Education, entertainment and fellowship for farmers, producers and families are the goals of the Missouri Livestock Symposium. And, every year, the event surpasses those expectations.

Garry L. Mathes, chair of the Missouri Livestock Symposium (MLS) committee, says, “The 2013 Symposium will feature something for everyone. Just show up and take advantage of what we have put together for you at this year’s MLS event. And there is no cost to attend.”

The Symposium will be held December 6 and 7 at the William Mathew Middle School (formerly known as Kirksville Middle School), 1515 South Cottage Grove in Kirksville. The MLS will be open from 4:00 PM to 10:00 PM on Friday, December 6 and from 8:00 AM to 5:00 PM on Saturday, December 7.

Each year the MLS hosts an agriculturally-related trade show and a Classic Tractor Contest. The top five tractors will be on display: the winner announced at Friday evening program. A delight for all Missourians, will be Dr. John Dodam and the University of Missouri, College of Veterinary Medicine mules, Tim and Terry. The MU Mule Club will offer wagon rides to MLS attendees.

The Missouri Livestock Symposium features nationally known speakers covering the topics of horses, beef cattle, forages, sheep, meat goats, and stock dogs. Their presentations will offer producers the most recent science-based information on current topics and concerns. The MLS will give producers information that will enable them to make the best financial decisions possible in their operations.

Other timely topics of interest will address “The Affordable Health Care Act” and “Food Safety for Farmers Markets: Regulations and Best Practices.”

The Beef Cattle section will concentrate on management strategies to stretch forage supplies, cow nutrition, improved stockmanship, and ranching in the 21st century. Featured speakers will be Dr. Justin Sexten, MU Extension beef cattle nutrition specialist; Dr. Ron Gill, professor and Extension livestock specialist, Texas A & M University; and Kit Pharo, Pharo Cattle Company, Cheyenne Wells, Colorado.

Ron Gill will address techniques for getting the most out of improved stockmanship via low stress cattle handling. Gill will also share his knowledge of stockmanship with a presentation for the Horse section. Justin Sexten will discuss factors affecting the nutritional needs of cows. As well, Sexten will show how feeder design and management affect hay waste—information to help producers lower annual operating costs by exploring the latest research in hay feeding.

A highlight of the 2013 MLS will be Kit Pharo addressing “Ranching for Profit in the 21st Century.” Pharo has spoken extensively about his low-input, real-world philosophies on raising cattle. Pharo has developed an extensive production system, marketing over 800 bulls annually all over North America. He believes that the right kind of cattle can thrive in a variety of environments.

Another beef related topic will be beef cow leasing arrangements with Joe Koenen, MU ag-business specialist. Veterinarians Scott McVey and Steve Olsen will give presentations titled “Bluetongue and Blacktongue: Old Enemies of Livestock Producers” and “Brucellosis: It’s Importance in Humans and Livestock.”

“The Forages section should be equally as relevant and inviting,” said Mathes. Featured forages expert and Friday night keynote speaker, Dr. Garry Lacefield, University of Kentucky, will address “Changes, Challenges, and Opportunities” and “Tall Fescue and the Endophyte.” Dr. Lacefield has authored and co-authored more than 300 Extension publications, papers, articles, and book chapters. He is co-author of the book “Southern Forages.”

Dr. Ray Massey, University of Missouri Extension Commercial Agriculture Program economist, will speak on pasture insurance, a new tool in risk management for livestock producers. Pasture insurance is beginning to attract interest in the wake of dry weather experienced during the past two growing seasons.

“For the last two years, Pasture, Range and Forage (PRF) Insurance has paid more to Missouri forage producers than they have paid in premiums. PRF Insurance allows farmers to insure a minimum percentage of normal rainfall during critical growing seasons,” said Massey.

Mark Kennedy, USDA Natural Resources Conservation Service (NRCS) Missouri state grazing lands specialist, will give two forage presentations: “Renovating Pastures with Livestock” and “A Comparison of Different Grazing Management Strategies.” David Otte of Green Valley Seed, Inc. will speak on forage choices, the pros and cons.

The Horse section will feature horse trainer and clinician Van Hargis of Victoria, Texas. Hargis will give three talks designed to help both the novice and the most experienced horse owners. Hargis’ topics are “How to Catch the Hard to Catch Horse,” “The Versatile Ranch Horse,” and “Starting Your Horse on Cattle.”

