



Montgomery County Conservation District
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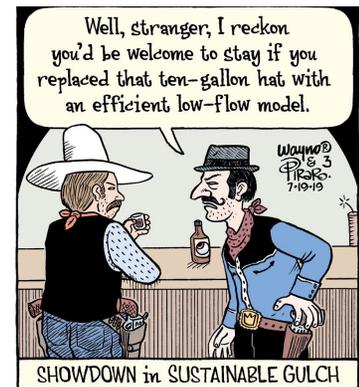
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Evaluating Terraces Following Large Rain Events

Like any conservation practice, once a terrace has been established, it requires maintenance for optimum performance. Properly constructed terraces in Kansas are usually engineered to handle a 10-year, 24-hour storm without being overtopped. However, depending on your location in Montgomery county, this year has seen several very large rain events that have come close to or exceeded the 10-year, 24-hour storm amounts. Producers harvesting this year’s corn and soybeans may find extensive damage to terraces due to overtopping from this year’s rain events. Repairing damaged terraces is critical to the overall performance of a conservation system. Ignoring terrace damage can lead to gully erosion and possible damage to other terraces below the affected terrace. The following should be done to keep terraces functioning properly. First, check the height of the terrace ridge to see whether it has been disturbed or lowered. The height of the ridge should be as least 1 foot higher than the channel. If it is lower than that, soil should be added to the ridge to prevent overtopping. Second, look for areas of up slope erosion that can lead to excessive sediment deposit in the terrace channel. Sediment deposits can dramatically lower water storage capacity and disrupt terrace grade. If you find this problem, work with a contractor to clean out the channel and restore storage capacity and grade. Third, look for signs of standing water in the channels. If, after a normal rainfall, terraces do not completely drain in 2 days or less, check the conditions of the outlets. A plugged outlet (i.e. corn stalks, flood debris) can back water up a terrace channel, possibly leading to overtopping and terrace damage.

Continued on next page.



Evaluating Terraces Following Large Rain Events? Continued...

If you think your conservation system that utilizes terraces has issues that would affect its performance and would like assistance, contact the Natural Resources Conservation Service. You could be eligible for financial assistance to help re-build terraces that are over 20 years in age and have the capacity to carry less than 50% of the design discharge without overtopping or have a minimum of 0.5 feet of height. For more information, visit the Kansas NRCS Web site www.ks.nrcs.usda.gov/programs or your local U.S. Department of Agriculture (USDA) Service Center. To find a service center near you, check on the Internet at offices.usda.gov. USDA is an equal opportunity provider, employer, and lender.

David Stephen, NRCS Soil Conservation Technician

Why Do We Want Legumes in Our Pastures?

By Kath Voth Forage legumes are plants that are in the pea family (Fabaceae) and include alfalfa, clovers, vetches and trefoils. We like them because they help take nitrogen out of the atmosphere and fix it in our soils. They are a tool we can use to increase fertility and forage production without the addition of man-made fertilizers.

Legumes' nitrogen fixing super-power is really a result of bacteria that legumes host in their roots. These bacteria, known as rhizobia, invade the root and multiply forming a root nodule. The rhizobia get all the nutrients they need from the plant, and in return the rhizobia draw nitrogen from the air and convert it to a form of nitrogen that the host plant can use. It's a mutually beneficial, symbiotic relationship.

When the nodules are young and haven't started fixing nitrogen yet, they are white or gray inside. Once they're working they will be larger and will gradually turn pink or reddish in color. When they're no longer fixing nitrogen, the nodules turn green and may even be discarded by the plant.

Nodules should form on roots 2 to 3 weeks after germination. If you don't want to dig up a plant to look, you can also use the color of the plant to diagnose whether or not nitrogen fixing is occurring. Light green, slow growing beans or alfalfa are a sign that nitrogen fixation is poor. The problem could be because there isn't enough of the native rhizobia, or it's the wrong kind. Seed companies have been solving this problem by selling pre-inoculated seed so you know the plant has the rhizobia it needs. If your seed was not inoculated, it is possible to inoculate plants after they're in the field. Since this often doesn't work, you'll want to get expert advice to go forward.

