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Your local link to MU for ag extension and research information
http://agebb.missouri.edu/agconnection

Fall Pasture Management - Stockpiling and Soil Testing

After dormancy during summer, cool season grasses should start to green up and regrow with temperatures getting cooler in the fall. Cool season grass species commonly grown in Missouri are tall fescue, orchardgrass, bromegrass, timothy and reed canarygrass. Among them, tall fescue is the most dominant and well adapted to the soil and weather conditions. It is one of the most drought-resistant forage grasses grown. Due to availability of soil moisture and cooler temperature, tall fescue grows well during early fall until middle of October. It has more resistance to low temperatures than other cool season grasses. Its leaves remain green later into winter than other pasture grasses.

Stockpiling

Tall fescue is used for stockpiling for winter grazing, due to its ability to remain green during late fall and early winter. Stockpiling is the practice of growing forages without mowing or grazing in the fall for grazing during winter . This method saves money and time for cutting, drying and storing hay to feed in winter. Letting grass grow without cutting during fall encourages better root growth with more reserved carbohydrate storage. With higher root carbohydrate storage in the fall and winter, grasses will have good growth and increased productivity in the spring. There are three main factors for stockpiling success: soil moisture, nitrogen availability, and fall or early winter weather conditions. The right amount of nitrogen and moisture will maximize the amount and quality of stockpiled forage in the winter. Application of 40-50 pounds nitrogen per acre around mid-August is good for grass growth but timely rainfall after fertilizer application is equally important.

Strip grazing is a good method for utilizing stockpiled forages in the winter and maintaining pasture health. This method involves utilizing a movable, electric fence to allot enough forage for a short time period and then moving the fence forward, providing a new allocation of forage. This decreases animal selectivity on forage and increases forage utilization. During grazing, use and move electric wire in such a way to allocate 2-3% of cattle body weight on forage dry matter basis for grazing. Make sure not to overgraze the pasture. It is recommended to leave a higher stubble height about 4-5 inches to give pastures a chance to store carbohydrates that will give them a “jump start” the following spring. If plants are grazed below the growing point, nutrient storage will be depleted and protection from stress will be reduced. Overgrazing inhibits regeneration of the root system and the development of new shoots for the next season’s growth.

It is better to graze the stockpiled fescue later in the winter when ergovaline levels are lower. Concentration of ergovaline, which is toxic to cattle, drops later in the winter and makes the fescue safer to feed. University of Missouri research shows concentrations of ergovaline likely fall below toxic threshold level after mid-January.

Soil Testing

Another important aspect of fall pasture management is soil testing. Although soil testing can be done in spring and fall on pastures and hay fields, fall is the preferred

time because it allows more time for any needed lime applications to have an effect before the next growing season begins. Fall soil testing also gives the producer flexibility for planning nutrient applications. Soil testing every 3-4 years can keep the producer from applying excessive or unnecessary amounts of fertilizer or manure, and can increase yields by providing the information on the amount of nutrients needed for optimum productivity. Testing soil periodically, can save money and reduce environmental impacts.

When collecting soil samples, divide fields into areas having similar soil characteristics or management practices. In general, sampling areas should not exceed 20 acres. If a producer is grazing cattle in management intensive grazing systems, collecting a soil sample from each paddock is recommended. Avoid sampling in areas that might have sources of variation such as animal feeding areas, under trees, near gravel roads, water sources, manure piles, and urine spots. Soil sampling from these areas will elevate the soil test results. Avoid collecting soil samples from recently fertilized, lime or manure applied pastures.

A core sampler is a good tool for soil sampling. Clean sampling tools help to minimize the error on soil test results. Generally, 15 to 20 random cores in a zigzag pattern are collected from the area to be sampled. Optimum soil sampling depth in the pasture is about 6 to 7 inches. Taking a soil sample from a shallow depth will overestimate the soil fertility level. Mix all cores thoroughly, break up the clods if needed and put about 1.5 cups of the mixture into a soil sample box or plastic bag and discard the excess soil. Label the sample with field and subfield names. Soil sample boxes and soil information forms are available at soil testing labs or MU Extension centers.

