



Stone County Soil and Water Conservation District

www.swcd.mo.gov/stone

April 2020



Support & Services to our Cooperators

Stone Co. Soil & Water is using all flexibilities given to provide support & service to our cooperators while adhering to guidelines to help slow the spread of the coronavirus as well as safety of staff. We are scheduling phone appointments at this time. You can reach us at 417-723-8389 or email staff at:

Melissa.white@swcd.mo.gov or kevin.wray@swcd.mo.gov No face to face meetings currently being scheduled in the office. We can make field visits but still no face to face out in the field. USDA service centers are also open for business by phone appointments only. Their agency remains operational with maximum telework flexibility while limiting staff numbers in the office. **Social Distancing efforts have been extended thru April 30, 2020 by the President.**

As practices are completed, please call our office so staff can make the field visit for checking out your practice ahead of your termination date. We have been able to successfully scan and email documents for signatures to our cooperators who in turn can scan/email back to us, fax to us at 723-8402 or mail to us. If you need information regarding your termination date or other technical information, please give our office a call. Our fiscal year ends in mid-June to allow complete payouts before the end of June.

Quote Worth Re-Quoting – *“Instead of worrying about what you cannot control, shift your energy to what you can create.”* ~ Roy T. Bennett

Farmers Wanting to Apply for EQIP, CSP can Apply from Home

Columbia, MO, March 26, 2020- The Missouri Natural Resource Conservation Service (NRCS) would like to remind producers of the program sign-up deadlines to be considered for FY 2020 funding are as follows:

- Environmental Quality Incentive Program (EQIP) application deadline was March 30, 2020.
- Environmental Quality Incentive Program-Regional Conservation Partnership Program (EQIP-RCPP) application deadline was March 30, 2020.
- **Conservation Stewardship Program-Classic (CSP-Classic) application deadline is June 1, 2020.**

Producers may submit a signed and dated application via the mail, fax, scan, email, or submit through the agency approved Client-Gateway at <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/cgate/>.

You may also submit application requests to your local NRCS office through telephone, email or letter received by the sign-up cut-off date listed above. NRCS will follow-up to obtain applicant signature's prior the application being ranked.

For more information contact the NRCS office serving your county. NRCS offices can be found in the phone book under "U.S. Government, Department of Agriculture," or online at <http://offices.sc.egov.usda.gov/locator/app>.

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STONE CO. SOIL & WATER ANNUAL TREE /SHRUB GIVEAWAY ON NAT'L ARBOR DAY, FRIDAY APRIL 24TH WILL NOT HAPPEN THIS YEAR DUE TO THE CURRENT SITUATION WITH COVID 19. IT MIGHT BE POSSILBE FOR YOU TO ORDER DIRECTLY; COULD CONTACT MDC-Trees @ 573-674-3229



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Pg.4- FSA Contacts—Are You Ready to Retire



Our office here in Crane had reported 10.29" of rain for the month of March.

Southwest Mo. Grazing Schools: Schedules, History & Economic Impacts

The first planned Management-Intensive Grazing Schools in April and May are being re-scheduled. April school was being hosted in Bolivar, MO and May school was being hosted in Mt. Vernon, MO; both of which will be rescheduled; possibly in June. The schools previously planned for June in both Ozark, MO & Neosho, MO have not been cancelled yet at this time; only time will tell. Attendance at these schools are a requirement for State Cost Share Programs for implementing managed intensive grazing systems.

BENEFITS: These schools have been very beneficial to participants as they make decisions for their own operations. First and foremost, MiG is a way to increase output (gains) from a fixed amount of land. This gain is accomplished via increased forage production and utilization, higher stocking rates, often better animal performance and using stockpiling to extend the grazing season. MiG can also cut input costs such as feed, hay, fertilizer and weed control. Soil fertility should improve over time in an MiG system with improved manure distribution and result in less fertilizer purchases. Chemical usage for weed and insect control should decrease with intensive management of pastures. Livestock will perform more of the forage harvest themselves. They also increase utilization, which results from intensified grazing pressure followed by rest periods. Deferred grazing or stockpiling offers an opportunity to extend the grazing season and as a result, less hay feeding is needed. Additionally, farmers have reported that cattle are easier to handle as they are trained to move throughout the grazing system. University of Mo. Extension reports that there have been 18,300 participants attend Missouri Grazing Schools since 1990. About 1 in 3 Missouri beef farms practice rotational grazing. These systems have aided the producers by \$40-60 per ac. in net returns. Missouri's 7.1 million acres of permanent pasture provide feed for the state's 1.9 million cows. Pasture yield and quality, in turn, drive the productivity of Missouri's beef industry. Over the past 30 years, public agencies in Missouri have devoted extensive effort toward educating and incentivizing more than 18,300 producers to adopt improved grazing management practices. MU reporting that the historical grazing educational efforts, have helped raise the economic output of Missouri's beef industry by more than \$125 million every year.

