SOPLIN REGIONAL STOCKYARDS

AUGUST 2014 Volume 18 | Issue 1 Weigh 'Em Up: Time to Wean Bunk-breaking Basics Keep or Cull?

B Shirtlan Alta

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VIEW FROM THE BLOCK

MKT

s we closed out the **M**month of June with our special value added sale, we sure thought the market couldn't get any higher, but that just wasn't the case. Fed cattle traded at all-time highs in July and the futures market has been at levels never

seen before. I still have no idea where the top of the market is. It just continually feeds on itself. Exports continue to be good, we are still seeing less numbers of cattle than ever, and feed prices are expected to be cheaper than we've seen in recent years.

We are still expecting cattle numbers to be short, especially as we get to the fourth quarter of this year. It's amazing what some of the cattle are actually bringing. Steers weighing 1,000 to 1,100 lb have been bringing \$2,000 to \$2,200 per head. Fiveweight steers will bring \$1,400 to \$1,500 per head. It's just amazing what's going on, and it's a surprise to everyone in the industry. We've never seen this before and we may never

see it again. At the moment, though, it's just a rocket.

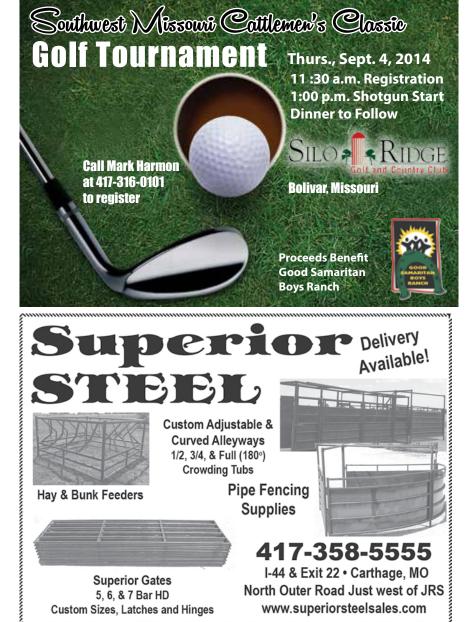
cows Slaughter have been selling for \$1.20 to \$1.40 with bulls at \$1.50 to \$1.60. I just really don't see anything to change that. Those cattle are just in huge

demand because of the shortage of ground beef. It's always been said that supply will outtrump demand and that's the case here. We just don't have the supply.

As we get closer to harvest, the corn crop sure looks to be a good one. We've also got ample forage this year, something we haven't seen in a while. Roughage availability has been a big problem the last few years. It's been high in a lot of places simply because there wasn't any to grow due to the lack of rain.

All the factors just keep working in our favor, which never happens. For now, we'll just take it while we can get it.

Good luck and God bless. Jackie





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Whether you use an old time scale or a new digital one, it's calfweaning time, so weigh 'em up! Story on page 18. —*Cover photo by Joann Pipkin*

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BEEF IN BRIEF

Southwest Missouri Gets New Weather Station

Missouri's newest automated real-time weather station recently went online at the Southwest Research Center, near Mount Vernon in Lawrence County. University of Missouri Extension's Commercial Agriculture Program operates a network of 31 stations across the state, said Pat Guinan, MU Extension climatologist.

The weather station measures variables such as air temperature, relative humidity, wind speed and direction, solar radiation, soil temperature and precipitation.

The agriculture community depends on weather information, using data such as real-time wind speed and wind direction to make spraying and chemical application decisions. Data also helps determine irrigation and planting schedules.

The National Weather Service and other agencies also use station data for numerous meteorological, agricultural and hydrological research projects.

The Mount Vernon station is one of 21 stations in the 31-station network that provide real-time data. Advances in wireless communication and grant funds make it possible for these stations to report weather conditions every five minutes over the Internet.

For real-time information from the Mount Vernon area, go to *www.agebb.missouri.edu/weather/realtime/mtvernon.asp*.

-Source: University of Missouri Cooperative Media Group.

Education-focused H.B. 1189 to Become Law

Governor Jay Nixon signed into law H.B. 1189. This bill, sponsored by David Wood (R-58), requires the Missouri Department of Elementary and Secondary Education (DESE) to adopt a policy on high school graduation that allows certain agriculture or career and technical education courses to satisfy certain subject-specific graduation requirements.

Rep. Wood said this bill requires the DESE to develop a high school graduation policy that allows students to fulfill academic requirements with an agricultural credit. Communication arts, mathematics, science or social studies courses could be substituted for a district approved agriculture or career and technical education course.

"H.B. 1189 will help make school more relevant for those students who do not want to attend a four-year university," said Rep. Wood. "When students can see a purpose to their classes, they will work harder and learn more. Our curriculum in the technical schools and agricultural departments has kept pace with the needs in our communities."

—Source: Missouri Cattlemen's Association release.

Rule Proposed to Track Sources of Ground Meats

The U.S. Department of Agriculture's (USDA) Food Safety and Inspection Service (FSIS) is proposing to require that all makers of raw ground beef products keep records in order to further protect consumers by ensuring retailers can trace sources of ground meats.

Retail outlets regularly make ground beef by mixing cuts of beef from various sources. This proposal, if finalized, will require them to keep clear records identifying the source, supplier, and names of all materials used in the preparation of raw ground beef products.

FSIS has concluded that recordkeeping by retail facilities that grind raw beef to date has not been sufficiently effective. This proposal is in keeping with the agency's latest efforts to target its food safety prevention tools at areas that will have the most significant public health impact.

—Source: USDA Food Safety and Inspection Service release.





The Missouri Beef Council and Cattlemen's Beef Board created a partnership to launch a new line of fresh beef products in five Price Cutter grocery stores in Springfield, Missouri. The line of products meet consumer demands for convenient fresh beef and keep preparation to 30 minutes or less, with a complete meal in one dish. The work has included development of five products and labels, point of sale materials, promotional plans, and training for store staff.



NUTRITION KNOW-HOW

Up for the Challenge

Feeding backgrounded calves requires strict attention

Story By Justin Sexten for Cattlemen's News

Moderate temperatures, regular rainfall and high cattle prices provide the opportunity for many producers to retain ownership past weaning. This summer has provided abundant forage and the prospect of record feedstuff production so whether you are considering a backgrounding, stocker or feedlot, retained ownership system is not important. What is important, however, is matching the desired performance level to the available nutrition of the growing calf.

Starting calves in a post-weaning nutrition program is the most challenging aspect of cattle feeding. In order to capitalize on calves' genetic potential to grow, health challenges at receiving must be minimized. Providing adequate nutrition to support immune function is key to getting calves started. Weaned calves have low dry matter intake so nutrientdense weaning rations ensure adequate energy and protein consumption. Adequate energy is achieved by eliminating low energy ingredients. Examples include cottonseed hulls and rice hulls. Bulky, low-energy ingredients increase cost of gain by yielding little results despite their inexpensive cost.

In the weaning supplement, maintain 14 to 16 percent crude protein levels. A number of feeds can be used, however, you should plan to incorporate some bypass protein sources. Nursing calves consume bypass protein in milk. Once weaned, these young calves require by-pass protein from feed to gain in excess of 2.5 pounds a day. Select multiple ingredi-



ents from corn, soybean, cotton and animal proteins to provide adequate and balanced amino acids to calves.

The greater the calves' performance target, the more important providing a balanced protein source becomes. Calves turned out on pasture might not gain beyond two pounds a day due to forage quality so single ingredient supplements will suffice. Backgrounding and feedlot cattle with high grain diets can increase performance with balanced protein supplies.

When considering feed additives, include a coccidiostat or ionophore and provide balanced vitamin and mineral supplements. Using a straight commodity supplement can provide adequate protein and energy to weaned calves, however, these might lack adequate mineral and vitamin premixes in addition to the feed additives shown to improve weaning health.

A good weaning management program begins with quality forage. In many operations, producers rely on forages to provide the bulk of the nutrients to weaned calves. Quality pasture, such as fall regrowth or hay fields added to summer rotation, offer quality forage options. Alternatively, you should still provide calves with the best grass hay available to ensure intake is not limited by fiber and fill.

One benefit to late-season supplementation is pasture conservation. As calves consume supplement, pasture consumption declines. As a rule of thumb, each pound of supplement consumed reduces pasture dry matter consumption by half a pound. When heat stress slows pasture and animal growth, supplementation offers the opportunity to maintain animal performance and reduce heat

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NEWS TO USE

Beef Prices High: Invest Now In Better Genetics

Advice from MU Economist Scott Brown

Story From Our Staff

66With record high beef prices, about anything works," said Scott Brown, University of Missouri economist. "It's hard to make a bad decision."

Speaking at American Society of Animal Science annual meeting July 22 in Kansas City, Brown warned of low prices ahead. "In cattle cycles prices go up-and down. With volatility, rebuilding cow numbers will face challenges."

In times of good prices, invest in improvements to make beef herds better, Brown said.

Low prices are not in the immediate future. Time remains to rebuild U.S. cow numbers with quality that meets consumer demand.

This year, calf returns top \$400 per cow, according to the Livestock Market Information Center. "We've never seen prices like this," Brown said. High prices are expected to continue through 2015 and beyond.

"Cattle producers can take a lesson from corn producers," he said. "High prices do come down. We'll work on changing demand and supply until prices drop. The industry will adjust."

With high prices, it's easy to not change anything. By planning now, herd owners can prepare for low prices ahead.

The U.S. beef herd has declined for six decades, sinking from 132 million cows to 88 million.

Herd owners are responding to highprice signals. They have saved heifers for breeding at a rate similar to a herd upturn in the 1970s.