Source: *Dhruba Dhakal, agronomy specialist*

Farm Leases - Still a Complicated Topic

A topic that is never old is farm leases. Several issues related to leases still confuse not only farmers and landlords, but attorneys and professionals also. Following are some clarifications on these issues.

(1) **Farm leases, whether written or oral, are legal, binding contracts.** Under Missouri law, a lease contract is a binding contract that both parties and their assigns (heirs or buyers) must adhere. To clarify, heirs (children or grandchildren) are bound by a contract/lease as well as new buyers of the property. For example, a five year written lease, where the landowner dies in the second year of the contract, will continue for the three remaining years. If either party does not fulfill the terms of the lease, then the other party has the right to force the contract through legal action. If someone (landlord normally but either party) wants out, it could cost him or her. Written lease contracts are always preferable.

(2) **Terminating a farm lease in Missouri.** A written farm lease should have a termination date on the contract. If it does not, then it is a year-to year lease. At the conclusion of a written lease another written lease must be signed or it will become an oral lease if it continues. Within the first year, either party of an oral lease can terminate without the 60-day notice. Oral lease termination after year one, is more complex in Missouri. An oral lease can only be terminated by a written notice to either party sixty days prior to the anniversary date of when the lease was first discussed/agreed upon. For example, two parties agree on a farm lease on February 1, 2016 and the lease continues. The landlord wants to terminate for 2021. The landlord must send the tenant a written notice no later than December 1, 2020, or the tenant can force another year. The initial agreement date is when the lease began, not when possession occurred. For example, if a tenant does not take possession until April 1, the lease date is still February 1, when the lease was agreed upon. March 1 is not the date all leases start in Missouri. The termination date in Iowa is November 1 so notice is required before September 1; however this does not apply to Missouri land.

(3) **Oral lease concerns.** Oral agreements have some unique concerns. The landlord does not legally have the right to inspect their property during the lease term. Also, the landlord cannot legally hunt or let someone else hunt on the property since the tenant has those rights. Oral leases limit what a landowner can make the tenant do and not do. Oral leases that have gone on for many years can be difficult to remember (agreement date, etc.).

(4) **Specific lease concerns.** There are some extra concerns to address in a lease. First, does the landlord or tenant pay for lime? If the tenant pays, is he/she assured the farm will be theirs for future years to justify the expense? Second, if the tenant wants to use a grain bin or buildings, is that a part of the lease? If not, how much will the landlord charge? Third, is there a specific time the landlord wants animals off the pasture? For a specific number of days? Fourth, are subleases allowed? It can become an issue especially if a son or daughter of the tenant wants to farm. Fifth, does the landlord want the property mowed or kept up? Sixth, is there a limit on the number of acres in annual crops? All of these concerns can be addressed in a written lease.

Written lease forms are available at county extension offices or by contacting your Agricultural Business Specialist. Legal lease forms are available at a small fee. MU Extension will hold lease classes Sept. 17, Nov. 10 and Jan 14 from 6 to 9 pm. Call local the local extension office for further details.

Source: *Joe Koenen, ag business specialist*

Short-Term Operating Plan

University of Missouri Extension recently released a new publication entitled, Short-Term Operating Plan (M202). The plan was developed to help farm and ranch families continue operating their businesses with minimal interruptions should the primary decision maker(s) be unable to make decisions for a short time. The plan defines short term as generally two weeks to six months.

Decisions are a part of daily operations on farms and ranches and vary greatly from deciding what job needs to be done first to choosing inputs and determining when to sell commodities. Most farms have primary decision makers who routinely make these decisions. It is important however, that others know how to proceed if the key decision maker is unable to make decisions.

The plan could be helpful in an unexpected situation such as sickness, hospitalization or military deployment.

The plan is based on having organized information for family members to use to continue operating the farm or ranch business. Locating key information is stressful and time consuming. Having a plan and knowing its location will help to reduce stress and save time.

The plan was developed to capture key pieces of data with concise input, while considering ease of information retrieval. The plan has seven parts and persons completing it can choose which sections are needed. All farms/ranches will likely need parts 1 (general information) and 7 (equipment information). Additional parts will vary depending on the enterprises of the specific farm or ranch.