Management-intensive grazing (MiG) is "a goal-driven approach to grassland management and utilization" (Gerrish, 2004). MiG is defined in the literature as a "flexible approach to rotational grazing management whereby animal nutrient demand through the grazing season is balanced with forage supply, and available forage is allocated based on animal requirements" (Martz, et al., 1999). This systems approach to grazing management also includes optimization of forage yield, quality and persistence; protection and enhancement of the natural resource base; and integration of knowledge and technology to develop a viable livestock operation (Gerrish and Roberts, 1999).

Assisting Missouri cattle producers to learn better grazing techniques has a rich history in the state. In the early 1980's, pioneering grazing research conducted at the University of Missouri (MU) Forage Systems Research Center in Linneus, Missouri attracted nationwide attention. In 1990, MU joined with the USDA Natural Resource Conservation Service (NRCS) to create a three-day school at this research center. By 1994, MU and NRCS partnered with the Missouri Department of Natural Resources (DNR) and Missouri Soil & Water Conservation Districts (SWCD) in a pilot cost-share program to encourage MiG in four Missouri counties. This pilot program was so successful that it went statewide within two years.

The number of locations has grown over time. By 2018, grazing schools were being offered in 33 locations across Missouri. The impact of the grazing schools reaches beyond Missouri, as several other states have established grazing schools based on the MU Forage Systems Research Center program.

These schools typically have presentations covering soils, plant growth and development, livestock nutrition, animal behavior, grazing economics, water availability, fencing and design and layout for MiG.

Gerrish, J. 2004. Management-intensive grazing: the grassroots of grass farming. Green Park Press, Ridgeland, MS. Gerrish J. and C. Roberts, editors. 1999. *Missouri Grazing Manual*. Columbia (MO): University of Missouri Extension. Manual M157.

Is Your Soil Up to Par? Grazing management comes in all shapes and sizes, or, as Natural Resource Conservation Service Area Soil Health Coordinator Drexel Atkisson, says, it comes in "all heights."

"The way we manage our pastures greatly effects the soil health," Atkisson says. "Soil health may be summed up by simply how efficient our soil is at receiving and storing rain water and cycling nutrients. **Overgrazed pastures would typically run off 80% of an inch of rain, while well-managed pastures only lost 20%.**



Financial Assistance and Adoption Rates

State and federal governments have invested in financial and technical assistance programs to support the adoption of improved grazing management practices in Missouri.

Missouri DNR SWCD have cost-share programs related to grazing management, which are funded from a portion of the parks, soils and water sales tax. These programs provides financial incentives to landowners for up to 75 percent of the estimated cost. The SWCDs provide technical support with the design, implementation and maintenance of practices. Exhibit 1 details these Missouri DNR cost-share practices related to grazing management. Practices (DSP) must conform to related NRCS standards and specifications.

Exhibit 1. Missouri DNR Cost-Share Practices Related to Grazing Management

Practice Code	Conservation Practice	Description
DSP 0.2	Permanent Vegetative Cover Enhancement	Improve the vegetative cover on pastures by introducing legumes into the grass base using no-till technology.
DSP 3.1	Grazing System Water Development	Develop water sources (ponds, springs or wells) for livestock watering.
DSP 3.2	Grazing System Water Distribution	Develop water distribution, including pipeline and watering tanks, for grazing areas.
DSP 3.3	Grazing System Fence	A planned rotational grazing system allows time for vegetation to rest and recover before being grazed again. Fencing is used to allow livestock access to a small area to be grazed.
DSP 3.4	Grazing System Lime	Manage the pH of soil for optimum fertility.
DSP 3.5	Grazing System Seed	Interseed legumes in an established grass pasture grazing system to improve plant health and diversity and protect soil from erosion.

Practice Adoption Rates

USDA conducts a Census of Agriculture every five years. The most recently reported census occurred in 2012. One question asked in its survey was about whether a farming operation “practices rotational or management-intensive grazing” any time during the survey year.

The beef industry adoption of rotational or management-intensive grazing in Missouri had 40,724 farms that were in beef cattle production and 11,633 were identified to practice rotational or intensive grazing (28.6 percent). In 2012, Missouri had a total of 1,153 dairy farms and 384 listed this grazing practice for their farm (33.3 percent).

When considering all livestock operations, the USDA reported in 2012 that Missouri had a total of 16,882 farms that practiced rotational or management intensive grazing. **Missouri ranks number two in the U.S.** behind Texas (41,401 farms) and followed by Kentucky (14,652 farms) and Tennessee (11,766 farms).