"We can build cow numbers quickly," Brown said. "That is different than building beef supply quickly. It takes time to bring calves to the feedlot, packing plant and finally to consumers.

"We don't need 132 million cows again, as we produce more beef with fewer cows."

Beef supply will be short for some time, which supports continued high prices.

Brown advocated not just adding cow numbers but improving beef quality. Consumers have learned to like higher-quality beef. And they show they'll pay more for USDA prime grade beef.

Brown's price charts show premiums for prime beef remain less volatile than for choice, the next lower grade. Select, a grade below choice, remains the lowestpriced. Improvements can be made in meat quality by selecting genetically proven sires.

Difference in profits can make a difference in farm survival at the bottom of the next price cycle.

"There's a difference between cattle prices and cattle profits," Brown said. "Building quality genetics reduces risks. Quality meets a growing consumer demand for prime beef."

There's a world of producers who raise commodity beef.

U.S. cow herd owners remain slow in adopting new ways. "Those who adopt new technology may get risk mitigation," Brown concluded.

In a talk after Brown, University of Idaho animal scientist John Hall said, "There will be a lot of heifers bred this year that shouldn't be bred."

—Source: University of Missouri Cooperative Media Group release.



HEALTH WATCH

From Conception to Consumption

Proper weaning helps ensure a quality end product

Story By Dr. Dave Rethorst for Cattlemen's News

Beef Quality Assurance (BQA) is about producing a safe, wholesome product that will provide an enjoyable eating experience for the consumer and comes from animals that have been properly cared for from conception to consumption. In this column, we have talked some about fetal programming or gestational nutrition and the effects that it has on the calf after it is born. More recently, we have discussed preparing the calf for weaning through vaccination, parasite control and nutrition. This part of the discussion has centered on making sure the immune system is functioning at an optimal level at weaning. Another point has been to get the calves castrated early in life so we can reduce the immunosuppressive effects of castration at the time of weaning. The weaning process

can put a huge stress on calves if it is not done correctly, creating immunosuppressive effects.

In a "traditional" weaning system, the calves are separated from the cows, placed in a pen with feed and water, and allowed to walk the pen and bawl until they finally settle. This is a very stressful process on the calf. I have seen people do derivations of this system, such as using snow fence to make the pen smaller, to help reduce the dust and reduce the time the calves are walking and bawling, but the bottom line is that they are still walking and bawling. While this could help some, several other options can make this process less stressful.

The Australians use a method referred to as "yard" weaning. This is an abrupt weaning of sorts in that the cows are



separated from the calves, and the calves are placed in a yard (pen). That's where the similarities end. The primary difference is that low-stress handling techniques are used. In this system, the cows are separated from the calves as quietly as possible, and the calves are penned. The calves are then handled quietly along a fence each day using low-stress settling techniques to stop them, move them, and ask them to go to feed and water. In other words, they are handled daily so that they become acclimated to the pen and people sooner. This method can also aid in early detection of sick cattle.

A weaning method that is gaining some popularity in the U.S. is the "two-step" or "nose flap" method. This method involves a plastic flap that clips into the

nose of the calf and prevents the calves from nursing. This flap is placed in the nose approximately seven days before the intended weaning date. The theory is that since the calves can't nurse for seven days, they won't miss the milk when they are weaned and thus won't walk and bawl as much. A small number of calves will lose their flap during the seven days, but it is usually not a problem. If a producer is doing things right and getting the calves vaccinated and dewormed two to three weeks pre-weaning, this system will require an extra handling of the cattle a week before weaning in order to place the nose flaps. The risk with this system is the temptation to just work the calves once a week before weaning to vaccinate, de-worm and place nose flaps. While this might reduce your workload, the immune system requires two weeks or more from vaccination to produce functional immunity, and the result is a calf with a subpar immune status. Low-stress cattle handling expert Dr. Tom Noffsinger states, "If you are handling cattle correctly, a big advantage of this system is that

CONTINUED ON NEXT PAGE



HERD HEALTH FROM PREVIOUS PAGE

you get an extra handling of the cattle in before weaning."

"Fenceline" weaning involves holding the cows in a pen or small pasture immediately adjoining the pen holding the weaned calves. My observation on this method is that while the calves tend to congregate along the fence separating the cows and calves, the cows are the ones doing the bawling. A derivation of this I have seen work fairly well is to place the pairs in the pen where the calves are going to be weaned and feed the cows in the bunk where the calves will be fed. A few days later the pairs are separated with the cows placed in a pen adjacent to the calves. The potential advantage to this approach is that the cows may teach the calves where to eat and drink. Furthermore, the cows are nearby for a few days to help keep the calves calm and reduce stress. Low-stress handling techniques to help acclimate and settle these calves more quickly will only improve the process.

The last low-stress weaning

method to discuss is the "twophase" Canadian method. This is actually simulated 'weaning' for a very short period of time one or two times in a calf's life before a weaning actually occurs. What is commonly done is when the calves are processed as baby calves, they are held off of the cows overnight and then returned to momma at daybreak the following morning. This process is repeated as part of the pre-wean vaccination process. A key component of this method is to make sure the pairs are separated as quietly as possible each time sorting occurs. While visiting with Dr. Noffsinger, I discovered this is the method he and his wife use with their cow herd. They also like to separate the pairs one time between prewean processing and weaning. At this time, they ask the calves to walk through the chute and alley without catching them so they will go through more easily at weaning.

We have discussed handling as we sort, process and wean. However, we cannot forget how the cattle are handled as they are gathered for each working. If you are dealing

CHALLENGE FROM PAGE 6

produced while digesting forages. When supplementing calves during summer heat, consider feeding late in the afternoon to prevent heat from building during the day.

When pasture rental opportunities are limited or expensive, adding weight by using grass looks increasingly less profitable. However, declining feed costs and rising calf prices can make adding weight to calves by using supplements cost ef-

with big pastures to gather or are moving the cattle several miles as part of weaning, I encourage you to "stage" the cattle a few days before weaning. Get them in small pastures close to the weaning corrals so that when weaning day arrives, the calves can be quietly gathered, sorted and placed in pens.

Dr. Noffsinger offered this final tip for weaning. "Make sure the feed the calves get the day they are weaned imitates the feed they received the day before." This will keep the calves eating the first few days of weaning, fective. Continue to price supplements with cost of gain in mind, as inexpensive supplements resulting in subpar gains increase marketing risk due to failure to make contract specifications. Matching production goals, feeding level and supplement ingredients to optimize gain offer the greatest return on investment in retained ownership opportunities.

— Justin Sexten is University of Missouri state extension specialist, beef nutrition. Contact him at sextenj@ missouri.edu.

thus eliminating one more possible stressor on the calves.

In closing, let's make sure we are doing all we can to properly care for calves from conception to consumption. If we do, we can reduce the amount of antibiotics we have to use AND increase consumer confidence in our product.

—Dr. Dave Rethorst is director of outreach for the Beef Cattle Institute at Kansas State University.

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NEXT GENERATION

Communication Counts

Is your farm prepared for the next generation?

Story By Darren Frye for Cattlemen's News

Thinking about bringing another family member into your farming operation is a major decision. You're excited that they want to work in the operation – and they're excited about the prospect of working on the family farm.

Taking a closer look into a few areas first can ensure that the decision and the transition will be the best for all involved – and for your farming operation. Here are a few things to consider before you make the leap.

The first important pieces to consider are: What are the needs of your farming operation? What are the skills that the family member brings? Is there a match?

If you determine that your operation is in need of the skills and talents of that family member, then your thoughts revolve around these ques-

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INDICATIONS

ZACTRAN is indicated for the treatment of bovine respiratory disease (BRD) associated with *Mannheimia haemolytica*, *Pasteurella multocida*, *Histophilus somni* and *Mycoplasma bovis* in beef and non-lactating dairy cattle. ZACTRAN is also indicated for the control of respiratory disease in beef and non-lactating dairy cattle at high risk of developing BRD associated with *Mannheimia haemolytica* and *Pasteurella multocida*.

CONTRAINDICATIONS

As with all drugs, the use of ZACTRAN is contraindicated in animals previously found to be hypersensitive to this drug.

WARNING: FOR USE IN CATTLE ONLY. NOT FOR USE IN HUMANS. KEEP THIS AND ALL DRUGS OUT OF REACH OF CHILDREN. NOT FOR USE IN CHICKENS OR TURKEYS.

The material safety data sheet (MSDS) contains more detailed occupational safety information. To report adverse effects, obtain an MSDS or for assistance, contact Merial at 1-888-637-4251.

RESIDUE WARNINGS: Do not treat cattle within 35 days of slaughter. Because a discard time in milk has not been established, do not use in female dairy cattle 20 months of age or older. A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal.

PRECAUTIONS

The effects of ZACTRAN on bovine reproductive performance, pregnancy, and lactation have not been determined. Subcutaneous injection of ZACTRAN may cause a transient local tissue reaction in some cattle that may result in trim loss of edible tissues at slaughter.

ADVERSE REACTIONS

Transient animal discomfort and mild to moderate injection site swelling may be seen in cattle treated with ZACTRAN.