Ron Gill, Texas A & M University, renowned horse and cattle behaviorist, will speak on “Feeding the Performance Horse.” Dr. Gary Webb, Missouri State University, assistant professor of animal science, has an extensive knowledge of animal behavior.
research and teaching background on management, reproduction, training and nutrition of horses. Webb will give two talks, "Feeding Fescue to Performance Horses" and "Opportunities for Participation Ranch and Stock Horse Competition."

The Sheep and Meat Goat programs on Saturday, December 7, will include Mike Caskey from Pipestone, Minnesota, Stan Potratz of Washington, Iowa, Dr. Niki Whitley, North Carolina A & T State University, and Dr. Michael Seipel of Truman State University.

Caskey will give three talks: "Making Lambing Easier, "Building the Right Ewe for You," and "Managing Ewe Feed Costs." Potratz will address "The Future of the U.S. Sheep Industries—All Four of Them." Whitley will talk on "Parasite Resistance," and Seipel will speak on "Grazing Sheep on Annual Forages: Preliminary On-farm Research."

In the Meat Goat section, Dr. Steve Hart of Langston University will give two talks: "Vegetation Management with Goats" and "Look Before you Leap into Goats." Linda Coffey from the National Center for Appropriate Technology, Fayetteville, Arkansas, will speak on the subject of "Hitting the Target: Whole Farm Planning."

The Meat Goat section will conclude with all speakers participating in a panel discussion and Q & A.

The 2013 Missouri Livestock Symposium will have a familiar face addressing the use of stock dogs in livestock operations. Lyle East, nationally known stock dog trainer from Clinton, Missouri, will offer three talks to stock dog enthusiasts: "Stock Dog Training—it’s not Rocket Science," "Speaking the Language," and "Pups vs Started Dogs."

Jesse Lyons, MU Extension Associate, poultry specialist, will give two presentations. Said Lyons, "In the first presentation titled "Small Flock Poultry – Beginners and Basics," I will concentrate on the basic requirements of a small poultry flock such as what breed to select, how to take care of your flock, and what to expect from your flock."

In a second talk immediately following, entitled "Advanced Small Poultry Flock Management," Lyons will cover more advanced topics such as management and marketing, and present current research updates from alternative poultry management systems such as enriched housing and pasture programs.

Connie and Brent Haden, Columbia attorneys, will participate in a special feature of the 2013 Symposium with advice for farmers and landowners on farm succession strategies. The Hadens will give two presentations titled, "Estate Planning: What should I do now?"

Other topics include beekeeping, comparing GMOs, traditional and organically grown foods, viticulture 101, and flower arranging.

Dr. David Moore of Kirksville will be named the Missouri Livestock Symposium Person of the Year at the Friday evening program. Dr. Gary Lacefield will be presented with the Agricultural Educators Lifetime Achievement Award. Dr. Lacefield will give the keynote address at the program, "Gratitude and patriotism: A Personal Prospective."

Attendees of the 2013 MLS will be treated to a free beef supper at 6:00 PM on Friday evening and a free Governor's Style Luncheon on Saturday at noon.

Additional information about the program, speakers and trade show can be found at missourilivestock.com or email Erwinz@missouri.edu (please write MLS in the subject line). For information by telephone, call Zac Erwin, 660-665-9866 or Gary Mathes, 660-341-6625.
The 2013 growing season was dominated by anomalous weather conditions for much of the spring and summer, and made it another challenging year for Missouri farmers. Agricultural conditions only began to improve toward the end of the growing season with favorable harvesting opportunities, and some rain that initiated forage growth. Drought, however, was still impacting the northern half of state at the end of October. The most notable anomaly for this year’s growing season in Missouri was incredible precipitation disparities that occurred - from historic flooding in southern sections to severe drought in the north.

The clash of air masses contributed to an unsettled weather pattern during April with numerous periods of showers and thunderstorms impacting the region. Data indicated a statewide average monthly rainfall of 6.30 inches, making it the fourth consecutive month with above normal precipitation. The cool, wet weather during April delayed spring tillage and planting opportunities across the state.

May temperature data indicate the monthly statewide average temperature was less than 1 degree below normal, making it the third consecutive month below normal and the 7th coolest spring (Mar-Apr-May) on record. A strong and cold storm system brought a historic and rare snow event to parts of the state on May 3 with 2-7 inches reported. May precipitation averaged more than two inches above normal with a statewide average of 6.87 inches.