Exhibit 9. Potential Farm Level Effects from Management Intensive Grazing Adoption

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Source: USDA National Agricultural Statistics Service (2014)

Positive Effects	Negative Effects
Increased forage utilization Extended grazing season Reduce feed costs Higher forage quality Potentially greater average daily gains (ADG) May decrease fertilizer costs May decrease weed control costs Easier cattle handling May increase stocking rates	More fencing cost More watering system cost Additional labor and management needed Increased animal investment per acre

Exhibit 9 +/- Effects



18,300 participants attended MO. Grazing Schools since 1990



About **1 in 3** Missouri beef farms practice rotational grazing

March 30, 2020



Farm Service Agency Electronic News Service

BULLETIN

GovDelivery

Are You Ready to Retire?

Is it time to start transitioning the farm over to the next generation? Maybe your hired hand is going to buy you out? Or perhaps you are not ready to retire, but

your son or daughter is graduating and needs to start learning to manage a farm of their own. FSA Farm Loan can help. There is no need to risk your retirement by mortgaging your farm or co-signing on a crop loan just to get the next generation up and going. Let FSA use its various direct and guaranteed loan programs to start junior's career.

FSA can finance equipment. We can provide money for crop inputs. If a beginning farmer has sufficient management experience, we can even fund land purchases, whether the land is being bought from grandpa or the neighbor down the road.

FSA's loan programs aren't just for beginning farmers though. If a farmer is having trouble getting credit from a commercial lender, we can assist operators of all ages, regardless of where you are at in your career. If you have been farming for 30 years and find yourself in a situation where the last few years have made it difficult to make a tractor payment, come see FSA Farm Loan and let us see if we can help.

For more information on FSA farm loan programs, visit www.fsa.usda.gov

Contact your farm loan team at the Marshfield Service Center. Ask for Abigail Calton, Courtney Gunter or Kelsey Rummel at 417-468-2088 ext. 3165.

Christian/Stone/Taney County Farm Service Agency Encouraging Visitors to Be Proactive to Help Prevent Spread of Coronavirus: The Ozark Service Center is encouraging visitors to take proactive protective measures to help prevent the spread of coronavirus. We will continue to be open for business by phone, email or regular mail. Our program delivery staff will continue to come into the office and we will utilize phone and online tools whenever possible to serve the needs of our producers. If you wish to conduct business with the Farm Service Agency please call the office to schedule a phone appointment at 417-581-2718 ext.2. You may also use email to conduct business, deliver documents, or submit signed forms for which we do not need the original. Our email addresses follow: matia.hartley@usda.gov hannah.eldridge@usda.gov abby.inglis@usda.gov
 Thank you for your patience. Stay Healthy, Abby Inglis

DR. HARLEY NAUMANN-Assistant Professor University of Mo.

SUNN HEMP: A WARM SEASON COMPLEMENT TO COOL SEASON FORAGE LIVESTOCK SYSTEMS



Dr. Naumann's research focuses on understanding the critical physiological components of warm and cool-season forages that lead to improved forage-livestock production systems. His research goal is sustainable intensification of forage-livestock systems, to provide a framework for yielding more animal products through targeted exploitation of our forage resources while improving environmental impact. His approach involves a two-pronged approach to meeting this goal: 1) Mitigating animal production inefficiency using forage condensed tannins and 2) improving summer forage to minimize forage shortage due to the uneven seasonal distribution of the feed resource.

Cool-season grasses such as tall fescue [*Schedonorus arundinaceus* {Schreb.} Dumort.] produce 2/3 of their annual growth during the spring and the remaining 1/3 during the fall. Cool-season grasses typically experience decreased solar energy conversion during the summer, accompanied by greater respiration rates and an overall decrease in forage productivity. Increased temperature normally promotes more stem than leaf growth, resulting in greater cell wall concentrations and decreased forage nutritive values. Therefore, livestock producers are challenged with mitigating the uneven seasonal forage growth and nutritive value distribution. Low productivity and nutritive value of cool-season perennial forages during summer necessitates the identification of warm-season forages that improve nutritive value and available forage in cool-season based forage systems. A fast-growing, warm-season tropical legume such as sunn hemp (*Crotalaria juncea* L.) has the potential to accomplish this.

Sunn hemp is a tropical annual legume that can be cultivated across a multitude of environments including low fertility, dry, wet, tropical, subtropical and temperate conditions. As an obligate warm-season forage crop, sunn hemp is better adapted to provide high quality forage during the warm season as compared to clovers that are typically used to complement cool-season perennial forage systems.

Sunn hemp may be established by multiple means. In a no-till drill, seeding rates may range from 20 to 50 pounds per acre. When broadcasting sunn hemp, 30 to 60-pound rates may be used. In either situation, competition from existing forage must be minimized. Sunn hemp may also be established in a well-prepared, weed-free seed bed. Regardless of establishment method, it is highly recommended that sunn hemp seed be inoculated with a *Bradyrhizobium* species to realize the benefit of nitrogen fixation.