EFFECTIVENESS

The effectiveness of ZACTRAN for the treatment of BRD associated with *Mannheimia haemolytica, Pasteurella multocida* and *Histophilus somni* was demonstrated in a field study conducted at four geographic locations in the United States. A total of 497 cattle exhibiting clinical signs of BRD were enrolled in the study. Cattle were administered ZACTRAN (6 mg/kg BW) or an equivalent volume of sterile saline as a subcutaneous injection once on Day 0. Cattle were observed daily for clinical signs of BRD and were evaluated for clinical success on Day 10. The percentage of successes in cattle treated with ZACTRAN (58%) was statistically significantly higher (p<0.05) than the percentage of successes in the cattle treated with saline (19%). The effectiveness of ZACTRAN for the treatment of BRD associated with *M. bovis* was demonstrated independently at two U.S. study sites. A total of 502 cattle exhibiting clinical signs of BRD were enrolled in the studies. Cattle were administered ZACTRAN (6 mg/kg BW) or an equivalent volume of sterile saline as a subcutaneous injection once on Day 0. A teach site, the percentage of successes in cattle treated with JACTRAN (6 mg/kg BW) or an equivalent volume of sterile saline as a subcutaneous injection once on Day 0. At each site, the percentage of successes in cattle treated with saline (74.4% vs. 24% [p < 0.001], and 67.4% vs. 46.2% [p = 0.002]). In addition, in the group of calves treated with gamithromycin that were confirmed positive for *M. bovis* (pre-treatment nasopharyngeal swabs), there were more calves at each site (45 of 57 calves, and 5 of 6 calves) classified as successes than as failures.

The effectiveness of ZACTRAN for the control of respiratory disease in cattle at high risk of developing BRD associated with Mannheim*ia haemolytica* and *Pasteurella multocida* was demonstrated in two independent studies conducted in the United States. A total of 467 crossbred beef cattle at high risk of developing BRD were enrolled in the study. ZACTRAN (6 mg/kg BW) or an equivalent volume of sterile saline was administered as a single subcutaneous injection within one day after arrival. Cattle were observed daily for clinical signs of BRD and were evaluated for clinical success on Day 10 post-treatment. In each of the two studies, the percentage of successes in the cattle treated with ZACTRAN (86% and 78%) was statistically significantly higher (p = 0.0019 and p = 0.0016) than the percentage of successes in the cattle treated with saline (36% and 58%).

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tions: What's the best way to do this? How will you bring them into the operation?

Maybe you've talked with others about how family owners were brought into the operation on their farms. That's a great idea – look into the options based on what other families have done.

Still, certain ways to transition might work better for you, your operation and the family member. It can be based on how your operation is set up, the current ownership structure, and the way you want your farm business to run.

Farm families have also found that an in-depth look at the financials of their operation gives them a clearer picture of what they might need to do to bring about a smooth transition. When operators know exactly where their farm is at financially, then they can set up a plan that will work best for everyone involved.

Looking closely at the farm's financials before setting up your plan gives you different options for how to go about it. Then, you can 'stress test' your farm's financials using different potential scenarios to see how those could play out when you bring the family member into the operation.

Maybe the analysis shows you that the farm needs to grow or expand a bit more before you can bring the family member in as an owner. Then, with that goal in mind, you can create a plan to make that happen.

A farm could get into trouble by trying to do this in the reverse order. If you don't have a clear picture of your operation's financials, it's tough to make the call as to whether the farm is financially ready for another family member to become an owner.

Have you been considering bringing another family member in to your operation? Figure out whether there's a good 'fit' with the needs of the farm and their skill set. Then, take a close look at the numbers and run scenarios to help you figure out the best way to bring him or her in.

Sometimes, the desires and passions of the next generation might focus on a particular area of the farm. When that's the case, both generations need to be aware so the operation's transition plan can reflect that reality.

In one family, the daughter returned to work on the farm full-time, while the son has a career off the farm and is unlikely to come back. The older generation has been working with a legacy advisor to help the family navigate the upcoming transition.

The parents and daughter needed to talk about which parts of the operation she'd be interested in running in the future when Dad isn't farming anymore. As they talked, they were surprised to find out that she isn't interested in running the grain portion of the operation. She's passionate about the livestock portion.

It's good the family learned this now, as they have the opportunity to create a plan. They can figure out the future of the grain side of the operation – whether that means transitioning to cash rent, custom farming, or if it means hiring someone to run that side of the business.

The key in all of this is clear, effective communication about the farm's future and transition. It might be helpful to have a third party facilitator, such as a legacy advisor, working alongside your family as you get plans in place.

Find more resources and information on transitioning the farm to the next generation at www.waterstreet.org.

—Darren Frye is President and CEO of Water Street Solutions, a farm consulting firm that helps farmers with the challenges they face in growing and improving their farms – including the challenge of transitioning the farming operation to the next generation. Contact Darren at waterstreet@ waterstreet.org or call (866) 249-2528.

HELPING HANDS

Farm Bill Provisions to Help Farmers Manage Risk

New beginning farmer benefits, other changes to crop insurance provide flexibility to farmers

Story From Our Staff

A griculture Secretary Tom Vilsack recently announced continued progress in implementing provisions of the 2014 Farm Bill that provide new risk management options for farmers and ranchers. These improvements to crop insurance

programs will provide better protection from weather disaster, market volatility and other risk factors to ensure farmers aren't wiped out by events beyond their control.

Vilsack also announced new support for beginning farmers that will make crop insurance more affordable and provide greater support when new farmers experience substantial losses. These announcements build on other recent USDA efforts to support beginning farmers.

"Crop insurance is critical to the ongoing success of today's farmers and ranchers and our agriculture economy. These improvements additional provide flexibility to ensure families do not lose everything due to events beyond their control," said Vilsack. "We're also acting to provide more support to beginning farmers and ranchers so that they can manage their risk effectively. We need to not only encourage new farmers to get into agriculture, we must ensure they're not wiped out in their riskiest initial seasons so they can remain in agriculture for years to come."

The U. S. Department of Agriculture's (USDA) Risk Management Agency (RMA) filed an interim rule with the Federal Register, allowing USDA to move forward with changes to crop insurance provisions. The provisions provide better options for beginning farmers, allow producers to have enterprise units for irrigated and non-irrigated crops, give farmers and ranchers the ability to purchase different levels of coverage for a variety of irrigation practices, provide guidance on conservation compliance, implement protections for native sod and provide adjustments to historical yields following significant disasters.

The Farm Bill authorizes specific coverage benefits for beginning farmers and ranchers starting with the 2015 crop year. The changes announced today exempt new farmers from paying the \$300 administrative fee for catastrophic policies. New farmers' premium support rates will also increase ten percentage points during their first five years of farming. Beginning farmers will also receive a greater yield adjustment when yields are below 60 percent of the applicable transitional yield. These incentives will be available for most insurance plans in the 2015 crop year and all plans by 2016.

Starting in the fall of 2014, producers who till native sod and plant an annual crop on that land will see reductions in their crop insurance benefits during the first four years. Native sod is acreage that has never been tilled, or land that a producer cannot substantiate has ever been tilled for the production of a crop. The provision applies to acreage in all counties in Iowa, Minnesota, Montana, Nebraska, North Dakota and South Dakota that is greater than five acres per policy and is producing annual crops.

More flexibility for irrigated and non-irrigated enterprise units and coverage levels will be available in the spring of 2015. Additional information on implementation of these changes is available at the RMA website, www.rma.usda.gov.

—Source: USDA release. More information is available on the RMA website at www.rma.usda.gov.



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TRENDING NOW

Is There a Place for Cows in the **Future?**

Remember to consider the big picture

Story By Kris Ringwall

Liduction to expand, the economics of the beef cow needs to have a threefold increase in net returns to compete with crop production.

future? The reality of today's agriculture is that it is heavily slanted toward crop production if the land has the potential to be converted to crops.

ike it or not, for beef pro-Like it or not, for beef production to expand, the economics of the beef cow needs to have a threefold increase in net returns to compete with crop production.

Is there a place for cows in the To leave land in hay production, the net return for hay needs to double. These are very unlikable thoughts, but certainly thoughts that will

drive the next wave of young agriculturists.

So is there a place for cows in the future? Yes, but let's visit a bit first about the topic. For cattle or livestock producers, in general, this always has been a difficult question.

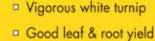
What is the purpose of food? Livestock production has always been a part of farming as a way to use what the family did not want to eat. With that came the need to have cows, horses, chickens, pigs and other livestock. The conversion of the unwanted crops and produce to meat created a more complete package for survival and a better balance at the local level of production.



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For example, milk that would not keep could be fed to the pigs. The pigs had a longer window of harvest, so thus the balance. One also needs to remind oneself that even the household pet was there to help clean up a hardy meal in exchange for some warmth and a day's helping on the farm or ridding the place of unwanted guests.

In today's world, one needs to look at the bigger picture and ask the same questions. Not one particular producer has the capacity to produce all that is needed. However, thanks to modern transportation, those same pieces that were so needed on the homestead can now be parceled out around the neighborhood. Therefore, larger operations have fine-tuned the production science behind the intended foods that need to be marketed, so production efforts have become focused.

These larger operations generally had a foundational family structure that provided wisdom through a connection to the past. Their history included people who lived through the time when balance was achieved through sharing of resources and efficiency so nothing was wasted.

In fact, Ralph Waldo Emerson said it best. "He (the farmer) stands close to nature; he obtains from the earth the bread and the meat. The food which was not, he causes to be." That connection to the earth, soil, bread and meat, plus other food, is as real today as it was when Emerson wrote his quote.

So why the dilemma? Some would quickly say there is no dilemma. However, by merely asking the question, we start the process of acknowledging that something is a awry. The modern, refined approach, at least in the more affluent countries, to the new generation is one of convenience and calculated efficiencies that purchase, measure, sort and process needed inputs into appropriately salable products, including food.