Part 1: General Information
Part 2: Livestock Information
Part 3: Crop Information
Part 4: Horticulture Information
Part 5: Woodlands / Timber
Part 6: Hunting Leases / Rights
Part 7: Equipment Information

Attachments can be added to the plan for more detail. Examples of attachments may be farm maps and feed mix rations.

The plan needs to be updated periodically to remain relevant and useful. Updating it at the end of each year should keep the data accurate and retain the value of the document. Although the plan may seem a bit cumbersome, it is similar to insurance, as it requires an investment with the hope it is not needed. However, when an unexpected situation arises, this plan could be quite helpful for the family members maintaining the farm or ranch business.

This plan is available online for download as a pdf file at https://extension2.missouri.edu/publications/m202

Source: *Mary Sobba, ag business specialist*

Understanding Hay as a Crop

As hay production is winding down for the year, it is important to look at hay not just as a forage but also as a crop. Hay has seen a drastic increase in harvested acres, though not at the capacity of traditional crops, such as beans and corn. According to the latest figures provided by the USDA, total acreage for Northeast Missouri has reached 229,000 acres accounting for 408,400 tons of forage. When adding grazing and conservation to the mix, there is a $12 billion input to the economy of Missouri. This income directly impacts more than 200,000 Missourians. Missouri ranks third in the nation in cow calf pairs accounting for more than four million head. Appropriately, Missouri also ranks second in the nation for the production of grass hay.

Beef producers, and those directly involved in beef production, are not the only ones producing hay. Indications show traditional row crop farmers who have little or no livestock are devoting more acreage towards hay production. By doing so, farmers are providing more diversification while increasing farm resources. Thus, those traditional crop farmers tend to apply the needed time to develop proper hay production and management/ marketing programs. Those producing hay do not have the availability to submit their crop in a manner respective of traditional row crop farmers. There are very few auction houses or businesses to accept hay when compared with grain elevators for those producing grains. Adding to the complexity, hay is not an individual crop such as soybeans or corn but exists of many crops such as fescue, clover and alfalfa to name a few. Additionally, hay can come in various sizes and forms from small and large square bales to small and large round bales.

One of the most common difficulties impacting the marketing of hay is the lack of standardized grades used for value. While hay is often shipped great distances, there does not exist a national or standardized market structure as it exists for corn, soybeans and cotton. Due to the structure and weight of hay, markets are typically more localized. Because of this, data reflecting the pricing of hay is virtually non-existing. As the value of hay should represent both the weight (volume) and nutritional value, most pricing is determined between the seller and purchaser. While other agriculture commodities, such as corn, cattle or swine have a national pricing system, hay value needs to be determined through laboratory analysis. University of Missouri Extension can assist in the understating of this analysis. Understanding the quality of hay can be a positive for each party

involved in buying and selling. As price variability and the lack of published or researched pricing exists, producers can utilize marketing strategies to sell their hay product and improve pricing for it. The simplest and best means of marketing hay is through forage testing results.

The first and most important step is understanding the value of a marketing program versus waiting for buyer inquires. The principal focus of any marketing program is to improve profitability of the enterprise. Marketing hay is no different. However, the criteria differs among hay producers who are simply disposing of excess forage and those whose hay production provides for substantial income. For the most effective means of marketing hay, producers should attempt to market hay according to quality, type, and most importantly, towards select groups of livestock and equine owners. These include:

- livestock including beef, goats, sheep and other
- equine such as horses, mules, donkeys and ponies
- industrial mulch users
- hay brokers
- export markets

Cash hay production in Missouri is increasing and thus appealing to more farmers. As this interest increases, so does the supply. For more profitability, hay producers need a sound management program which includes marketing. A forage improvement plan can increase both hay yields as well as profits. Hay sample testing can be beneficial to the purchaser, as well as the producer. . Additionally, knowing the quality of the forage purchased can aid in the profit of the animal owner through lowering input costs and increasing weight gains or milk production.

Source: *Jason Morris, ag business specialist*