In research conducted at the University of Missouri, interseeding sunn hemp into tall fescue pastures resulted in increased herbage accumulation, carrying capacity, grazing days and animal performance, as well as improved nutritive value, as compared to tall fescue pastures without warm-season legumes.

It gets the name 'hemp' from the fact that initially it was a fiber crop," Naumann said. "It's mostly known today as a cover crop because it's a nitrogen-fixing legume." "We can have huge swings; we've measured so far as low as 30lbs./ac. to as high as 110 lbs./ac; so it is variable.

At the Missouri State University Shealy Farm Field Day near Fair Grove, Missouri, in 2017, Harley Naumann gave an update on alternative forage research he had conducted with sunn hemp. Now, the university researchers had begun to look at it in a more practical application by experimenting with interseeding sunn hemp into fescue fields. "We planted it as early as June 15," Naumann said. "We planted it as late as July 20, and the later you plant it, the hotter it is and the faster it grows. It flies out of the ground. It really loves it. You don't have to have much water on it, either." You get the best nutritive value at about 35-45 days after planting. At that time, leaves are abt. 20-25% crude protein & 90% digestible. Stems are at 10-13 % crude protein & 60-70% digestible. "All in all, nutritive value-wise, it's a pretty good plant," he emphasized. The environment will cause some variation. Despite being told sunn hemp wouldn't compete well in a fescue field, he pursued his research and said "I will tell you that it stood on its own. Drilled into 3-3.5 in. tall fescue. Once it got above the fescue canopy, all bets were off, it just took off & performed really well." It has incredible regrowth. "Everywhere the leaf touches the stem there is a hidden axillary bud. When you come along & harvest that off & that triggers all those buds to grow." The architecture of the plant is a single stalk with leaves until the leaves are clipped, the axillary buds pop out & plant begins branching. They did harvest between 35 & 45 days, "we didn't know exactly what would happen. 21 days later, came back & had more than doubled yield because you go from 1 branch to 4 or 5. We're really hopeful the same dynamic will exist when the cattle are clipping it off. With rotational grazing, we're hoping to move in a way they come across & harvest to the residue we desire to promote regrowth. We set up system so we give that plant at least 21 days to then get back on it." "Once it gets past that 45 day period, the nutritive value really starts to decline." He recommended a seeding rate for forage stands of 30-35 lbs./ac. The NRCS has used sunn hemp at 5-10 lbs./ac. in mixes with millets, peas & other forages, which seems to work

STONE COUNTY SOIL & WATER CONSERVATION DISTRICT

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(866) 632-9992. Submit your completed form or letter to USDA by:

- (1) **mail: U.S. Department of Agriculture
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1400 Independence Avenue, SW
Washington, D.C. 20250-9410;**
- (2) **fax: (202) 690-7442; or**
- (3) **email: program.intake@usda.gov.**

Managing Intentional Randomness in Your Grazing System

Drexel Atkisson, Area Soil Health Specialist, USDA-NRCS Springfield, Mo

Grass is almost here! Don't be too eager to start grazing that green grass. We're all tired of feeding hay but getting started too soon will give the cows the advantage over the grass. Grass needs to get some leaf height on it and soak up some sunshine. It is pulling from root reserves to get started and when grazed too early it extends the drain time on the energy within the plant. The effects can last all season. We need to allow the grass to have the advantage over the grazing animal. Now, with that reminder being said, let's discuss where you are going to start. The subject of intentional randomness in your management is a hot topic when encouraging soil health. It's a biological thing, nature loves chaos! Encouraging diversity within the plant community in our pastures is a good thing. It provides different nutrition levels throughout the grazing year that the animal can choose from. It also ensures there is always a plant that is growing during different temperatures and different moisture levels. It builds in resilience or forgiveness into our grazing systems. This is a big money saver, in that less money must be spent mitigating weather extremes. One of the best ways to increase plant diversity is to change up our grazing order. Starting the grazing in a different paddock from year to year is a good step. This allows a longer rest period to the last paddock grazed, change that up each year. Kick a different paddock out of the rotation in the spring when the grass is out growing the grazing and graze it later in the year when the growth slows down. Do this on a different paddock each year. Stockpile forage in the fall for winter grazing on a different paddock than the year before. You start to see the "no pattern" developing. Simply said, don't repeat a management strategy on any given paddock until it has been applied to all the paddocks possible in the system. This will not only begin to encourage plants to express themselves that have not been able to because of grazing pressure but will also start building a healthier soil. As we learn more about the relationships between the plants growing in the soil and the soil biology, grazing management is becoming more and more important to our operations. To learn more please visit one of the soil health workshops in your area when available. If you have not attended a grazing school, I would encourage you to do so also once available. You can get a schedule from your local Natural Resource Conservation Service office or Soil & Water Conservation District offices.