Upcoming Events:
- March 14—SEMO Fair Steer Weigh-In
- March 15—MFA Scholarship Due
- March 16—Bollinger Co. Extension Annual Meeting
- March 17—CGC Extension Annual Banquet
- Fescue Renovation School
- MO Complex Fence Law program

Local Sales:
- SEMO Bull Sale Mar. 27 @7:00 PM Farmington

SEMO Fair Steer Weigh-In
The 4-H and FFA Steer Weigh-In for the SEMO District Fair has been scheduled for March 14, 2015 at the Fruitland Livestock Auction from 1:00-3:30 p.m. You must have your steer weighed March 14 if you plan to show at the SEMO District Fair. Please bring $1.00 per steer for tag costs.

Sponsors:
- Fruitland Livestock Auction Inc.—Steve and Jeff Preusser
- Jackson Veterinary Clinic—Dr. Austin Bock
- MFA Agri Services
- SEMO Cattlemen’s Association

Fescue Renovation Schools
The last week of March the Alliance for Grassland Renewal will host a series of fescue renovation schools at University of Missouri Farms and Centers. The schools provide producers, veterinarians and industry professionals options for successfully converting Kentucky 31 tall fescue to novel endophyte varieties. Schools begin with understanding fescue toxicosis, then walk through the conversion process. Conversion topics include establishment practices, fertility needs, smother crops, weed control, stand maintenance, and variety selection. Schools provide hands on training for drill calibration in addition to pasture walks to observe different novel endophyte varieties.

Schools combine expertise from University of Missouri Extension, NRCS, Agribusiness and Producers to give participants the opportunity to get answers to questions from a variety of perspectives and information sources. For further information visit http://grasslandrenewal.org/education.htm or contact the location where you would like to attend.

Southwest Research Center, Mt. Vernon
Monday, March 30, 2015
Enrollment Limit = 60
Carla Rathman at 417-466-2148 or RathmannC@missouri.edu

Beef Research & Teaching Farm, Columbia
Wednesday, April 1, 2015
Enrollment Limit = 70
Lena Johnson at 573-882-7327 or JohnsonLM@missouri.edu

Wurdack Farm, Cook Station
Tuesday, March 31, 2015
Enrollment Limit = 30
Will McClain 573-775-2135 or McClainWE@missouri.edu

Forage Systems Research Center, Linneus
Thursday, April 2, 2015
Enrollment Limit = 120
Racheal Foster-Neal at 660-895-5121 or FosterNealR@missouri.edu
Traditional EPD’s combine animal performance, progeny performance, and pedigree performance to predict the genetic merit of that animal for several production traits. However, in young animals with few or no progeny the accuracy of the EPD’s will be low. The accuracy of an EPD is an indication of the reliability of said EPD in data selection. Genomic testing is available for many breeds of seedstock cattle and the results are used to create a genomic-enhanced EPD or GE-EPD. It uses thousands of DNA markers to predict an animal’s genetic merit or breeding value and is then combined with traditional EPDs to improve the accuracy of that EPD. Genomic testing provides the same amount of information as about 20 progeny and provides more accurate estimates for young animals.

There are now several genomic prediction products for commercial cattle to estimate genetic merit. These products can be used to help manage inventory and make selection decisions on commercial females.

**GeneMax Focus (Zoetis)**
For high-percentage (greater than 75%) Angus cattle. Provides predictions on a 5 point scale for marbling and gain, and an index called a GMX score on a scale from 1 to 100. This score is a percentile rank where 50 is average, 1 is poor, and 99 is superb. The test is $17 and is most appropriate for commercial producers who retain ownership of their cattle in the feedlot.

**GeneMax Advantage (Zoetis)**
Again, targeted for high-percentage (greater than 75%) Angus cattle. This test reports three indexes, Cow Advantage focused on cow-calf production, Feeder Advantage focused on performance in the feedlot and on the grid, and Total Advantage index which ranks animals on performance from conception to carcass. These indexes are also reported as percentile rank on a scale from 1 to 100. This test also reports SMART Outliers, meaning it flags an animal for extreme values for cow size, milk, docility, marbling, and tenderness. This test costs $44 and is appropriate for anyone with high-percentage Angus.

**Maternal Edge (American Gelbvieh Association and GeneSeek)**
This test is a commercial heifer genomic prediction for high-percentage Gelbvieh cattle. It provides a score for calving ease, maternal calving ease, weaning weight, yield grade, marbling, and carcass weight. These scores range from 1 to 10, where 5 is average, 1 is poor, and 10 superb. The cost is $26 and appropriate for anyone with high-percentage Gelbvieh cattle.

**Igenity Gold and Silver (Neogen GeneSeek)**
These tests are to be released March 1 and will focus on the most powerful genes that affect profits in commercial cow herds. Igenity Gold will rank cattle on 12 categories of maternal, performance, and carcass traits, while the Igenity Silver profile ranks animals on 6 categories. Both tests will offer free parentage verification and can be combined with BVD-PI and pregnancy testing. The profiles will also test for the presence of male Y chromosomes in females, which is suggested to reduce fertility (USDA-MARC).