If the assumption that all the purchased inputs always will be available for the growing population models is true, I guess one does not need to be too concerned, so maybe the

CONTINUED ON NEXT PAGE

Agriculture today is heavily rooted in crop production, however, living animals remain a vital part in the life cycle. For beef production to expand, economics call for the cow to have a three-fold increase in net returns to compete with crop production. —Photo by Joann Pipkin

FUTURE COWS FROM PREVIOUS PAGE

mud boots, coveralls and other working paraphernalia can be put to rest. However, what if the assumption is not true and all the needed inputs will not be available forever?

Then the new ways break down and one needs to back up and look for the source of those needed inputs. In the short term, money still seems to be the fix. By increasing one's willingness to pay, those last few remaining pots of inputs can be wrestled away and consumed. However, what happens when those last few remaining pots go empty? Let's hope we are smart enough to not get to that point.

Therefore, we return to our roots and the generations who understood the need for balance in the agricultural system and ask what made those early farms work. Well, there really is no secret. However, great-grandma and greatgrandpa did not have names for all the ingredients, but they understood the need to diversify and have balance in the soil, like Emerson said of the farmer, "The food which was not, he causes to be."

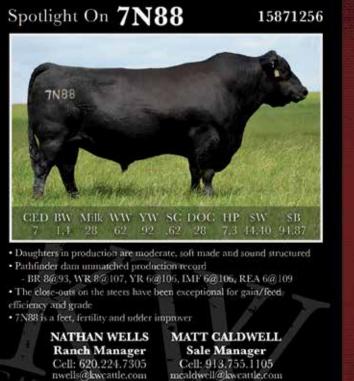
Today, we know more because we have those names and we better understand that the soil is a very large, unfocused mass of living things. Each living thing is doing its part to make sure the pot never goes empty. That seems strange, but in science class, we called that the carbon cycle. Living animals are part of the loop that makes sure the cycle of life does not end.

Cows are part of that cycle, so, yes, cows do have a future.

—Kris Ringwall is a North Dakota State University Extension Service livestock specialist and the Dickinson Research Extension Center director.



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PASTURE PROFITS

Up Your Game with Novel Endophyte Fescue

Rid pastures of toxic fescue for better animal performance

Story By Joann Pipkin, Editor

Missouri farmers can take three big steps to up their game in the pasture. That's according to Dereck Ferguson, North Island Forage Development manager for Agricom in New Zealand. make some of the biggest potential changes in their farming career by switching pastures to novel endophyte fescue, changing to a more rotational style of grazing management and adding white clover to pastures.

We caught up with Ferguson while he visited southern Missouri at the end of June, and he said Missouri farmers can

"Those are three big steps to improving your pastures," Ferguson noted, "and to get-



For Subcutaneous Use In Beef Cattle, Non-Lactating Dairy Cattle And Swine Only Not For Use In Female Dairy Cattle 20 Months Of Age Or Older Or In Calves To Be Processed For Veal

BRIEF SUMMARY

Before using Baytril[®] 100, please consult the product insert, a summary of which follows: CAUTION:

Federal (U.S.A.) law restricts this drug to use by or on the order of a licensed veterinarian. Federal (U.S.A.) law prohibits the extra-label use of this drug in food-producing animals.

PRODUCT DESCRIPTION:

PRODUCT DESCRIPTION: Each mL of Baytril® 100 contains 100 mg of enrofloxacin. Excipients are L-arginine base 200 mg, n-butyl alcohol 30 mg, benzyl alcohol (as a preservative) 20 mg and water for injection g.s.

INDICATIONS:

Cattle - Single-Dose Therapy: Baytril® 100 is indicated for the treatment of bovine respiratory disease (BRD) associated with *Mannheimia haemolytica, Pasteurella multocida, Histophilus somni* and *Mycoplasma bovis* in beef and non-lactating dairy cattle; and for the control of BRD in beef and non-lactating dairy cattle at high risk of developing BRD associated with *M. haemolytica, P. multocida, H. somni* and *M. bovis.*

Cattle - Multiple-Day Therapy: Baytril® 100 is indicated for the treatment of bovine respiratory disease (BRD) associated with *Mannheimia haemolytica, Pasteurella multocida* and *Histophilus somni* in beef and non-lactating dairy cattle. Swine: Baytril® 100 is indicated for the treatment and control of swine respiratory disease (SRD) associated with *Acti*-

Swine: Baytril® 100 is indicated for the treatment and control of swine respiratory disease (SRD) associated with Actinobacillus pleuropneumoniae, Pasteurella multocida, Haemophilus parasuis, Streptococcus suis, Bordetella bronchiseptica and Mycoplasma hyopneumoniae.

RESIDUE WARNINGS:

Cattle: Animals intended for human consumption must not be slaughtered within 28 days from the last treatment. This product is not approved for female dairy cattle 20 months of age or older, including dry dairy cows. Use in these cattle may cause drug residues in milk and/or in calves born to these cows. A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal.

Swine: Animals intended for human consumption must not be slaughtered within 5 days of receiving a singleinjection dose.

HUMAN WARNINGS:

For use in animals only. Keep out of the reach of children. Avoid contact with eyes. In case of contact, immediately flush eyes with copious amounts of water for 15 minutes. In case of dermal contact, wash skin with soap and water. Consult a physician if irritation persists following ocular or dermal exposures. Individuals with a history of hypersensitivity to quinolones should avoid this product. In humans, there is a risk of user photosensitization within a few hours after excessive exposure to quinolones. If excessive accidental exposure occurs, avoid direct sunlight. For customer service or to obtain product information, including a Material Safety Data Sheet, call 1-800-633-3796. For medical emergencies or to report adverse reactions, call 1-800-422-9874.

PRECAUTIONS:

The effects of enrofloxacin on cattle or swine reproductive performance, pregnancy and lactation have not been adequately determined.

The long-term effects on articular joint cartilage have not been determined in pigs above market weight. Subcutaneous injection can cause a transient local tissue reaction that may result in trim loss of edible tissue at slaughter.

Baytril® 100 contains different excipients than other Baytril® products. The safety and efficacy of this formulation in species other than cattle and swine have not been determined.

Quinolone-class drugs should be used with caution in animals with known or suspected Central Nervous System (CNS) disorders. In such animals, quinolones have, in rare instances, been associated with CNS stimulation which may lead to convulsive seizures. Quinolone-class drugs have been shown to produce erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species. See Animal Safety section for additional information. **ADVERSE REACTIONS:**

No adverse reactions were observed during clinical trials.

ANIMAL SAFETY:

In cattle safety studies, clinical signs of depression, incoordination and muscle fasciculation were observed in calves when doses of 15 or 25 mg/kg were administered for 10 to 15 days. Clinical signs of depression, inappetance and incoordination were observed when a dose of 50 mg/kg was administered for 3 days. An injection site study conducted in feeder calves demonstrated that the formulation may induce a transient reaction in the subcutaneous tissue and underlying muscle. In swine safety studies, incidental lameness of short duration was observed in all groups, including the saline-treated controls. Musculoskeletal stiffness was observed following the 15 and 25 mg/kg treatments with clinical signs appearing during the second week of treatment. Clinical signs of lameness improved after treatment ceased and most animals were clinically normal at necropsy. An injection site study conducted in pigs demonstrated that the formulation may induce a transient reaction in the subcutaneous tissue. U.S. Patent No. 5,756,506

November, 2012 GHG071614 Baytril® 100 Baytril® 100 Bayer, the Bayer Cross, and Baytril are registered trademarks of Bayer. NADA 141-068, Approved by FDA Bayer HealthCare LLC, Animal Health Division Shawnee Mission, Kansas 66201 U.S.A. ting more gain out of your cattle."

In New Zealand, Ferguson spends much of his time incorporating similar forages to MaxQ fescue and Durana clover into farming systems. He works with producers on how to graze those forages, how to get maximum live weight gain or milk production from them, how to fertilize them and how to sow them. He also helps farmers troubleshoot any problems they may encounter with those grasses.

"Grazing management is what New Zealand is known for," Ferguson said. "I'm here in the U.S. to assist farmers with grazing management and to help get MaxQ going here, to help producers get the most out of these forages."

Ferguson explained that during his trip this year, farmers in the area of southern Missouri seem quite aware of fescue toxicity issues. The awareness, he says, is actually better than what he encountered in 2013 when he toured eastern Missouri.

"(Farmers) need to probably embrace the MaxQ, the novel endophyte technology and get on board with replacing some of their toxic endophyte, Kentucky 31 pastures," Ferguson said. "The information out there produced by the universities here is quite amazing. It's very compelling as to the increase in live weight gain that can be achieved, the improvement in stock health, breed back times, conception rates with cows. It's really more compelling than the endophyte story back in New Zealand."

Ferguson said the environment here in the U.S. provides a great opportunity. "(I want to) encourage producers here to take that step and make that change, otherwise I think if they do what they've always done, they'll get what they've always gotten. There's money left on the table. You could operate on a completely different plane of performance if you move to that kind of technology."

With about 30 to 40 million acres of tall fescue in the U.S., Ferguson said that's about the same as the entire pasture farming area in New Zealand. "It's generational here, it's been here a long time," he said, noting that people accept the performance they get now, and even some physical things they see like cattle standing in ponds and going under shade all the time.

"A New Zealand farmer would question why that's happening," Ferguson explained. "They aren't used to farming with toxic endophyte tall fescue. They are used to farming with novel endophyte fescue and novel endophyte ryegrass, and they would expect a higher plane of performance."

The big issue, Ferguson said, is getting rid of the endophyte.

He explained that moving to more modern fescue varieties like Jesup and Texoma would call for slight changes in grazing management, but added benefits would come with the removal of the toxic endophyte.