Temperature data for the state indicate an average June temperature of 72.9°F, or 0.1° below the long-term average. June precipitation was variable across Missouri, but the statewide average was 4.92 inches, or 0.25 inches above the long-term average. Due to the localized nature of convective activity, precipitation disparities were profound across the state.

July weather conditions trended toward a cooler, cloudier and drier month than normal, but with large precipitation disparities from north (drier) to south (wetter). Data indicate a statewide average temperature just under 3 degrees below normal. The last week of the month was notably cool. Widespread significant precipitation events were confined to the last ten days of July with southern Missouri being the primary beneficiary. Statewide rainfall was highly variable, but averaged just over 3 inches, or 0.75 inches below normal.

Droughty conditions were beginning to emerge across the northern half of the state as July progressed. However, unseasonably cool July temperatures, in combination with below normal evapotranspiration rates, were mitigating full drought stress potential. Incredibly, precipitation disparities impacted Missouri during August, ranging from historic flooding to severe drought. Some communities in north central and northeastern Missouri reported no measurable rainfall, and driest August on record, while counties in south central Missouri received more than 15 inches of rain, and witnessed their wettest August on record.

Seasonably cool and pleasant temperatures were the rule for much of the summer, but a major pattern change during the third week of August resulted in a late summer heat wave for Missouri. The statewide average August temperature was 74.5°F, or 1.6 degrees below the long-term normal. Unfortunately, the late summer heat wave initiated “flash drought” conditions across northern Missouri and vegetative stress quickly ensued, including significant declines in crop growth and pasture conditions.

Summer-like temperatures prevailed for much of September in Missouri and resulted in the first warmer than normal month since February. The abnormal warmth was especially notable during the first half of the month with rare triple digit temperatures reported. Rainfall was below normal across all of Missouri during September and averaged slightly was about 1.6 inches below normal. Cooler and wetter conditions during the latter half of September initiated vegetative growth, and slightly improved conditions, but much of the northern half of Missouri was still experiencing moderate to severe drought by the end of September.

Dry conditions dominated in October and allowed numerous harvesting opportunities. Moderate to severe drought was still impacting the northern half of the state by the end of the month, and, despite a wide spread significant rain event at the end of the month, more rain was needed to recharge water supplies above and below the ground. Unusually mild weather continued through the first half of October, but a mid-month pattern change translated to mostly below normal temperatures for the rest of the month. Sub-freezing temperatures impacted all of Missouri on October 25th, and effectively ended the growing season.

The University of Missouri Extension Commercial Agriculture Program will hold its annual Swine Institute in Columbia on Nov. 13, 10:30 a.m.-8:15 p.m. at the Courtyard by Marriott.

The speakers will be Bryan Myers of the Pipestone Veterinary Clinic of Iowa and Minnesota, and Linda Hickam, state veterinarian for the Missouri Department of Agriculture. They will address Porcine Epidemic Diarrhea Virus (PEDV) in the evening session.

Myers and Hickam will address the virus as a disease as well as methods to control an outbreak and minimize spread should one occur at a producer’s facility.

“In four months, PEDV has gone from an unknown disease to the most talked about swine disease other than PRRS virus,” Myers said. “Moving across the United States, it has infected hundreds of farms and thousands of pigs.”

Introduction of PED virus into a naïve herd results in acute outbreaks of severe diarrhea and vomiting, he said. “Morbidity and mortality in a population ranges from 40 to 100 percent. Mortality in very young pigs can reach 100 percent.”

“Pigs will have a fever and have hypovolemic shock resulting in death,” Myers said. Infection of pigs with PEDV can lead to diarrhea and vomiting and can result in significant mortality, especially in very young pigs.”

Infective grow-finish pigs and sows will become ill and are set back, but most recover from the virus. Myers has become an expert on PEDV containment and disinfection strategies from working with producers dealing with outbreaks, and through his subsequent research. He said that PEDV virus is relatively easy, control and elimination has proven to be difficult. Many farms have attempted elimination with herd stabilization and closure with variable rates of success. Strict biosecurity protocols have been implemented around the source of the virus and the introduction of virus into a naïve farm.”

Tim Safranski, MU Extension genetics/reproductive specialist, says biosecurity from swine barns to transport trailers to packing plants is imperative in preventing the virus from spreading. “Importantly, new data on the source of transmission beyond fecal-oral transmission is emerging daily.”