The Show-Me-Select Heifer Replacement Program will now recognize heifers with genomic predictions and will be designated Show-Me-Plus. Buyers have consistently paid premiums for heifers with more information such as the Tier II heifers, therefore this designation is designed to capitalize on the increased information provided by genomic predictions. Approved testing includes registered heifers with genomic-enhanced EPDs or commercial heifers with a genomic prediction from either GeneMax Advantage or Maternal Edge Heifer Profiles. This designation will be available starting with the December 2015 sale for spring calving.

Beginning in 2016 all natural service sires for SMS will be required to have GE-EPD’s from a DNA Test such as the HD50K.
Feeding Baleage to Cattle

I have had several inquiries about feeding moldy baleage to cattle. Surface mold may be visible and is usually white, but may also appear pink, gray, or blue. It typically will not penetrate more than a couple inches of the bale and have not shown to cause problems when feeding. Cattle will typically avoid the moldy portion unless they are being limit-fed or forced to eat the entire bale. Depressed intake is the most common effect of moldy haylage as a result of reduced palatability. Spoilage due to bacterial growth can also occur. Bacterial growth and spoilage can be a result of wrapping at a moisture content >65% (too wet), improper sealing (too little wrap), and soil/manure contamination. Signs of spoilage include dark brown/black bale color, wet, slimy feel, rancid smell, and poor palatability. Botulism caused by Clostridium botulinum poses the biggest toxicity risk associated with moldy baleage. Again, campus personnel are not aware of any cattle getting sick or dying from consuming moldy baleage, not to say it isn’t possible!

Recommendation for feeding moldy baleage:
1. Open/dry cows
2. Growing non-pregnant cattle
3. Lactating non-pregnant cattle
4. Pregnant cows

Grass Tetany Season

As the snow melts and cool-season forages begin to emerge, producers need to prepare for grass tetany. Grass tetany can occur in cattle grazing ryegrass, small grains (oats, rye, wheat), and cool-season grasses (tall fescue, orchardgrass) with low levels of calcium and magnesium and excess potassium. Grass tetany most commonly affects lactating cattle because their magnesium and calcium requirements are so high.

Clinical Signs: nervousness, muscle twitching and staggering during walking, animal may go down, experience muscle spasms and convulsions

Prevention: provide magnesium and calcium mineral supplement during grass tetany season (when grazing above mentioned forages and cereal grains in late winter and early spring)

- Occurrence is more frequent in fertilized pastures than unfertilized ones.
- Occurrence is usually higher after 5 to 10 days of cold weather.
- Most frequently observed in early spring after consumption of lush forages.
- Low magnesium levels are a result of the high water content of rapidly growing plants.

Maternal Nutrition Impacts Developing Fetus

We know maternal nutrition during gestation can impact the performance of offspring, and timing of nutritional assault impacts different performance traits. When raising replacement heifers it is going to be specifically important to pay attention to maternal nutrition as it can affect the reproductive success of her offspring. Listed are the impacts of nutritional manipulation during different stages of gestation on reproductive development in female offspring.

To summarize, undernutrition or protein deficiency during the first trimester was associated with reduced fertility of female offspring and was not reversed with high protein during the second trimester. However, heifers born to dams receiving high-nutrient diet during the third trimester had a higher proportion of calves born during the first 21 days of their first calving season.

<table>
<thead>
<tr>
<th>Undernutrition</th>
<th>First Trimester</th>
<th>Decreased number of follicles, lower AMH and higher FSH concentrations</th>
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<tbody>
<tr>
<td>Low Protein-High Protein</td>
<td>First Trimester-Second Trimester</td>
<td>Smaller dominant follicles before puberty, lower densities of growing follicles within the ovary as adults</td>
</tr>
<tr>
<td>Overnutrition</td>
<td>Third Trimester</td>
<td>Higher proportion of heifers calved in the first 21 days of their first calving season</td>
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(Mossa et al., 2015)
Missouri Complex Fence Law

Joseph Koenen, Agriculture Business Specialists, will be delivering two evening programs to discuss Missouri’s Complex Fence Law. These programs will be delivered via Lync, an internet meeting delivery system.

Program dates: 6:30—8:30 PM
Tuesday, March 24
Thursday, April 2

This program will be available for viewing at the Cape Girardeau County Extension office. Please call ahead to reserve a spot. 573-243-3581

Please contact your local Extension office to see if this program will be offered near you.

State Fair Steer Ownership

In order to exhibit your steer at the Missouri State Fair, you must own the animal by March 1. A nose print must also be taken and sent in by March 15. If you may exhibit your steer at the State Fair, contact the extension office to set an appointment for a nose print to be taken.

SEMO All-Breed Performance Tested Bull Sale

The SEMO Bull sale will be held Friday, March 27, 2015 starting at 7 PM in the Farmington Livestock Auction barn.

Please visit SEMObeef.com or contact Darrell Aufdenberg (573-270-6755) or the Extension office for a catalog.

Offering 30 bulls
- 6 Charolais
- 21 Angus
- 1 Simmental
- 2 Gelbvieh Balancer

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