"With a bit of applied grazing management," Ferguson said, "you can actually extract more benefit from the fescue. Adding white clover to the stands would take that even a step further."

Work completed here in the U.S. shows increased gain again from adding white clover to fescue, according to Ferguson. That research resulted in greater animal performance. White clover is also a reliable crude protein feed, he said, and fixes nitrogen, which is also a cost saver.

Ferguson said that even though farming is a lifestyle for many of us, we are still farming for profit. "This needs to make money," he stated.

On this particular trip to the U.S., Ferguson said he's examined what MaxQ fescue costs to establish, what its payback period is, when profit is noted and what would happen if producers just remained status quo.

"There is history with the endophyte here in the U.S.," Ferguson said. "MaxQ is the gold standard for novel endophyte fescue varieties here. You need to have some confidence in the product that it's going to work."

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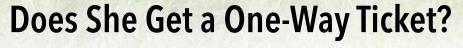
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TRENDING NOW



Weighing the factors for cow culling

Story and Photos By Rebecca Mettler for Cattlemen's News

Gathering cow/calf pairs for weaning often triggers another important event on the farm or ranch — cow culling. Females found to be open or that have other undesirable attributes might find themselves in the group bound for town.

Though culling practices can vary by operation, on average, producers can expect to replace 15 to 20 percent of their herd each year. Making the most logical decisions can encompass many factors with varying degrees of importance. However, one factor usually rises far above the others.

The reproductive status of a female is the most important factor when culling decisions

need to be made, said Jeremy Powell, DVM and animal sciences professor at the University of Arkansas.

"It gets very expensive to keep open cows if they aren't able to calve when they should," said Powell. "It's of the upmost importance."

Kenneth Elbert of Elbert Angus Farms, Pierce City, Missouri, runs 250 head of cattle and adheres to the philosophy that open cows deserve to be culled. Only in special situations will he keep an open cow and transfer her to the next calving season.

"We have a 60-day breeding season," Elbert said. "(The

cow) has to have a good reason for not settling or else she goes to town."

Jaymelynn Farney, Kansas State University Extension's southeast area beef specialist, has a handy tip for producers to keep in mind when culling cows.

"Remember the four O's: old, open, ornery and oddball," Farney said.

It's popular in Farney's area for cattle to be culled around 10 years of age. One benefit is to have a fairly fleshy cow that will generate a decent check. It also gives the producers the ability to bring in replacement females to keep improving and maximizing overall calf returns.

"The reproductive performance and overall weaning weight of the calf starts to decline somewhat and at 10 years old that seems to be the cutoff," Farney said.

She explains that no one wants to keep an open cow and dealing with a high-headed, meantempered cow can be difficult.

Oddball refers to cattle that just don't fit in with the rest of the

herd. Whether that is a cow that consistently calves later in the season or one that doesn't fit in the herd phenotypically.

Following the pregnancy status, other factors include the health, structural soundness, feet and legs and udder issues. In Powell's opinion, genetics is not as important.

Powell said other questions producers might ask focus on the wear pattern of the cow's teeth and how old she is.

The wear pattern on her teeth as well as her structural soundness will affect her ability to glean forage from a pasture. In turn, that could affect her ability to maintain weight and good body condition. Lower body condition scores are known to have a negative impact on fertility, according to Powell.

Keeping adequate records and examining the cow's "batting average" over the last several years can greatly assist producers, Powell said. Lower weaning weights over time coupled with a lameness issue or bad udder would make an individual a candidate for culling.

CONTINUED ON PAGE 23

Pierce City cattleman Kenny Elbert maintains a 60-day breeding season on his operation. That way, he says, the cow has to have a good reason for not settling, otherwise she's a prime candidate to be culled. Keeping track of the profitability of his cows also helps him make culling decisions.



Considerations When Optimizing Saleable Output

Setting an end-point management strategy. Short feeder-cattle supplies and varying feed prices contribute to a dynamic beef business, which is why beef producers should be intentional about setting an end-point management strategy to optimize saleable output.

Nathan Pyatt, Ph.D., Elanco beef technical consultant, keeps his strategy development recommendations simple, "Begin with the end in mind."

Pyatt suggests producers think about end-point management from three aspects:

- 1. Enhancing the animals' natural biology
- Managing feed and growthenhancing technologies
- 3. Choosing optimum marketing methods

"Cattle feeders should be targeting days on feed and final weight, yet position themselves to capitalize on profitenhancing opportunities," says Pyatt.

D.J. Jordon, Ph.D., consulting nutritionist with Cattlemen's Nutrition Services, helps his clients do just that.

"Many of our customers work with consulting veterinarians to develop vaccination and antibiotic programs that help lay the groundwork to optimize gain," says Jordon. "Then, depending on how cattle might be sold, we consider how aggressive to be on implants, and possibly utilizing a beta-agonist to help animals be more efficient at the end of the feeding period."

Managing days on feed and carcass weights. When managing to an optimum end-point, Pyatt advises feeders to continually assess premiums and discounts for carcass and grid marketing methods, and consider the incremental costs of feeding to heavier weights.

Benchmark[®] data suggests* that feeding cattle ten days beyond their target days on feed may reduce average daily gain 0.06 lbs/day and feed-to-gain by 0.18 units.

"Feeding steers beyond 1,400 lbs can be costly. Every 50 lbs adds 10 percent more heavyweight carcass discounts and 6.5 percent more yield grade 4 discounts. That's worth zeroing in on," says Pyatt citing Benchmark.*

End-point management for stocker

cattle. Stocker operators also have tools to optimize saleable output. When feeder prices are high, every pound counts in potential profitability.

Pyatt suggests, "To optimize saleable weight, it's key to minimize morbidity and mortality. Proven protocols like vaccines and ionophores are beneficial tools, and adding an implant can help deliver additional pounds."

Jordon says implanting stocker cattle helps with lean muscle growth without negatively impacting feedyard performance. "In my opinion, it's a mistake not to utilize implants to help increase final weight in the stocker phase," he says.

Measuring progress. In addition to the strategic decisions made, measuring progress helps refine the strategy, says Jordon. "I'd suggest stocker operators and feeders look at closeouts and critically evaluate how cattle performed. In any production segment, some information on the subsequent performance of your cattle in the feedyard and/or the packing house can give you guidance to help you be even more successful."

Jordon also mentions that production databases, like Elanco's Benchmark database, are resources for cattle feeders to identify opportunities and measure the success of their strategy.

"Our goal is to meet customer needs, including profit-enhancing data analysis with the Benchmark database, helping customers manage technologies and continuing to bring new product innovations to the industry," says Pyatt.



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^{*}A Benchmark analysis of 500-899 lb-steer performance and carcass data was evaluated for animals closed between January 2008 and June 2013 in the Midwest and North Plains regions.

Weigh 'Em Up

Weaning time: All directions lead to the same goal

Story By Rebecca Mettler for Cattlemen's News

Though there are a variety of ways to wean calves, cow/ calf producers should always share the common goal of reducing weaning-related stress. Selecting a weaning strategy that reduces calf stress can equate to an easier transition during the most stressful time in the calf's life.

For Terry Potts, Potts Farms of Jerico Springs, Missouri, a calm disposition sets the stage for a smoother weaning process. Potts runs 200 head of crossbred Angus females with both a spring and fall herd. That means he has two rounds of weaning to get through each year when the calves reach seven to eight months of age.

"The pen that we hold them in is a small enough space that (the calves) have to become accustomed to us walking around," Potts said.

Holding the calves in tight quarters provides the environment for the calves to become gentle, and according to Potts, if done right, the gentleness can last the entire life of the calf.

The proper disposition is especially important for the heifers because Potts is an annual consignor to the Show-Me-Select Replacement Heifer Sale at Joplin Regional Stockyards (JRS). "The replacements have to be of the right nature that when buyers walk up, they want to take them home," Potts said.

The calves are held in the smaller pen for an average of seven to 10 days depending on the group and the calves' dispositions.

"We wait 'til they are firmly broke before we go to the next size pens," Potts said. "If I turn them out too quick then I can never go back."

During that time, the calves are hand fed a ration with added molasses to get them to start eating, Potts said. He also mentioned that he and his family walk at the perimeter of the pen to ease them to the bunks and to observe the cattle.

Working with a vaccination schedule that provides protection for newly weaned calves is imperative. Often, a stressed calf can turn quickly into a sick calf.

"Having the first round of vaccine at three months of ages pretty much sets up the calves' immune systems for the vaccinations at weaning so they will perform better," Potts said.

Earl Ward, northeast area beef specialist with Oklahoma State University Extension, recommends a wean-vac program such as the one administered by JRS or others such as MFA Health Track or Oklahoma Quality Beef Network.

Potts has found a method of weaning that works well for his operation. Getting the right strategy can take time, and according to Ward, might not be the same method year after year.

"What I would advise anybody to do, with all weaning strategies, is to put a pencil to it. What worked last year might not be the most economical this year," Ward said.

Below are some of the common weaning methods seen on today's cattle operations.

Fenceline Weaning

"I highly recommend fenceline weaning," Ward said.

Fenceline weaning provides cows and calves with nose-tonose contact during the first stages of the weaning process. Calves are placed in one pasture with their mothers in the adjacent pasture. Naturally, producers want to make sure a sturdy fence is separating the two groups.

Ward says that fenceline weaning makes life easier for the animals and will help producers financially in the long run. Calves tend to bawl less as he mentions that bawling is an indication of stress. Calves should also gain better in familiar surroundings with their dams close.

Early Weaning

When forage availably is limited, early weaning can be an economical option for producers, according to Ward.