The plant has to provide the rhizobia with all their food, so any stress to the plant, like high temperatures or a lack of water, will reduce the amount of nitrogen fixation by the hungry rhizobia. Since the plant has so much invested in the rhizobia, it also takes up almost all of the nitrogen produced. A small amount is "leaked" into the soil (about 30-50 pounds of nitrogen per acre). The rest of the benefits to your pasture only occur when the legume dies and the roots, leaves and fruits of the legume decompose into the soil. If you cut the plant and remove it, say in the form of alfalfa hay, most of the nitrogen leaves with the hay bales.

Continued



Jodi Cushenbery

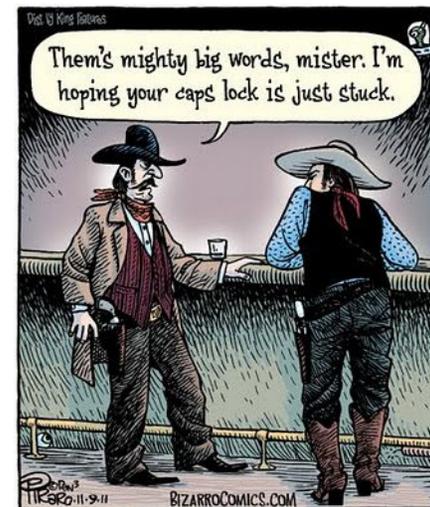
Supervisory District
Conservationist

Ethan Walker

Rangeland Management
Specialist

David Stephen

Soil Conservation Technician



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Provide Cold Cows More Energy

The New Year historically brings with it some of the coldest and most extreme conditions of the year. Weather can be one of the greatest challenges of managing cows during the winter, especially for spring-calving herds on the verge of calving. Most cattle producers appreciate that cold weather increases nutrient requirements. However, the more common questions are “When or under what conditions should we respond to a cold weather event?” and “How should we respond?”

How cold is too cold?

According to Justin Waggoner, K-State beef systems specialist, cattle are most comfortable within the thermoneutral zone when temperatures are neither too warm nor too cold. During the winter months cattle experience cold stress anytime the effective ambient temperature, which takes into account wind chill, humidity, etc., drops below the lower critical temperature. The lower critical temperature is influenced by both environmental and animal factors including hair coat and tissue insulation (body condition). In wet conditions cattle can begin experiencing cold stress at 59°F, which would be a relatively mild winter day. However, if cattle have time to develop a sufficient winter coat the estimated lower critical temperature under dry conditions is 18°F.

Energy requirements during cold stress

Cold stress increases maintenance energy requirements but does not impact protein, mineral or vitamin requirements. The general rule of thumb (for a cow in good body condition, BCS = 5 or greater) is to increase the energy density of the ration by 1% for each degree (Fahrenheit) below the lower critical temperature. The classic response to cold stress in confinement situations is an increase in voluntary intake. However, it has been documented that grazing beef cows may spend less time grazing as temperatures decline below freezing, which reduces forage intake and makes the challenge of meeting the cow’s nutrient requirements even greater.

Feed needs: energy VS protein

The traditional response to a cold weather event on many operations is to feed more of the current supplement being used or offer a greater amount of low-quality hay. Although the additional supplement and hay may provide some additional energy it may not be sufficient to meet the energy requirements of a third trimester cow, experiencing cold stress. In many situations (depending on the supplement being used), the additional supplement offered supplies more protein and not necessarily energy; and the additional hay offered simply replaces grazed forage. In this situation energy is likely limiting. An alternative response would be to offer a relatively higher-quality hay than the current forage being grazed or a small amount of grain combination with the normal amount of (protein) supplement being used. Circumstances, supplements and forages will vary.

