



Ag Connection

Your local link to MU for ag extension and research information

<http://agebb.missouri.edu/agconnection>

For more information
please contact your
MU Extension Center:

Adair
(660) 665-9866

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(573) 581-3231

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Chariton
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Clark
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Howard
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Knox
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Lewis
(573) 767-5273

Linn
(660) 895-5123

Macon
(660) 385-2173

Marion
(573) 769-2177

Monroe
(660) 327-4158

Pike
(573) 324-5464

Putnam
(660) 947-2705

Osage
(573) 897-2497

Ralls
(573) 985-3911

Randolph
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Schuyler
(660) 457-3469

Scotland
(660) 465-7255

Shelby
(573) 633-2640

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(660) 265-4541

Adding Legumes to Pastures and Hayfields

Red clover is a short-lived perennial legume and is widely utilized in Missouri. It is well adapted to the soil and climate, and grows well in mixtures with cool season grasses, like tall fescue, brome grass and orchardgrass. It is susceptible to drought and root diseases, but due to its ease of establishment and generally affordable seed cost, it can be reseeded easily. Alsike clover is found in many pastures in Missouri, but is less productive than red or white clover; it withstands wet soil conditions and flooding better than many other legumes. White clover also tolerates poorly drained soils, but is not drought tolerant and can cause bloat if fed as a large portion of an animal's diet.

The most common way to seed clover is to frost seed in February or March. Graze pastures to a height of three or four inches prior to seeding to allow sunlight to penetrate the canopy once the seed germinates. Seed is broadcasted on frozen ground which allows freezing and thawing to work the seed into the soil. Planting clover at a rate of three to six pounds per acre, every one to three years, will maintain the stand in pastures and hayfields. Clovers can be seeded in April, but is best to drill in late spring rather than broadcast to ensure good seed to soil contact.

Lespedeza, a summer annual legume, can also be frost seeded at a rate of eight to ten pounds per acre in February or March. It is better suited to areas with low soil pH and fertility and withstands drought better than clovers.

Avoid applications of nitrogen fertilizers to pastures and hayfields where legumes are present. Grasses begin growing earlier in the spring than legumes and the addition of nitrogen fertilizer causes grasses to out compete legumes for sunlight, nutrients and moisture. Legumes fix nitrogen, some of which is available to companion grasses, making it unnecessary to apply additional nitrogen fertilizer.

In order to fix nitrogen, the legume seed must be inoculated at seeding with rhizobia bacteria. The bacteria needed is specific to the legume being planted. Seed should be inoculated with the proper rhizobia bacteria to maximize the nitrogen fixation of the legume.

For more information contact the local MU Extension agronomy specialist.

Source: Valerie Tate, agronomy specialist

For More Information:

MU Guide G4652
**Seeding Rate, Dates and Depths for
Common Missouri Forages**

Available at MU county extension
centers or online
[https://extension.missouri.edu/
publications/g4652](https://extension.missouri.edu/publications/g4652)

New Planning Tool

Timely decision making is an essential part of daily operations on farms and ranches. Some decisions have minimal consequences and others greatly impact the operation. Often decisions are routinely made by one person. It is important others know how to proceed if that one person is suddenly unable to make decisions.

A team of MU extension ag business specialists developed a short-term operating planning tool. The tool can be helpful to family members when the primary decision maker(s) cannot make short-term decisions. Short-term is generally a couple of weeks to six months. There could be a variety of reasons why the decision maker(s) is unable to make decisions including health issues and military deployment. The purpose of the plan is to have information organized for family members to use to continue operating the farm.

The plan was designed for most types of Missouri farms and ranches. The plan is divided into seven parts: general information, livestock information, crop information, horticulture information, woodlands and timber, hunting leases and rights, equipment information. Farm families using the plan should complete only the parts needed for the operation.

This plan is available online at <https://extension2.missouri.edu/publications/m202>. The downloaded pdf file is fillable or can be printed. (Additional details are available in the September 2020 issue of NEMO Ag Connection). The paper copy works well, but there are limits to the amount and type of data that can be put in the plan. To make the plan easy to access at any time, there was a need to have it online so data is available via computer, tablet or phone.