Potts has utilized early weaning on his first-calf heifers because they were still trying to grow and raise a calf. It also takes a heifer longer to recover from a hot, dry summer.

Extended Weaning

Producers who will utilize extended weaning will leave the calves on the dams up to an extra two months after the typical seven- to eight-month weaning range to add extra weight on the calves.

Ward said that extended weaning would work in years such as this one where there is an abundant forage supply.

"Only do it if (the cows and calves) have access to forage. If it's marginal, pull the calves off to save forage for the cows," Ward said. "We don't want to drop the body condition of the cows."

2-Step Weaning

The 2-step weaning method is gaining attention in the cow/ calf sector, noted Ward. An anti-sucking device, or nose-flap as he calls it, is placed into the calf's nose to prevent sucking. Thus, the calf is first weaned from milk while still in the dam's presence. The calves are later separated and weaned from the attachment to the dam.

"It does have increased labor costs; you have to get the calves up an extra time to put the nose flaps in," Ward said. "But the people who have been using them like them pretty well."

Off the Starting Block

Bunk-breaking takes time, attention

Story By Rebecca Mettler for Cattlemen's News

The old adage goes, "You can lead a horse to water, but you can't make it drink." For freshly weaned calves, entirely naïve to feed bunks and waterers, that saying can be applicable. Knowledge and a little patience can go a long way when bunk-breaking calves.

It can take up to a week to bunk break calves if they are coming straight off pasture with no experience eating feed out of a trough. That's one of the first challenges they will face, according to Logan Wallace, Howell County livestock specialist with the University of Missouri Extension. Terry Potts of Potts Farms in Jerico Springs, Missouri, weans roughly 200 head of calves a year. He says that it takes his calves about two to three days to become accustomed to eating out of a bunk.

Potts places his newly weaned calves in a small holding pen for the first seven to 10 days to make the process easier.

Placement of the feeders and waterers is very important during the initial stages of weaning. Naturally, calves will walk the perimeter of the fence. Because of the activity toward the fenceline, placing a few of the bunks along the perimeter of the fence is helpful. "Eventually, (the calves) will find themselves running into the bunks," Wallace said.

Producers typically don't want waterers to overflow, however, the sound of running water can attract a calf's attention when calves are new to drinking from automatic waterers.

"That can be especially hard with ball waterers," Wallace said. "Keep the balls pressed down and the flaps up (when using covered waterers)."

Providing adequate bunk space is also important. Both Wallace and Potts agree on 18 inches of bunk space for calves.

As for waterers, Potts suggests having plenty of space. His weaning facility is equipped with a 14-foot long open water tank with enough space for his calves to have access to water at the same time.

From a management stand-

point, Wallace said that producers might want to feed calves twice a day during the initial weaning period.

"It gets you out there to watch the calves to see which ones are eating and others who have health issues," Wallace said. "Twice a day may help keep a little bit better eye on them."

In the beginning, Wallace suggests feeding long-stem grass hay in the feed bunks. This works because the hay is a familiar source of nourishment for them and gets them to check out the bunks.

Starting calves out slowly on a palatable diet is essential during the first stages of feeding. The ration should be energydense and high in protein.

A ration sweetened with molasses is what Potts uses to start calves. He will gradually reduce the amount of molasses once the calves get accustomed to the feed.

Wallace recommends

starting out feeding 1 percent body weight of feed and hay for the first seven to 10 days. Then, working up a pound of feed every three days until desired consumption is met.

"If dry-lotting the calves the amount of feed should be two to three percent body weight in a total ration and then moved over to a grain diet if that is the plan," Wallace said.

Calves that are headed to high quality fall pasture could be feed only one to 1 ½ percent of their body weight. Calves should be placed on pasture after they have become accustomed to eating from the bunk and are consuming the proper amount of feed.

Once on feed and out to pasture, Potts will give his steers five to seven pounds of ration, depending on the year and how hard he wants to push the calves.

"I know some producers will creep feed right before weaning," Wallace said, noting producers will need to pencil that out to determine if it is beneficial.

Potts said that sometimes he feeds cows grain and therefore calves have been exposed to feed and a bunk, but that exposure is limited. He normally relies on the human interaction of walking through the pasture to ease the calves toward the bunks.

"Occasionally, we have brought in cull cows so they have assisted in some of the weaning," Potts said. "Normally there wouldn't be any adult cattle, but it does help with some bunches."

Some producers might not realize it, but disposition can play a role in the weaning process and the calf's ability to adjust. Potts has strict selection criteria for disposition for his cows, natural service bulls and AI sires.

Before and after weaning, Potts along with his father Don, and his children Jacob and Shanae, provide the calves with ample amounts of human interaction to further calm their dispositions.

"If you have good-natured sires it makes a huge amount of difference in the ability of the calves to gain," he said.



ECONOMIC INDICATORS

Soaring to New Heights

Beef price records continue; pork retail prices rising

Story From University of Missouri Cooperative Media Group

The situation for cattle producers is outstanding. That was the message University of Missouri Extension agricultural economist Ron Plain delivered during the 2014 Summer AgMarketing Outlook Conference. Meanwhile, the cost of hog production has dropped as the price of corn has come down. Plain stated breakeven on a live-weight basis in June was \$56 per hundredweight. With record corn production expected, breakeven prices could move lower.

"We have record cattle prices by big margins," Plain said.

Like beef, pork retail prices



"Each of the last four months have set new records and you can see a very strong upward trend."

The number of cattle slaughtered is 5.7 percent lower than last year. Plain said the drop in cow and heifer slaughter has tightened up the beef supply, driving up prices. With high feeder cattle prices and good pastures, producers are now looking to increase the breeding herd, which eventually will bring prices down.

"The more cows we keep on the farm and the more heifers we save for breeding, the faster we will turn this cattle cycle," Plain noted. "But we are talking about cattle. It takes a long time to change the breeding herd and turn that into more calves and more slaughter."

Estimated net return on cowcalf production is \$350. Plain explained it is an outstanding time to own cattle and expects that to last for some time. have been setting new records for the past several months, breaking \$4 per pound on average in May.

Slaughter numbers for hogs will also be lower. Plain said the driving factor is porcine epidemic diarrhea virus, which has killed around 7 million pigs.

Plain noted profitability has been very good in 2014 and he expects more than \$100 per head profit in July and August. Based on the futures market for corn, bean meal and hogs, Plain said hogs should be profitable each month through the end of 2015.

Audio recordings and handouts from the conference are available for download at http://agebb.missouri.edu/ mkt/teleconf.

—Source: University of Missouri Cooperative Media Group.

Corn, Bean Prices to Drop

Long waited relief comes to livestock producers

Story From University of Missouri Cooperative Media Group

The supply of corn is outracing the demand.

University of Missouri Extension agricultural economist

for soybean production, so it's too soon to tell how this year's crop will be. The other concern is weather in South America.



David Reinbott told the 2014 Summer AgMarketing Outlook Conference that prices are likely to remain low, with projected record global corn crops. Ending stocks of corn are projected to be 190 million metric tons worldwide.

"I think that is really going to keep the lid on corn prices unless we see some production problems either in South America or China," Reinbott said. "We've got fairly good demand, but there is a lot of corn on the supply side."

If corn prices rally on the futures market, farmers should start locking in prices, Reinbott stated.

"If we see a bump back above \$4, I would definitely price some corn, especially that grain you can't store," he noted. "We're probably going to trend this market lower, with December down at \$3.50 or possibly \$3.60."

Soybean acres are up about 3.3 million, according to US-DA's June report. Reinbott said weather in July has been great for soybeans, but notes that August is the key month "You could build a very bearish scenario for all crops if South America has another big soybean crop on top of the big soybean crop it had this year," Reinbott said. "It could really push these soybean prices quite a bit lower."

As with corn, demand for soybeans is going up, but not as fast as supply or production. With the potential for a big crop, farmers should be making some sales now, especially with any kind of rally in the \$11 range, Reinbott noted.

"The next level of support on the market is around \$9, and there has been some talk about prices dipping below \$8," Reinbott explained. "If I was a farmer, I'd be taking advantage and making some sales now. It probably wouldn't be a bad idea."

Audio recordings and handouts from the conference are available for download at http://agebb.missouri.edu/ mkt/teleconf/.

—Source: University of Missouri Cooperative Media Group.

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BUSINESS BEAT

Larson Farm & Lawn Expands

Dealer adds Anderson, Missouri, to its locations

Story From Larson Farm & Lawn

Larson Farm and Lawn Dopened their doors in 1999. Beginning with a location in Rogersville and Nixa, Missouri, the roots were planted.

These roots have proven strong, allowing the company to continue to grow over the last 15 years. Larson Farm and Lawn began their expansion in 2003 with the purchase of "Stubblefied Equipment in Alton". In 2007 "Crown Equipment" of West Plains, Missouri was purchased and shortly after the Alton location consolidated with West Plains.

Also in 2007 their location Harrison, Arkansas was purchased. . In 2008 The Harrison location was moved to downtown Bellefonte, Arkansas, about 5 miles south of Harrison. In 2009 Freistatt, Missouri formally "Schoen Equipment" was added to the family. This addition allowed Larson Farm and Lawn access to the large AG market. On July 15, 2014 another location as added in Anderson, Missouri, formally Murphy Farm and Lawn. This addition will add to their "Area Responsibility". of North West Arkansas, extreme eastern counties in Oklahoma and Southwest Missouri will be added.