In a cold weather event, cold stress increases energy requirements and not protein. More information on cold stress and nutrition may be found in Beef Cow Nutrition Guide, Publication C-735 which may be accessed online at <http://www.ksre.ksu.edu/bookstore/pubs/C735.pdf>

By Jessica Barnett, Agriculture and Natural Resources Agent,
jessica.barnett@jocogov.org

MCCDCalendar 2019

Oct 1 st	Fall Newsletter	Nov 21 st	7 P.M. Board Meeting
Oct 10 th	7 P.M. Board Meeting	Nov 24 th -26 th	KACD Annual Convention
Nov 1 st	Start Poster Contest	Dec 19 th	7 P.M. Board Meeting

Can You Run Your Pasture On Legume Nitrogen Alone?

Nitrogen fixation declines when soil is poor in nutrients and pH is low. You can improve legumes’ nitrogen fixing in the long run by addressing these deficiencies. Heat stress can also reduce the amount of nitrogen being fixed. So if you’re in an area prone to hot summers, be sure to choose a variety that can survive in your climate.

You’ll also be less successful with nitrogen fixing plants in more arid environments. If you’re a western rancher with irrigated pastures, you’ll find you can produce tremendous yields with mixed grass-legume pastures. Jim Gerrish notes that “The pastures we manage under center pivots in Idaho are remarkably similar in composition to the pastures we had in Missouri. Where we have a strong legume component, pasture yields compare favorably to N-fertilized pastures, without the cost of N-fertilizer.”

According to Gerrish, “Warm-season grass pastures with legumes typically don’t produce near as much forage as N-fertilized pastures. They do, however, produce better individual gains at a lower cost, and several studies have shown them to be more profitable per acre than N-fertilized pastures.”

Scientists are currently doing research on how to improve legume’s nitrogen fixing rates in poor soil and arid environments, knowing that as prices for N-fertilizer continue to rise, farmers and ranchers will need an alternative. In the meantime, consider mixed grass-legume pastures that fit with where you live.



Lifetime Members

Doug & Meggin Blex – 2013	Springer Family Foods, LLC – 2015
Knisley Trust – 2013	J. D. Rector – 2016
Cotterill Ranch, LLC –	Sherwin Farms – Jack Sherwin,
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Montgomery County Commission – 2015	
Bartlett Co-op Assoc. – 2015	
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Randall & Nicole Small – 2015	
Larry Smith – 2015	

The Montgomery County Conservation District would like to invite you to become a 2019 Affiliate or Lifetime Member. You can support the District and conservation education programs with a \$25 or

more donation for an Affiliate Membership or a \$250 or more donation to become a Lifetime Member. Your donations will go towards natural resource education in Montgomery County Schools along with adult environmental education programs. Your name, or business will be added to this list which is on display at the USDA service center, and in every MCCC Newsletter. Your support is greatly appreciated.

Tractors and other equipment create ruts, which encourages standing water or mud. Combined with the cattle foot traffic around the feeder, heavy equipment creates even more mud, destroys vegetation, and can increase erosion. All of these factors degrade pasture quality and increases the chance of polluting surface water runoff.

As hay breaks down, nutrients, like nitrogen and phosphorus are created. When water and sludge drain, these excess nutrients are added to the runoff. Neither of these nutrients are positive if introduced to local waterways. Feeding densely stocked cattle concentrates all these pollutants.

It is common to see a “sacrifice” pasture, where producers will confine animals to a smaller area to reduce the land damaged from winter feeding. A poorly chosen site for winter feeding can have significant negative impacts on soil and water quality. A well-chosen site will be on a summit, well drained and easily accessible during all winter weather conditions.

Providing a space of land between the feeding sites and water bodies will decrease the risk of water pollution. These riparian areas give nutrients a place to go rather than into the water system. Designated riparian areas are fenced so animals do not graze those areas and add their own personal little piles of nutrients.

