous grazing with suppression is the way to go, he says. That’s because bluegrass, orchard grass and other desirable species will head out, but the fescue won’t. So you’re building a soil bank of seeds of other grasses.



Rotational grazing allows you to increase carrying capacity, he says. A cattle producer can treat a fourth to half of the infected pastures while grazing untreated pastures early in the grazing season. Because the fescue doesn’t put resources into reproduction, forage quality stay higher later in the year, Flynn says.



STONE COUNTY SOIL & WATER CONSERVATION DISTRICT

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2017 Grazing School Schedule

Halfway, MO (Weekday Evenings plus Saturday Daytime)	Tues. April 25; Fri. April 28; Sat. April 29; Tues. May 2; Fri. May 5, 2017	Dallas County SWCD/NRCS - 417-345-2312, ext.3 email: Debbie.Henderson@swcd.mo.gov
Mt Vernon, MO (daytime)	May 9,10,11, 2017	Lawrence County Extension - 417-466-3102 email: ColeE@missouri.edu
Neosho, MO (daytime)	June 6,7,8, 2017	Newton County SWCD/NRCS - 417-451-1007, ext.3 email: Tracy.White@swcd.mo.gov
Ozark, MO (daytime)	June 12,13,14, 2017	Christian Co. SWCD/NRCS - 417-581-2719, ext.3 email: John.Stratman@swcd.mo.gov OR Jeremy.Wallen@swcd.mo.gov
Marshfield, MO (daytime)	September 19,20,21, 2017	Webster County SWCD/NRCS -- 417-468-4176, ext.3 email: Jody.Lawson@swcd.mo.gov
Stockton, MO (Weekday Evenings plus Saturday Daytime)	Tues, Oct 3; Thurs, Oct 5; Tues, Oct 10; Thurs, Oct 12; Sat, Oct 14, 2017	Stephanie Auffert - 417-276-3388, ext. 3 email: stephanie.auffert@swcd.mo.gov OR Patrick Davis - 417-276-3313 email: davismp@missouri.edu
Fair Grove, MO (daytime)	October 17,18,19, 2017	Greene County SWCD/NRCS -- 417-831-5246, ext.3 email: Mark.Green@mo.usda.gov OR Eric.Morris@swcd.mo.gov