Grant funds were secured last year, through the North Central Risk Management Education Center, to take the plan to an online format. MU Extension worked with the University of Minnesota to create the website, agplan.mn.edu. The partnership with the University of Minnesota was chosen because Minnesota has several planning tools on their site and the short-term operating plan fit well with existing tools on the website.

The website allows users to include more information and more customization including attachments, such as farm maps. The website contains tips and samples to help guide users. It is free to use with an email and password. Users can choose to share their plan with others. For example, a user can share it with other family members simply by adding additional email addresses.

The extension team working with the short-term operating plan is scheduling several workshops and online zoom trainings this winter/spring to share more details and help farmers start building a plan. For more information call 573-581-3231.

Funding for this project was provided by the North Central Extension Risk Management Education Center and the USDA National Institute of Food and Agriculture Award Number 2018-70024-28586.

Source: Mary Sobba, ag business specialist



2021 Show-Me-Select Heifer Sale

The Northeast Missouri Show-Me-Select® replacement heifer sale averaged \$2,259 at F & T Livestock Market, Saturday, December 11.

The 17 producers of the 247 heifers were enrolled in the MU educational heifer management program. The heifers were bred to sires with both calving-ease and growth genetics. The top lot sold belonged to Twin Hill Stock Farm (Silex) and brought \$3,050.

The highest average price from a consignor was \$2,900 on two head from long-time consignor McCutchan Angus (Monticello). Other top consignors were Keithley/Jackson (Frankford) \$2,683 on 24 head; Connor Eckman (Paris) \$2,575 on four head and Twin Hill Stock Farm \$2,390 on 58 head.

The 43 buyers were responsible for just over \$558,000 worth of bred heifers exchanging hands in one hour. Thirty-four repeat buyers purchased 206 head (83 percent of the total consignment). Calving surveys returned by these buyers provide important information that is given back to consignors to improve for future years.

The Show-Me-Select® heifer development program takes nearly a year to complete. The heifers complete a pre-breeding examination usually four to eight weeks before breeding. This exam includes a pelvic measurement, reproductive tract score, and weight. Heifers may be bred artificially or exposed to natural service, however; the service sires must meet specific calving ease Expected Progeny Difference (EPD) requirements based on breed. This year 182 head (74 percent of the heifers in the sale) were synchronized and bred by artificial insemination (AI). In this sale, the choice to AI, showed a \$67 price advantage over those bred naturally.

All heifers must be pregnancy tested within 90 days of breeding by a veterinarian to determine expected calving date. The use of ultrasound has helped many of the veterinarians improve their accuracies on calving dates. During the development period the heifers undergo an extensive health program and are vaccinated at weaning, pre-breeding, and pregnancy examination as well as treated several times for internal and external parasites. Heifers are also screened for blemishes, condition, muscling and structural soundness by MU livestock specialists and USDA graders.

Averages of other Show-Me-Select® sales from fall 2021 were Joplin, \$1,790 on 173 head; Kirksville, \$1,882 on 223 head; Kingsville, \$1,909 on 252 head; SEMO, \$2,112 on 58 head; and Farmington, \$1,964 on 82 head.

This was the 25th year for the Show-Me-Select® heifer sale in Palmyra and over 43,192 heifers have been through the program and 7,605 head have been sold. If interested in participating contact the local MU Extension livestock specialist.

Source: *Daniel Mallory, livestock specialist*



Gardening Tips for February

Ornamentals

- Inspect summer bulbs in storage to be sure they are not drying out. Discard any that show signs of rot.
- Winter aconite (*Eranthis* sp.) and snowdrops (*Galanthus* sp.) are hardy bulbs for shady gardens that frequently push up through snow.
- Take geranium cuttings now. Keep the foliage dry to avoid leaf and stem diseases.
- Sow seeds of larkspur, sweet peas, Shirley poppies and snapdragons where they are to grow outdoors. For best results, these plants must sprout and begin growth well before warm weather arrives.
- Start seeds of slow-growing annuals like ageratum, verbena, petunias, geraniums, coleus, impatiens and salvia indoors.
- Start tuberous begonias indoors.
- Dormant sprays should be applied to ornamental trees and shrubs. Do this on a mild day when temperatures are above freezing.