Concrete or gravel pads under hay feeders or feed bunks can greatly decrease the creation of mud. Situating feed bunks and hay rings across the pasture from the water source or mineral will encourage animals to utilize the entire pasture rather than hanging out in small areas creating more mud.

I always encourage producers to forage test their hay. This is the most economical practice to save quite a bit of money on supplement feed. Keep in mind the animals nutrient requirement, it changes based on stage of gestation and with temperature. Knowing what nutrients your hay provides could save on the amount of feed that needs to be put out. For more information contact Wendie Powell at wendiepowell@ksu.edu or at (620) 784-5337.

Wendie Powell, Livestock Production Agent, Wildcat Extension District



Conservation District Services

The Conservation District owns conservation field equipment available for rent to Montgomery County Landowner and operators. To rent call Levi Clubine (620)331-4860 ext. 3 or e-mail: levi.clubine@ks.nacdnet.net

Great Plains No Till Drill

10' Brillion Seeder

12' Brillion Seeder

Deposit of \$100 due with the signing of the contract. This deposit is refundable upon timely return of the clean undamaged equipment and payment of use fees are paid.

- \$100 minimum charge (10 acres)
- \$10.00 per acre charge allowing one day per 20 acres
- After allowable days, a charge of \$40 per day will be levied
- \$50 cleaning fee

Root Plow/ Root Ripper

\$20 per day

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Selecting a Winter Feeding Site

Winter feeding of cattle is a necessary part of nearly all cow-calf operations. The feeding site is the area that a producer will feed the cattle regularly, providing hay and sometimes grain or other supplements to provide the nutrients cattle need.

When cattle are closely confined, especially in the winter, manure and wasted hay can accumulate. The manure contains bacteria, viruses, and protozoa that increase susceptibility to calf scours and other diseases such as navel ill and coccidiosis. When cattle are fed hay, unrolled or in a ring feeder, the hay can become trampled and wet, until it is eventually rotten and unusable as feed.

Animal energy requirements are increased with muddy conditions, whether they are created in feeding areas, or just in wet pasture conditions. Performance can be reduced when cattle have to walk through mud, or maintain body temperature when their legs and belly are covered in mud. That extra energy requires more feed. Lots of effort is required on the part of the producer also, in time and fuel to haul feed.

2020 Acreage Reporting Dates

In order to comply with FSA program eligibility requirements, all producers are encouraged to visit the Montgomery/Chautauqua County FSA office to file an accurate crop certification report by the applicable deadline.

The following acreage reporting date is applicable for Montgomery/Chautauqua County:

December 16, 2019: Fall seeded small grains (winter wheat, winter oats, small grain rye, etc.)

The following exceptions apply to the above acreage reporting dates:

- If the crop has not been planted by the above acreage reporting date, then the acreage must be reported no later than 15 calendar days after planting is completed.
- If a producer acquires additional acreage after the above acreage reporting date, then the acreage must be reported no later than 30 calendars days after purchase or acquiring the lease. Appropriate documentation must be provided to the county office.
- If a perennial forage crop is reported with the intended use of "cover only," "green manure," "left standing," or "seed," then the acreage must be reported by July 15th.

Noninsured Crop Disaster Assistance Program (NAP) policy holders should note that the acreage reporting date for NAP covered crops is the earlier of the dates listed above or 15 calendar days before grazing or harvesting of the crop begins.

We encourage scheduling appointments for certification, but walk-ins are welcome. For questions regarding crop certification and crop loss reports, please contact the Montgomery/Chautauqua County FSA office at (620) 331-4860 ext. 2.



Kansas AgrAbility Project

Each year, more than 5,000 Kansas farmers and agricultural workers sustain injuries or acquire a health condition that affects their ability to work. Kansas AgrAbility Project is a resource for Kansas farmers and ranchers dealing with disabilities and chronic illness.

AgrAbility focuses on directly assisting Kansas farmers, farm employees and farm family members who have become injured or have an activity-limiting health condition/limitation to remain actively engaged in production agriculture for as long as they choose.