The Commercial Agriculture Program annual Swine Institutes are designed to inform Missouri swine industry leaders of the latest research and analysis impacting swine production.

Members of the Commercial Agriculture Program’s Swine Focus Team will present “rapid-fire topics.” They will include: animal welfare audits and present an update on Missouri CAFO rules regarding construction permits, and news about a biofilter and anaerobic digester. Bob Broz, MU Extension water quality specialist, will provide an update on a nutrient reduction strategy for Missouri.

Attendees will receive insight from the National Pork Producers Council and the National Pork Board, and an update on the Farm Bill from FAPRI director Pat Westhoff. Ron Plain, MU State Livestock Marketing Specialist, will provide his popular market outlook forecast and update producers on country-of-origin labeling (COOL).
A Visit to the 2013 Manure Expo, Guelph, Ontario

by Teng Teeh Lim, MU Extension CA Program, Air Quality Specialist

In mid-August 2013, I accompanied Bob Schultheis, Natural Resource Engineering Specialist / CPD, University of Missouri Extension Center in Webster County, to the North American Manure Expo. We traveled more than 800 miles to beautiful Guelph, Ontario, Canada to participate in the 2013 Expo. As engineers, we attended to both help with the 2013 Expo and gain experience in order to bring the Manure Expo to Missouri in 2014.

MU Natural Resource Engineering Specialist, Bob Schultheis with field application equipment on display at the Expo.

The American Manure Expo is an annual event that combines three major functions: an education program, demonstrations of innovative technology and equipment, and industry trade show. The education program provides professional development (credit hours) for those implementing nutrient management plans (NMPs).

The annual Expos showcase the latest research results and innovations that will help improve efficiency, protect water quality, follow NMPs, and reduce pollution risks. Vendors appreciate the opportunity to learn the newest regulations, and have face-to-face meetings with users. The Expo attracts over 1,100 attendees and has been rotated around Wisconsin, Minnesota, Michigan, Ohio, Iowa, Pennsylvania, and Nebraska. The Expo has grown in both numbers of attendees and participating companies. This sizable growth is unique, as unfortunately, in recent history, several farm shows have ceased to exist.

Bob Schultheis and I also took part in a tour the day before the Expo officially began. That day we were able to visit a vendor’s manure equipment production warehouse; farms utilizing anaerobic digestion; power generation and air quality measurement experiments; and sites with large manure storages to see different manure agitator demonstrations.

Schultheis and I are working with other extension specialists who have hosted past Expos in their states, and with a show manager to help us bring the Expo to Missouri next year. The 2014 Expo will be held at the Ozark Empire Fairgrounds in Springfield on July 9, 2014.

A brief introduction of each spreader is given prior to the demonstration.

Several solid spreaders of different design and sizes line up, ready to demonstrate spreading poultry manure on a field.

Say it ain’t so!
Written laws apply to oral leases

by Linda Geist, MU Extension Writer

Missouri has written laws on oral leases, says Joe Koenen, University of Missouri Extension agribusiness specialist. Those leases are binding and differ from laws in bordering states.

Variances in these laws often lead to confusion when absentee landowners from bordering states are dealing with Missouri tenants. So it’s important to know Missouri’s rules regarding leasing, Koenen said.

It’s important to remember that farm leases are legal, binding contracts. Sale of the land, death or other extinguating circumstances does not release either part from the contract. Surviving spouses or children don’t have the right to change the lease until it expires, and neither does the renter. A change in ownership of the land does not change the lease.

Missouri’s Chapter 441 covers leases and includes termination procedures, tenant rights and responsibilities, as well as landlord rights and responsibilities. “Don’t assume attorneys or other professionals know Missouri law either,” he warned.

Oral leases are especially difficult to terminate because they are subject to interpretation by the landowner and tenant. In Missouri, more than 50 percent of leases are oral, not written, Koenen said.

Missouri’s 441.050 statute requires a 60-day written termination notice of an oral lease and the date is based on when the agreement was made, not when the tenant took possession. Koenen recommends that termination notifications be documented by sending registered mail. Failure to follow this may result in one party forcing the other to provide another year’s tenancy.

Lease dates may be difficult to remember 10 years down the road, as many leases are long-term, so written leases with specific dates are always recommended. The contract can include notification modifications. Sharecropper leases are particularly challenging, he said. Sharecropper and crop-share agreements are not the same, and true sharecropper arrangements can be terminated after the tenant harvests the crop. Historically, a sharecropper provides labor only. Crop share arrangements may be treated differently.