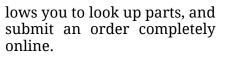
Larson Farm and Lawn prides themselves on exceptional service. They are a one stop shop for your equipment needs. Whether a customer is looking for parts, sales or service for their John Deere or any make equipment from lawn mower to combine, Larson Farm and Lawn has them covered. Their dedication to service doesn't stop there, though. Larson Farm and Lawn also offers thing

such as extended warranty for new equipment, maintenance plans on all equipment and insurance for all equipment (underwritten by Sentry Insurance).

Taking care of the customer is the primary concern at Larson Farm and Lawn. One thing that makes this easy is the dedication of Larson Farm and Lawn employees. Many of the employees have been with Larson Farm and Lawn for over 10 years. When you walk in the doors at any of the six locations you will see many familiar faces. As Lar- lows you to look up parts, and son Farm and Lawn grows vou will also be introduced to some new ones.

Larson Farm and Lawn is pleased to offer not only a complete line of John Deere lawn and farm equipment, but also STIHL hand held, and Honda Power Equipment. On the Agriculture side they offer lines like Ogden rakes, Roto-Mix mixers, J& M grain carts, and Schaben sprayers.

The parts department offers discounts for early orders of net wrap and special financing throughout the year. There are also programs to offer parts cabinets for the customer to keep filled with parts where it's convenient for them, helping to reduce down time. John Deere offers parts look up that the customer can do at home. JDParts al-



The service Departments at Larson Farm and Lawn offer service on both Deere and non-Deere equipment. They have shops that are suitable from Lawn Equipment all the way to large Ag tractors and combines. Their technicians maintain training throughout the year to make sure that they can fix what is broken.

Larson Farm and Lawn stays on the forefront of training where all employees are concerned. Throughout the year John Deere offers off site trainings on both new and current equipment. Larson Farm and Lawn is happy to send their professionals where ever they need to go. This training helps the sales professionals stay abreast of changes that are

coming out in the industry.

Rest assured that if you walk through the doors at Larson Farm and Lawn you will be greeted by people that care about you issues, and are ready to help. All 6 locations are growing and improving to cover the needs of their customers. Larson Farm and Lawn continually trains and invest in their employees and work. Their work represents Larson Farm and Lawn as well as John Deere. It is their desire to do the best they can to show integrity and earn your trust.

Larson Farm and Lawn's mission is simple:

• Listen to our cusemployees tomers, and suppliers to ensure quality service through a proactive process of continuous improvement and employee training.

• Excel in a timely delivery of value added goods and service

• Strive to go from being "GOOD" to being "GREAT"



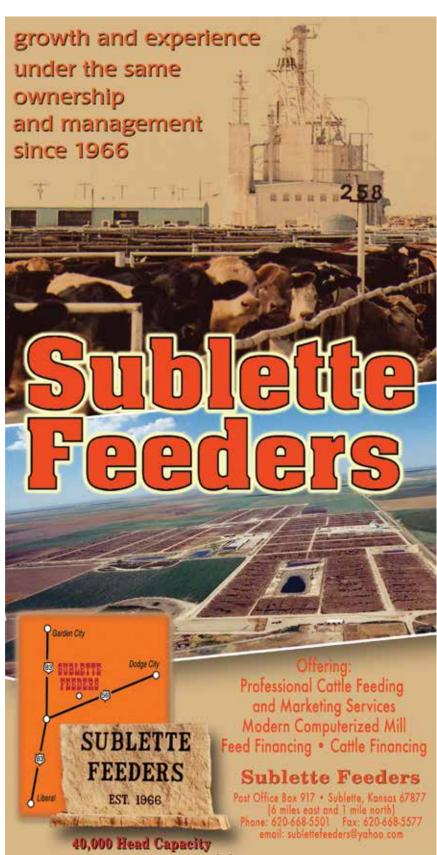
Don't Forget the Cows

Low-stress weaning meets cow health

Story By Beth Walker for Cattlemen's News

Adoldrums of summer, many of you are like my husband, making sure there is enough hay to get cows through the winter. Perhaps we should revisit our red toolbox and think about cow health. At about this time, if you have a pasture full of fescue, you may want to consider the energy your cattle are receiving. If you pasture is predominantly fescue, your cattle might not be receiving the energy they need, especially

s we make our way into the if they have a calf at side or are heading into the third trimester of pregnancy for fall calving. Cattle folks tend to wean their calves while the cow is pregnant with next year's income. Basically, many of our cattle are nursing and are pregnant with a considerable part of our farm income. We always think about the value of our bull, but the value of these cows are just as, if not more, important than the value of the bull.



Joe Scott, Manager, 620-675-8239 • Brad Shotton, Assistant Manager, 620-675-8474



Earlier this summer, right when Southwest Missouri had its first heat wave and temperatures got into the mid 90's, we weaned calves. Then, the unthinkable happened—our air conditioner went out. Our house has many windows so we were able to stay in the 80's in the house and it got to tolerable at night as long as all the fans were on. We awoke promptly at 5:30 a.m. every morning thanks to Ralph the cat and the two pair of Mockingbirds that attempted to protect their nests against a cat that was simply sitting on the windowsill waiting for his breakfast.

What didn't wake us up were bawling calves and stressed pregnant mothers. Even though we had weaned the calves, both mommas and babies seemed basically content. No undue stress on the calves and the mommas seemed relieved to be rid of them. For the past several years, we have employed lowstress weaning and have been pleased with the results. About a week or two before we plan to wean, all cows and calves are brought up and we apply a nose tag/weaner that prevents a calf from nursing. This starts to break the cow-calf bond. After a week or so, we get the herd up again and remove the tags from the calves. Tags can be used again so they are cleaned and stored. Cows go into one pasture and the calves into another - usually one that has the best grass. We go ahead and employ fenceline weaning at this time and end up doing a 2-stage approach to weaning.

Now, back to my air conditioning issues. Our weaned calves were right behind the house. Had we not done weaning in this method, I feel confident we would have heard the calves and cows bawling through the night, but we didn't. By the next morning, after they finished their morning meal of grass, most calves were in the shade on the opposite side of the pasture from their mommas. The mommas were grazing as well. I think the cows were relieved to be shed of the calves.

Most research discusses the results of low-stress weaning on the health of the calves, but cows are stressed, too, and cortisol (the notorious stress hormone) increases during the weaning process. While the cows might not be as stressed as the calves, as part of whole herd health management, cow stress levels should be taken into consideration.

As summer progresses, the energy levels of the forages start to decline. We know that the nutrient content of fescue in our "fescue desert" has dropped by now, and unless you have a mixed pasture with some warm season grasses, you might want to start supplementing your cattle. This is especially true if you do fall calving. Supplementing can come in a variety of forms. One example comes in the form of vinegar. Yes, vinegar. Apple cider vinegar is an option or you can choose the more conventional energy/protein tub.

While many folks think that protein is the limiting nutrient, energy is actually much more important to maintaining a healthy animal than protein. Once fescue becomes dormant, its energy levels will decline; hence the reason you might need to supplement with a bit of energy, especially if you have some fall calving cows.

You will also want to consider vitamins and minerals. We have continued to experiment with different mineral sources, and I still don't think we are in love or hate with any of them. Flies might be an issue, and a plethora of treatments to help decrease the stress of flies exist from genetically selecting animals that are more "fly-free" than others to using apple cider vinegar (anecdotal evidence) or the more scientifically proven option, insecticides.

Other items to be watching are certainly fescue foot, noxious weeds and hardware disease. The most important thing to do, though, in my opinion, is just watch your cows. Know what they look like when they are healthy so you know what they look like when perhaps they are on the verge of getting sick and losing condition due to nutritional stressors.

-Beth Walker is associate professor of agriculture at Missouri State University.

CULLING COWS FROM PAGE 16

"In my mind, it makes the decision much easier with herd records," Powell said. "If she's below average for several years, it gives you more insight and makes for a better decision on culling."

Even if the female meets the requirements outlined above, that doesn't automatically mean she's staying on the farm. Powell said producers must think about how the cow has performed with the resources on an individual's operation.

"She may be a great cow when she's in the correct situationwith an abundant supply of resources," Powell said. "However, if her genetic potential is too high for a specific environment with limited forage, she may not be a good fit for the operation."

Elbert knows exactly which cows are profitable in his operation, which ones can survive in what he dubs the "fescue climate" on his Southwest Missouri farm.

"The cows have to work on what we have and sometimes that means they aren't exactly the top-producing cows," Elbert said.

Unfortunately, sometimes culling cows has nothing to do with cattle performance. Forage availability during drought conditions can drastically increase the culling rate.

Elbert was lucky to have enough stored hay to make it through the tough years of 2011 and 2012. And because of that hay supply, he didn't have to cull any more than normal. In 2012, Elbert was also more willing to give good cows a "free pass" if she came up open.

"It's hard for us to take and sell a cow that is a good producer just because the environment was extreme one year," Elbert said.

Luckily, the summer weather pattern of 2014 is one that producers can live with.

"This year, at least in Northwest Arkansas, we have favorable pasture conditions and forage availability," Powell said. "We don't have the need to cull very deeply."

MANAGEMENT MATTERS

Genetics, Environment Impact Hair Shedding in Cattle

Lower rate of gain, reduced pregnancy rates directly affected

Story From Our Staff

Summertime in the Ozarks brings with it rising heat and humidity. That can spell trouble for beef cattle that still haven't shed their winter coats, according to one livestock industry expert.

According to Eldon Cole, a livestock specialist with University of Missouri Extension,

hair shedding is similar to most other traits in cattle influenced by both genetics and the environment.

"In fescue country where the wild type of endophyte is prevalent, it receives a lot of blame for long, heavy haircoats," said Cole. "We're learning more about cattle's genetic relation to long hair and heat stress. When you put it all together, the slow shedders result in lower rates of gain and reduced pregnancy rates."

