

Ozark Stockman

An informal Newsletter for Livestock Producers in the Missouri Ozarks and abroad...
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A New Year and a New Start

Well, it's been almost a year since the Ozark Stockman made its debut and what a year it's been. Although challenging at times with late freezes, lack of rainfall, high feed and fuel prices, most producers I've visited with have seen worse and are optimistic about the coming year. Perhaps that's what I like most about Agriculture in the Ozarks...challenges are simply a way of life and most folks are willing to accept that and go on.

The New Year provides most producers with an opportunity to reflect on the past while preparing for the future. Agriculture, is an ever-changing industry, and modifying the management of your enterprise to deal with these changes is an important step to remaining profitable in the coming years. It is my sincere hope that MU Extension can provide you with the technical assistance needed to help you and your enterprise remain viable.

The New Year also brings about change to this publication. With the addition of Will McClain to the South Central Ag Extension Team, serving as an Agronomy Specialist, I've invited Will to formally be a co-author/editor of the Ozark Stockman. As I've mentioned in the past, Will brings a wealth of knowledge about soils, forage, and plant growth and management and will definitely be a tremendous asset both to the Ozark Stockman as well as the residents of South Central Missouri.

Will and I have a very busy January-March planned with several programs that should be of interest to you. If you have special requests for programming efforts, or a require one-on-one help, don't hesitate to contact us.

Above all, have a safe and happy Holiday Season!

Keys to Frost Seeding Success by Will McClain

Much of the pasture and hay fields around the area are in need of some help after the last few years. For 2007, a late spring freeze followed by months of more chances of rain than actual rain has left many pastures looking thinner than they ever have. Adding legumes to your pastures improves forage quality over having just grass alone. This added quality also means an increase in palatability, intake, digestibility, and nutrient content. Forage legumes contain five times the calcium, 30 to 50% more phosphorus, and twice the magnesium of grasses.

Frost seeding offers producers an inexpensive method of establishing legumes into existing pastures to improve forage yield and quality. However, frost seeding can be risky compared to other methods as a dry year will reduce the establishment potential of frost seeded legumes. The freezing and thawing of the soil combined in winter, with spring rains, help germination of legume seed

broadcast during the winter months. This method of over seeding is not new to Missouri. Many folks have been doing it successfully for years. With good animal management and rotational grazing, the system has worked quite well on many Missouri farms. The relative low cost of this method is probably the greatest incentive for producers to utilize frost seeding. As the demand for energy continues to increase, we can expect the price of all forms of energy to rise. This will make legumes an even more important component of profitable pasture systems. Here are a few considerations for successful frost seeding:

1. Soil fertility and pH. Proper soil fertility and pH are essential for good forage production, as well as establishment. In a pasture situation there are very little nutrients removed, so taking soil tests every 3 to 5 years in most cases is adequate. However,

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Subscription Info:

If you'd like to receive this newsletter please do one of the following...

1. Email or call the Dent County Extension office and request to be put on the Ozark Stockman email distribution list.
2. Download the Ozark Stockman from our website at <http://extension.missouri.edu/dent/>. Each bi-monthly issue will be posted on this site as well as archived issues.
3. If you wish to receive this newsletter, but simply don't have internet/email access, give us a call and we'll work something out.

Frost Seeding...(continued from pg 1)

hay fields have a tremendous amount of nutrients removed with each cutting and should be tested more often. A good rule of thumb is to take your soil samples 6 months prior to seeding to allow for any corrective actions. For legumes, most prefer a pH of 6.0 or higher and adequate phosphorus and potassium. The phosphorus will help stimulate root growth, and the potassium will increase forage growth and promote winter hardiness. Applications of nitrogen should not be made the year of the seeding because of the potential for increased competition from grasses. Also, future applications of nitrogen should be made with the same consideration for increased competition. Frost seeding should not be considered as a substitute for poor fertility management. If fertility issues are the cause of a poor pasture, frost seeding will not remedy this situation.