There are other considerations on terminating a lease such as if new crops are planted, if rent has been collected, fertilizer carryover and gross negligence. Unless specifically noted, lime and other fertilizer paid for by the tenant goes with the land. The tenant is expected to leave a reasonable level of fertility on the land, but this must be specified in the lease and is difficult to determine.

Koenen said the tenant generally has a legal right to harvest crops that have already been planted. Complications arise when crops have not been harvested in a timely manner.

In Missouri, the landlord has the first lien for rent. There are also other circumstances such as the landlord defaulting on the mortgage. The lienholder has first rights, but the tenant might be able to work with the lienholder to complete the term of their tenancy.

Other special rules apply to fence responsibilities and these can vary county-to-county by local option.

Legally written lease forms are available in county extension offices. For more information, contact Koenen at 660-947-2705 or Mary Sobba at 573-581-3231 or koenenj@missouri.edu.
Using ultrasound for reproductive purposes in beef cattle

by Scott Pook, MU Extension Beef and Dairy Veterinarian

For many years, rectal palpation has been a mainstay to veterinarians for pregnancy diagnosis. Undoubtedly, it will continue to be important for palpation of the reproductive tract of the cow. To the experienced practitioner, it is most reliable ~35 days post breeding. However, of growing importance in the last 15 to 20 years is the use of ultrasound for bovine reproduction because of its many benefits.

Ultrasound has been investigated for approximately 25 years. Some of the earliest papers came out of Dr. Ollie Ginther’s lab at the University of Wisconsin. The ultrasound provides the practitioner a way to gather more information than via rectal palpation. The ultrasound was investigated as a tool for early pregnancy diagnosis, ovarian structures, fetal sexing, fetal aging, etc. Initially, the high cost of the ultrasound machines dissuaded the use. Yet, because of advances in technology over the past 15 years, use of the ultrasound has been increased due to the development of relatively inexpensive, portable equipment.

On the average, the embryo, with a heartbeat visible, is first visualized around day 20-28 of gestation depending on the type of ultrasound and probe. Most ultrasound machines used in beef cattle will first pick up the heartbeat around 30 days. A typical benefit seen among practitioners using ultrasound is that they often become more proficient at rectal palpation (Jones 2003, Lamb 2004, Stroud 2006a). The author would concur with this statement. Several studies also show that there are very little deleterious effects of rectal palpation or ultrasound by the experienced veterinarian.

An ultrasound is used in beef cattle more for fetal aging and/or fetal sexing in comparison to dairy cattle where early pregnancy detection is most important. Fetal aging is important to seedstock producers to determine accurate sires and dams. Similarly, as commercial producers enter value-based markets, there is the need to know the genetic base of their cattle. Determining exact sire identification is enhanced through the use of ultrasound.

For cattlemen interested in extra profits through special programs, ultrasound is essential. A majority of beef herds will choose a time to pregnancy check that minimizes trips through the chute. The Show Me Select Heifer (SMS) program in Missouri requires a palpation by 90 days after the start of the breeding season, whether bull bred or timed artificial insemination (TAI). This timing has been beneficial to the veterinarian performing the ultrasound, and it allows the owner to determine the AI bred animals from the cleanup bull (if the bull is put into the herd 14 days after TAI). Likewise, the veterinarian can fetal sex the TAI inseminations and most likely the first round of bull inseminations (~70 days).

Fetal aging is also possible to detect through ultrasound. This can be determined by making various measurements of the fetus depending on the stage of gestation. Dr. Sandra Curran and coworkers first characterized the growth of the embryo/fetus. The most accurate estimate of gestational age is derived from taking an actual anatomical measurement. Early in the pregnancy (30-55 days of gestation), it is recommended that the crown to rump length (total length of the calf) be used. Later, the head or body circumference and/or the length of the head can be used to determine the gestational age of the fetus. Thus, the earlier the diagnosis, the more accurate the veterinarian will be.

As part of the SMS program, several livestock specialists have followed calving results of heifers sold through the sales. They have correlated the resulting calving dates with estimation of breeding dates corresponding to whether the heifers were diagnosed via rectal palpation or ultrasound. The data would suggest that the use of ultrasound improves the accuracy of the veterinarian, although several very experienced practitioners have very high accuracies. This would correlate with a recently published paper on the use of per rectum palpation, i.e., experienced palpators can be quite accurate while less experienced veterinarians are less accurate.