The project is a partnership between K-State University Research and Extension, Southeast Kansas Independent Living in Parsons, and the University of Kansas Lifespan Institute.

Kansas AgrAbility Agriculture Assistive Technology Specialists combine their knowledge of agriculture with disability expertise to provide specialized services needed to safely accommodate disabilities in everyday farm and ranch operations. These services cover the entire state of Kansas and include collaboration with extension educators, disability experts, rural professionals and volunteers in offering an array of services.

Kansas AgrAbility actively promotes education and networking among rural and disability-service organizations to increase capacity for serving farmers with disabilities and to promote understanding around challenges faced by those farmers in an effort to break down service barriers and promote successful outcomes.

AgrAbility also provides educational resources to avoid primary and secondary injuries on the farm by recommending safe practices and tools to minimize back and joint injuries.

The grant is administered in Kansas State University's Department of Biological and Agricultural Engineering by Project Director John Slocombe and Project Coordinator Tawnie Larson.

For more information, contact Kansas AgrAbility by calling 1-800-KAN-DO-IT (1-800-526-3648), visit the website at www.agrability.ksu.edu or email agrability@ksu.edu.



USDA Opens Signup for Market Facilitation Program

Enrollment Now Open through Dec. 6

Signup opens today for the Market Facilitation Program (MFP), a U.S. Department of Agriculture (USDA) program to assist farmers who continue to suffer from damages because of unjustified trade retaliation from foreign nations. Through MFP, USDA will provide up to \$14.5 billion in direct payments to impacted producers, part of a broader trade relief package announced in late July. The sign-up period runs through Dec. 6.

MFP payments will be made to producers of certain non-specialty and specialty crops as well as dairy and hog producers.

Non-Specialty Crops

MFP payments will be made to producers of alfalfa hay, barley, canola, corn, crambe, dried beans, dry peas, extra-long staple cotton, flaxseed, lentils, long grain and medium grain rice, millet, mustard seed, oats, peanuts, rapeseed, rye, safflower, sesame seed, small and large chickpeas, sorghum, soybeans, sunflower seed, temperate japonica rice, triticale, upland cotton, and wheat.

MFP assistance for 2019 crops is based on a single county payment rate multiplied by a farm's total plantings to the MFP-eligible crops in aggregate in 2019. Those per acre payments are not dependent on which of those crops are planted in 2019. A producer's total payment-eligible plantings cannot exceed total 2018 plantings. View payment rates by county.

Dairy and Hogs

Dairy producers who were in business as of June 1, 2019, will receive a per hundredweight payment on production history, and hog producers will receive a payment based on the number of live hogs owned on a day selected by the producer between April 1 and May 15, 2019.

Specialty Crops

MFP payments will also be made to producers of almonds, cranberries, cultivated ginseng, fresh grapes, fresh sweet cherries, hazelnuts, macadamia nuts, pecans, pistachios, and walnuts. Each specialty crop will receive a payment based on 2019 acres of fruit or nut bearing plants, or in the case of ginseng, based on harvested acres in 2019.

More Information

Payments will be made in up to three tranches, with the second and third tranches evaluated as market conditions and trade opportunities dictate. If conditions warrant, the second and third tranches will be made in November and early January.

MFP payments are limited to a combined \$250,000 for non-specialty crops per person or legal entity. MFP payments are also limited to a combined \$250,000 for dairy and hog producers and a combined \$500,000 for specialty crop producers. However, no applicant can receive more than \$500,000. Eligible applicants must also have an average adjusted gross income (AGI) for tax years 2015, 2016, and 2017 of less than \$900,000, or 75 percent of the person's or legal entity's average AGI for those tax years must have been derived from farming and ranching. Applicants must also comply with the provisions of the Highly Erodible Land and Wetland Conservation regulations.

More information can be found on farmers.gov/mfp, including payment information and a program application