2. Site selection. Frost seeding can be used on any pasture, but is particularly effective where tillage can create potential erosion problems (fields with light soils or steep slopes). The best candidates for frost seeding are closely grazed or thinning pastures which contain finer textured soils such as clay, silt, or sandy loam's. These soils tend to create more action with the freeze thaw cycles of the late winter and early spring while providing more moisture for the newly emerged seedlings. The pasture should be closely grazed or mowed in the fall or winter to open the stand and expose soil. After the spring freeze and dry summer and fall we have had, exposed soil probably won't be a problem for most folks. A chain drag or light disking can also be used to help open the stand. This will increase the opportunity for seed-to-soil contact.

3. Seed – Soil contact. Any method of forage establishment requires good seed to soil contact for success. This also means that the soil has good moisture available and that the soil is in close contact with the seeds allowing moisture in the soil to enter the seeds. Often slightly firming the soil with a light roller or dragging after over seeding improves the germination of seeds. There are several management practices that can be done to help insure good seed-soil contact. The first involves fall grazing management. Pastures should be closely grazed or mowed in the fall or winter to open stands and expose soil. Sod-type grasses like bluegrass are the most difficult to successfully frost seed, especially where a thick layer of thatch covers the soil surface. It is in these situations where short duration animal hoof action is sometimes needed to help "plant" the seed.

4. Reduce competition. New legume seedlings must

be given a chance to get established without competition from grass already present in the stand. Reducing competition can be done in several ways. First, grazing or mowing pastures down to 2 inches in the fall will help to slow re-growth in the spring. Frost-seeded pastures need to be grazed regularly in the spring and summer to allow for light penetration into the plant canopy. However, it is also beneficial to move animals off pastures before young seedlings are consumed prior to adequate root development. The importance of reducing plant competition during the year of establishment is seen in research done at Michigan State University. In this study, red clover and birdsfoot trefoil were frost-seeded into a sod that was either suppressed with a herbicide or cut from zero to four times following seeding. The more frequent cutting regime resulted in stand densities similar to or better than those of the herbicide-treated field plots.

5. Species selection. In many cases, frost seeding is done to introduce or increase forage legume species into a pasture. Research and farmer experience has shown good results with red clover and birdsfoot trefoil. Seedlings of both species can tolerate the lower temperatures in the early spring. Red clover has good seedling vigor and is one of the easiest legumes to establish. It is also tolerant to slightly acidic and somewhat poorly drained soils. However, in most cases, red clover will only last two years

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and should be treated as a short-lived perennial. Birdsfoot trefoil is slow to establish but is one of the most long-lived pasture legumes. It can adapt to a wide range of soil conditions, such as low soil pH and poor soil drainage. Several studies have indicated that frost seeding both red clover and birdsfoot trefoil together offer the advantage of long-term legume presence in a pasture. In an Iowa State University research trial, red clover established quickly and remained productive for the first two years while birdsfoot trefoil became productive in the second and subsequent years following seeding. Many producers routinely frost seed red clover every two to three years to sustain legume production.

6. Timing. The fundamental principle behind frost seeding is that alternating freezing and thawing, along with spring rains, will help to incorporate the broadcast seed into the soil surface. Seeding on top of snow is acceptable if the depth is not too great. The risk of seeding on top of snow is that a

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Heart of America Grazing Conference - Jan 7-8, Columbia,

The Heart of America Grazing Conference is back in Missouri this year on Jan 7&8 in Columbia. This year's conference features several of the industry's grazing "gurus" and should provide grass farmer's with valuable information.

For more information on this upcoming conference go to: <http://extension.missouri.edu/cmregion/ag/mmgc/grazingconf.shtml>, or give Will or I a call.

Grow Your Farm Program to begin January 21

University of Missouri Extension will be starting a new program in 2008 entitled "Grow Your Farm". This program is geared towards both newcomers to agriculture as well as folks who may be long-time producers but who are interested in adding a new venture to their existing operation.