Referring once more to the beginning of ultrasound research for cattle, fetal sexing was first described in 1989 by Dr. Sandra Curran. She discovered that around day 56 days of gestation, the genital tubercles have migrated to their proper positions. In general, the female genital tubercle will be under the tail earlier than the male genital tubercle will be caudal to the umbilical cord. Therefore, earliest practitioners can practically detect sex is ~56 days. The latest fetal sexing can be done varies, but around 90 days of gestation in heifers, 100 days of gestation in dairy cattle and 110 days in beef cattle, the gravid uterus becomes more difficult to scan. It is generally concluded that sex determination is most practical between 60-85 days of gestation. For teaching purposes, the author prefer the cattle to be 70-85 days of gestation.

Remarkably, fetal sexing can predict the sex of the resulting calf by 92-100%. One should not be discouraged, realizing that this level of accuracy will take time and practice to achieve.

Taking time to learn the art of pregnancy diagnosis for cattle by ultrasound has many benefits. The early detection of pregnancy, fetal sexing, aging, ovarian and uterine pathology, etc., all aid the cattlemen to increase profits.

Livestock lease agreements new option

by Linda Geist, MU Extension Writer

Older farmers and young capital-strapped farmers are teaming up in increasing numbers to form livestock lease alliances, according to University of Missouri Extension agribusiness specialist Mary Sobba.

“Leasing land is common,” she said. “Why not cattle?” Young producers who may not have adequate finances are working with ready-to-retire producers to share income and profits on cattle by sharing land, machinery, breeding stock, labor, seed, fertilizer and other costs.

She suggests that producers and would-be producers test the fairness of a lease by using a two-column worksheet, one for the landowner and one for the tenant.

Owners can cash lease beef cows, or another alternative is for the owner to furnish a set of breed cows or heifers for a predetermined lease price. The operator receives the livestock, cares and manages them, keeps a percent of the calf crop, and returns the cows to the owner at the end of the lease. Ways to determine cash rental rates are livestock ownership costs, livestock owner net share, rent and operator’s net return to livestock.

Some of the considerations include fence repair, bull expense, how and when cows are culled and sold, how and when calves are sold and replacement females. Owners and tenants also should decide the length of the lease, incentives for lower death loss and higher calving percentages, provisions for drought and disaster.

For more information on leasing or to find an extension agribusiness specialist in your area, go to http://extension.missouri.edu.
The September expiration of the USDA’s Milk Income Loss Contract (MILC) program means that most Missouri dairy producers do not currently have a safety net if margins crash.

So far, this lack of a safety net has not mattered. Margins have stayed strong as grain prices have fallen faster than milk prices. However, history suggests that MILC payments have been a significant part of producer’s income in some years as depicted in Figures 1 and 2. To help Missouri dairy producers adjust to the next era of managing price risks, five free regional workshops are planned the first week of December. The workshops are intended to help Missouri dairy producers understand and learn to use the tools that are available to protect margins. The workshops will cover:

- Mechanics of using proposed new farm bill margin insurance program
- Livestock Gross Margin (LGM-Dairy) insurance
- Hedging using futures and options through brokers
- Risk management tools now available through DFA Risk Management

The five planned workshops will be held between 9:30 a.m. and 3:30 p.m. to accommodate producers who have to milk and then travel to the workshop. Lunch is sponsored by FCS Financial.

The workshops will be held Monday through Friday, December 2-6 throughout the state. On Monday, December 2, the first workshop will be in Mt. Vernon at the University of Missouri’s Southwest Center. On Tuesday, December 3, the workshop will be in Mountain Grove at the Missouri State University Fruit Station. On Wednesday, December 4, the workshop will be held in Jackson at the Cape Girardeau County Extension Center. On Thursday, December 5, the workshop will move on to Union at Hagie’s Restaurant. The week of state-wide workshops conclude on Friday, December 6 in Sedalia at the FCS Financial Meeting Room.

Teaching the workshops will be Joe Horner and Scott Brown from the University of Missouri, LGM Dairy Insurance agents, Earl Biggers from DFA Risk Management, and collaborating dairy producers experienced in using price and margin insurance tools. This material is based upon work supported by the USDA/NIFA under Award Number 2012-49200-20032. Funding for this project was provided by the North Central Risk Management Education Center and USDA National Institute of Food and Agriculture. For more information, please contact 573-884-6311.