Fruit

- Inspect fruit trees for tent caterpillar egg masses. Eggs appear as dark brown or gray collars that

encircle small twigs. Destroy by pruning or scratching off with your thumbnail.

- When pruning diseased branches, sterilize tools with a one-part bleach, nine parts water solution in between cuts. Dry tools when finished and rub lightly with oil to prevent rusting.
- Begin pruning fruit trees. Start with apples and pears. Peaches and nectarines should be pruned just before bloom.
- Prune grapes and bramble fruits.
- Established fruit trees can be fertilized once the ground thaws. Use about one-half pound of 12-12-12 per tree, per year of age, up to a maximum of 10 pounds of fertilizer per tree. Broadcast fertilizers over the root zone staying at least one foot from the tree trunk.

Vegetables

- Run a germination test on seeds stored from previous years to see if sprouting occurs.
- Season extending devices such as cold frames, hot beds, cloches and floating row covers will allow for an early start to the growing season.
- Sow seeds of broccoli, cauliflower, Brussels sprouts and cabbage indoors now for transplanting into the garden later this spring.

Miscellaneous

- When sowing seeds indoors, be sure to use sterile potting mix to prevent diseases. As soon as seeds sprout, provide ample light to encourage stocky growth.
- Repot any root-bound houseplants before vigorous growth occurs. Choose a new container that is only 1 or 2 inches larger in diameter than the old pot.
- To avoid injury to lawns, keep foot traffic to a minimum when soils are wet or frozen.
- Branches of pussy willow, quince, crabapple, forsythia, pear and flowering cherry may be forced to bloom indoors. Place cut stems in a vase of water and change the water every four days.

Resource: Missouri Botanical Garden

Source: Missouri Botanical Garden

Farm Bill Decision Tool

Trying to decide between ARC and PLC for 2022?

MU Extension has an Excel spreadsheet tool available for download at <https://tinyurl.com/MU-AgBus> then click on “resources”. For more information contact your local extension ag business specialist.

PPAT Schedule

The following list is for in-person training. Pre-registration is required with limited seating.

For questions call Valerie Tate (660)-985-5123 or Dhruba Dhakal (573) 581-3231.

Carroll County– Feb. 8 @ 10 a.m., or 1 p.m.
Carrollton Library basement 660-542-1792

Chariton County- Feb. 14 @ 10 a.m., or 1 p.m.
Chariton Courthouse big court rm 660-288-3239

Linn County- Feb. 1 @ 2 p.m. or 6 p.m. Forage
Systems Research Center 660-895-5123

Macon County- Feb. 7 @ 10 a.m. or 2 p.m.
or 6 p.m. MU Extension office 660-385-2173

Marion County- Feb. 11 @ 10 a.m., or 1 p.m.
Marion County Court Room 573-769-2177

Monroe County– Feb. 28 @ 10 a.m., or 1 p.m.
Monroe County 4-H Bldg 660-327-4158

Putnam County- Feb. 2 @ 10 a.m. or 2 p.m. 4-
H Building 660-947-2705

Ralls County- Feb. 24 @ 1 p.m., or 3:30 p.m. Mark
Twain H.S. Vo Ag Bldg 573-985-3911

Randolph County– Feb. 10 @ 10 a.m., or 1 p.m.
MU Extension office 660-269-9656

Schuyler County- Feb. 9 @ 2 p.m. Courthouse
basement 660-457-3469

Sullivan County- Feb. 9 @ 2 p.m. City Hall
Community Room 660-265-4541

Shelby County- Feb. 23 @ 10 a.m., or 1 p.m. MU
Extension office 573-633-2640