This course consists of 8 sessions as well as at least

Frost Seeding...(continued from pg 2)

rapid meltdown may result in runoff of both water and seed. In Missouri, most frost seeding is accomplished during January and February. The important thing to remember about seeding time is that one is depending upon the freezing and thawing action to help put the seed into contact with the soil for germination. The more freeze thaw cycles, the better chance of seed germination.

7. Management. Once legumes have been established in a pasture, steps must be taken to maintain them. Keep an eye on soil fertility to ensure that pH, phosphorus and potassium remain in the proper range for legumes. Once you have an adequate stand (~35%) of legumes avoid excessive nitrogen rates (greater than 50 lbs N/acre) that will increase competition from weeds and grasses. Graze or mow pastures to remove any excess grass growth and help control weeds. New legume seedlings are very sensitive to shading by established plants. Avoid overgrazing by leaving a minimum of 2 - 3 inches of growth at all times. Frost seeded pastures will require closer attention to grazing management than established pastures. Rotationally grazed pastures work best for successful frost seeding as this practice keeps grass in a vegetative stage throughout the entire grazing season.

two farm tours and is taught by not only Extension specialists but also farmer presenters who have been successful at their various enterprises and are willing to share their thoughts and recommendations to program participants.

Participants will receive instruction and training on the following topics: Identifying Values and Creating Farm Goals, Walking the Farm and Assessing Opportunities, Developing a Business Plan for Your Farm, Farm Finances and Record Keeping, Marketing of Your Farm Products, Understanding Rural Legal Issues, and Making a Presentation of Your Farm Plan.

This program is basically designed to help producers identify profitable agriculture enterprises for their acreage and realize the feasibility and limitations of their potential enterprise and develop a formal business plan for implementation of their enterprise. It is strongly recommended that the major decision makers of the potential enterprise attend, such as both spouses and/or business partners.

This program is slated to begin on January 21, and will be offered in Rolla, Lebanon, and Mtn. Grove, and continue through May. For more information, feel free to give Will or I a call or visit <http://extension.missouri.edu/dent/> to download a brochure.

Beef Production ITV Course

Randy Saner, MU Extension Livestock Specialist has put together an excellent series of ITV seminars on Beef Production and Profitability that will be held at several locations throughout South Central Missouri.

Topics for this course include Forage Systems for Southern Missouri, Reducing Scour Problems, Marketing Value Added Beef, Preparing for the Breeding Season, use of Ethanol Co-product Feeds, and Using Genetics to Improve Feed Efficiency. These seminars will be taught by State Extension specialists and utilize ITV capabilities for delivery.

This course will be offered at the following locations: Salem TCRC, Poplar Bluff TCRC, Hartville TCRC and the West Plains Public Library.

Cost of this program is \$70 per person for 7 sessions or \$15 per person per session. For more information, give Randy Saner, Will McClain or Ted Cunningham a call, or to download a brochure visit <http://extension.missouri.edu/dent/>.

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Calendar of events

January

7&8 - Heart of America Grazing Conference, Columbia

21 - Grow Your Farm - Rolla

22 - Grow Your Farm - Mtn. Grove

24 - Grow Your Farm - Lebanon

28 - Beef Production ITV Series (various locations)

29 - Beef Production ITV Series (various locations)

February

4 - Grow Your Farm - Rolla

5 - Grow Your Farm - Mtn. Grove

7 - Grow Your Farm - Lebanon

11 - Beef Production ITV Series (various locations)

18 - Grow Your Farm - Rolla

19 - Grow Your Farm - Mtn. Grove

21 - Grow Your Farm - Lebanon

25 - Forage and Beef Conference - Cuba, MO (watch for details)

25 - Beef Production ITV Series (various locations)

26 - Beef Production ITV Series (various locations)