### MILC Payments as a Percentage of Southern Missouri Mailbox Milk Price

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<tr>
<th>Year</th>
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<th>Southern Missouri Mailbox Milk Price ($/cwt.)</th>
<th>MILC as % of Milk Price</th>
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### Itinerary at a Glance

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<tr>
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<td>December 2</td>
<td>Mt. Vernon</td>
<td>MU Southwest Center</td>
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<tr>
<td>Tuesday</td>
<td>December 3</td>
<td>Mountain Grove</td>
<td>MSU Fruit Station</td>
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<td>December 4</td>
<td>Jackson</td>
<td>Cape Girardeau County Extension Center</td>
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<tr>
<td>Thursday</td>
<td>December 5</td>
<td>Union</td>
<td>Hagie’s Restaurant</td>
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<tr>
<td>Friday</td>
<td>December 6</td>
<td>Sedalia</td>
<td>FCS Financial Meeting Room</td>
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MILC Payments as a Percentage of Southern Missouri Mailbox Milk Price

Joe Horner

Learning to insure your dairy margins Regional Workshops - December 2-6, 2013

by Joe Horner, Dairy/Beef Economist, Commercial Agriculture Program

USDA’s Milk Income Loss Contract (MILC) Program Sponsors
Gender-selected (sexed) semen has been around for more than ten years now. There have been advancements in sexing bull semen through the years. Sexing Technologies just released data showing a 4-6% improvement in conception with their most recent improvements. However, there are considerations when using sexed semen, which include added cost of a unit of semen, the availability of bulls with sexed semen, and the compromised semen. Nevertheless, there can be a place for sexed semen in breeding programs, whether beef or dairy.

The dairy industry initially has used the technology at a much more rapid pace than the beef industry. This is due to the large disparity between the value of a heifer and a bull calf. The use of sexed semen, along with improved fertility programs on dairy farms, has led to an excess of available heifers on the market. Therefore, progressive producers have begun to strategically use sexed semen on heifers and standing heats in cows. Multiple service or lower production cows are bred to sexed semen. This allows a dairyman to generate enough replacements, without excess, and have a more valuable animal to sell at market (the ½ blood beef). This has been most beneficial to Jersey breeders.

So how does the sperm get sexed? The sperm is stained with a dye and because an X (female) chromosome is wanted, the machine can only do enough sperm for one conventional dose of semen per hour. This has led to reducing the dose to 1/5 of the conventional dose. For sexed semen, this 20% of a conventional dose does not affect the sexed semen conception rate, i.e. the pregnancy rate of using sexed semen does not improve if you pack more semen beyond 2 million sperm per dose.

Once the machine decides whether there is an X, Y, or “it cannot tell,” it will charge the sperm either positive, negative, or none. The sperm is then run past a magnet and either attracted, repelled, or nothing happens. The sperm then is “caught” in the appropriate containers.

What kind of success should you expect? With excellent management, pregnancy rates with sexed sperm are almost always 70-90% of controls, so if the control pregnancy rate is 60%, the sexed rate is 42 to 54% pregnant (Seidel, ARSBC 2006). In regard to sex ratios, producers have reported > 90% heifers (dairy).

How should the sexed-semen be handled? Sexed semen comes in 1/4 cc straws which are smaller than the typical ½ cc of conventional semen (some AI companies process the conventional in 1/4 cc straws). However, the semen should be handled as the conventional semen. Most of the companies are recommending the use of sexed semen only on yearling heifers, on observed heats, and following an AM-PM rule. Following these rules, along with excellent management, will yield the results quoted above.

So how can gender-selected technology be applied in the beef industry? For one, you could actually choose to get more heifer or more bulls (steers). The "good" cows could be bred to "heifer semen" and the rest to "bull semen." However, unlike the dairy farmers, cattle men do not handle their animals as often. Therefore, several researchers have studied the used of sexed-semen in timed artificial insemination (TAI) programs. We (Dr. Dave Patterson, his graduate students, Genex, and I) have looked at several ways of incorporating the use in TAI. An initial study compared sexed to conventional using the Show Me Synch program and breeding at 66 hours with Holstein heifers. The conventional semen yielded a pregnancy rate of 68% while the sexed semen was only 38%.

However what we observed, was that heifers bred to sexed semen, and were in heat, had a 46% pregnancy rate. This led to trials where we delayed breeding to the sexed semen, allowing more heifers or cows to show estrus and/or have the sexed semen placed in the reproductive tract nearer to ovulation. This has yielded better pregnancy rates. It has also led to the strategy of breeding animals to sexed semen that are in heat at the time of TAI and using conventional semen on those that have not. This strategy has been effective as well. We continue to search for the best strategy for utilizing this technology.

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Protecting your hearing
by Linda Geist, MU Extension Writer

Have you heard? Most hearing loss is preventable. That's the word from Karen Funkenbusch, University of Missouri Extension Rural Safety and Health Specialist.

Funkenbusch offers sounds advice for agricultural workers during harvest season.

"Nothing can restore lost hearing," she says. "Once it's gone, it's gone! But hearing loss caused by noise is preventable and you can choose to prevent it."

She recommends using hearing protection that will cut down on background noise.

A side benefit is that hearing protection reduces stress, anxiety and fatigue at the end of the day. Funkenbusch recommends that agricultural workers put earplugs in their pockets each morning when they grab their cell phone and keys. She said canal caps or muffs should be on the tractor steering wheel, combine or lawn mower. "The easier it is to use, the more likely you will use it," she says.

Hearing prevention also means reducing equipment noise by replacing worn, loose or unbalanced machine parts. Keep equipment well lubricated and maintained to reduce noise, she says.

Noise over 85 decibels can prevent hearing loss. Examples of common sounds above this include gunshots, firecrackers, grain dryers, chain saws, rock bands, circular saws, squealing pigs, a tractor idling in the shop six feet or less away, a hand drill, a combine ten feet away and at full throttle, table saw, tractor without a cab or a combine while riding in the cab.

"If you need to raise your voice to be heard an arm's length away, the noise is probably loud enough to damage your hearing," she said.

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Commercial Agriculture Fall 2013

So you want more heifer (bull) calves?
by Scott Pook, MU Extension Beef and Dairy Veterinarian

"If you need to raise your voice to be heard an arm's length away, the noise is probably loud enough to damage your hearing," she said.
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The Commercial Agriculture Program has developed many tools to help businesses develop, locate and operate. They are on our website, http://agebb.missouri.edu/commag/.

A wealth of information produced by the Commercial Agriculture Program is available on our website. Resource guides for beef, swine, crops and dairy producers are provided, as well as current instruments we have produced, such as the economic impact of Missouri dairy products study.

Our Beef, Swine, Crop and Dairy audits are published, as are business models and updates on prices and production trends for each commodity. Economic Impact studies prepared by the Commercial Agriculture Program show how important these commodities are to Missouri.

From our website you can find access to constantly updated climate studies to help you decide when to plant and what to expect of the weather in the future. Horizon Point Custom Weather Analysis system provides farmers with the opportunity to have site specific weather reports sent directly to their email address.

Information on the annual Beef Tour, Swine Institute, Ag Lenders School and other educational events we sponsor can be accessed online. Current issues and past archived issues of our quarterly publication, the CA News newspaper, from 2007 to the present are available on our website.

All of our work, over all of these years, is and was generated to make your operation more successful. Please visit our website, http://agebb.missouri.edu/commag/ and take advantage of what we have produced for you.

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Calender Events

NOVEMBER
13 Commercial Ag Swine Institute
15 Show-Me-Select Heifer Sale SW
30 Show-Me-Select Heifer Sale WC

DECEMBER
6-7 Missouri Livestock Symposium
7 Show-Me-Select Heifer Sale
8-10 Farm Bureau Annual Meeting
14 Show-Me-Select Heifer Sale NE
21 Show-Me-Select Heifer Sale

COLUMBIA
Joplin Stockyards
Kingsville

KIRKSVILLE
Fruitland

TAN TAR A
Lake of the Ozarks

PALMYRA
Green City

FEBRUARY
10-14 Missouri Pork Expo

HOLIDAY EXEC. CENTER, COLUMBIA
18 Dairy Profit Seminars
19 Dairy Profit Seminars
20 Dairy Profit Seminars
21 Dairy Profit Seminars
22 Dairy Profit Seminars

SEDALIA
Springfield

UNION
Jackson

SPRINGFIELD

MO CATTLEREN’S ASSOC. CONVENTION

TAN TAR A
Lake of the Ozarks

MT. VERNON
Mountain Grove

JACKSON
Union

SEDALIA

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