What can be done to get cattle to shed earlier, before 80-degree weather arrives?

"You can be more observant and make an attempt to cull the slow shedders," Cole said. "However, if a slow shedder breeds back promptly and raises a good calf, hold on to her."

When selecting a sire, either for natural service or artificial insemination, consider the

CONTINUED ON NEXT PAGE



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Genetics and the environment play key roles in the ability cattle have to shed their hair coats. White clover and other legumes help dilute the toxins in tall fescue and might have actually helped some cattle shed hair earlier this year despite a harsh winter and late spring. —Photo by Joann Pipkin



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Cooperia punctata – Adults and L ₄	
Cooperia surnabada – Adults and L	Grubs
Haemonchus placei — Adults	Hypoderma bovis
Oesophagostomum radiatum – Adults	
<i>Ostertagia lyrata</i> — Adults	Mites
Ostertagia ostertagi – Adults, L ₄ , and inhibited L ₄	Sarcoptes scabiei var. bovis
Trichostrongylus axei – Adults and L ₄	
Trichostrongylus colubriformis — Adults	
Parasites	Durations of Persistent Effectiveness
Gastrointestinal Roundworms	
dastronnestinai kounuwonnis	
Cooperia oncophora	100 days
	100 days 100 days
Cooperia oncophora Cooperia punctata	,
Cooperia oncophora	100 days
Cooperia oncophora Cooperia punctata Haemonchus placei	100 days 120 days
Cooperia oncophora Cooperia punctata Haemonchus placei Oesophagostomum radiatum	100 days 120 days 120 days

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species. When to Treat Cattle with Grubs

LONGRANGE effectively controls all stages of cattle grubs. However, proper timing of treatment is important. For the most effective results, cattle should be treated as soon as possible after the end of the heel fly (warble fly) season.

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Not for use in cattle managed in feedlots or under intensive rotational grazing because the environmental impact has not been evaluated for these scenarios.

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conducted in males intended for breeding or actively breeding. Not for use in calves less than 3 months of age because safety testing has not been conducted in calves less than 3 months of age.

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SHEDDING FROM PREVIOUS PAGE

haircoat. Cole said significant differences in haircoats exist and some AI companies rate that in their catalog.

"Bulls that shed slowly tend to be lazy in the breeding pasture in hot weather. In addition, they could have lower quality semen during and after the heat stress period. Recent work shows embryo quality and development could be affected by stress brought on by fescue toxins and high-body temperature," said Cole.

According to Cole, these are also reasons why, under most situations, the spring-early summer breeding season should end in early July in hot fescue country.

Shedding Early

In 2014, a number of cattle producers have asked why their cattle have shed earlier. Some possible reasons could be that in the last few years, selection pressure has eliminated some slow shedders. Perhaps sire selection is starting to reap the benefits of easier shedding.

"From the environmental side, we had an unusually cold and snowy winter, which could have resulted in more hair on the cattle, so it doesn't make sense they would shed easier. The spring seemed to come slower this year which again is opposite to the logical thinking about shedding," said Cole. In addition, southwest Missouri fields have seen a bumper crop of white clover this year. White clover and other legumes help dilute the fescue toxin so Cole said this could be part of the answer.

"Little by little, we've seen a loss of pure fescue in many pastures. This loss of pure pasture may be why the legumes are flourishing since there is less competition from the fescue. Naturally, as the fescue stand thins, cattle consume less of the toxin, ergovaline," said Cole.

Many ideas have been proposed as to how to eliminate or minimize the fescue toxin stress problem. Dilution with a non-toxic forage or supplement helps. Dilution can be done with hay, concentrated feed like dried distillers grains, corn gluten feed or a commercially prepared feed. So far, Cole said no miracle additive that combats fescue toxicity exists.

"I have some farmers who have resorted to clipping long hair off their cattle. This may be a whole-body clip, but more than likely they clip only along the topline, neck and shoulder area. Sometimes this helps, and other times it doesn't show much benefit," said Cole.

—Source: University of Missouri Extension Release.

WARNINGS AND PRECAUTIONS

ECONOMIC INDICATORS

Momentum Remains Strong for U.S. Beef Exports

Mexican exports up 35 percent

Story from MyBeefCheckoff.com

T.S. beef exports maintained their strong momentum in May, with export volumes exceeding last year's totals and value increasing by double digits, according to statistics released by USDA and compiled by the U.S. Meat Export Federation (USMEF), contractor to the Beef Checkoff Program.

Beef exports in May were up 5 percent in volume (227 mil-

lion pounds) and 15 percent in value (\$589 million). For the first five months of 2014, export volume was up 9 percent to 1.06 billion pounds and value increased 17 percent to \$2.64 billion.

Beef exports largest of the year to Hong Kong, Mexico

In mid-June, U.S. beef gained full access to Hong Kong, adding key products such as ground beef and processed meats. But even with some restrictions still in place, May exports to Hong Kong surged more than 80 percent from a year ago to 28.6 million pounds. On a value basis, exports more than doubled to \$95.2 million.

Other May highlights for beef exports:

• Exports to Mexico increased 35 percent to 45.2 million pounds, the largest monthly total of the year, while value increased 52 percent to \$93.5 million. This pushed the January-May total to 96,281 mt (+34 percent), valued at \$452.5 million (+49 percent).

• Strong momentum continued for exports to Korea, which increased 26 percent in volume (20.4 million pounds) and 48 percent in value (\$58.5 million). Korea's five-month value total was nearly one-third higher than a year ago (\$314.7 million, +32 percent) as retail outlets and restaurants have shown renewed interest in featuring U.S. beef. Beef muscle cut value (\$299.8 million, +41 percent) accelerated at an even more rapid pace.

• Exports to Taiwan continued to bounce back from a slow first quarter, increasing 25 percent in volume (7.5 million pounds) and 16 percent in value (\$25.7 million). Demand for chilled U.S. beef remains strong in Taiwan, even as frozen exports face increased competition from Australia (due to large, drought-induced supplies) and New Zealand (which has a new free trade agreement with Taiwan).

• Japan's results slowed from a year ago, but this was in comparison to very large totals from May 2013. For the first five months of the year, exports to Japan are fairly steady with last year's strong pace in both volume (192.4 million pounds, -1 percent) and value (\$547.9 million, +1 percent).

Beef export value per head of fed slaughter set another new record in May at \$279.39, up \$47.72 from a year ago. The ratio of U.S. production exported was 11 percent for muscle cuts and 14 percent for muscle cuts and variety meat combined – up from 10 percent and 13 percent, respectively, from a year ago. 🍸

—Source: Release from MyBeefCheckoff.com.





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Dependent upon parasite species, as referenced in FOI summary and LONGRANGE

⁴ DORGRANGE product label.
 ² LONGRANGE product label.
 ³ Dobson RJ, Lejambre L, Gill J. Management of anthelmintic resistance: inheritance of resistance and selection with persistent drugs. Int J Parasitol. 1996;26(8/9):993-1000.
 ⁴ Toutain PL, Upson DW, Terhune TM, McKenzie ME. Comparative pharmacokinetics of doramectin and ivermectin in cattle. Vet Parasitol. 1997;72:3-8.

Low-Cost Strategies for Heifer Development

Incorporate grazing of crop residues to develop heifers

Story By Troy Smith

There is cause for concern over low U.S cattle numbers. Cattle feeders are really concerned about the diminished supply of feeder cattle. That, of course, is a result of having too few cows. Rick Funston thinks the nation's cow inventory needs to be rebuilt, but retention of more

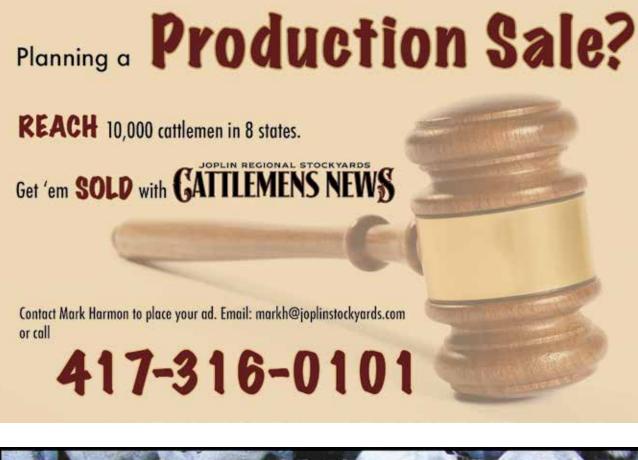
There is cause for concern over low U.S cattle numbers. Cattle feeders are really heifers for breeding can be expensive for cow-calf producers.

> "If there is an alternative, why would we want to lock up our heifers and develop them on the kind of feed they will never see after they enter the breeding herd?" asked

NU reproductive physiologist Rick Funston. "It doesn't make much sense."

A reproductive physiologist at the University of Nebraska (NU), much of Funston's research has focused on wavs to lower costs associated with developing replacement heifers. He talked about practical and economical heifer-development strategies during the 2014 Beef Improvement Federation Annual Meeting & Research Symposium June 18-21 in Lincoln, Nebraska. Funston favors low-cost, forage-based development systems over growing breeding heifers in confinement.

Funston said he and his col-





leagues are working on heifer-development systems that incorporate grazing of crop residues — cornstalks in particular. Abundant in Nebraska and other grain-producing states, Funston called cornstalks "the cheapest feed we've got." Corn residues also are representative of the type of low-quality forages that comprise winter diets for mature cows.

"I think we do a heifer a huge disservice when we lock her up and feed her to gain 3 or 4 pounds per day," Funston stated.

According to Funston, a heifer never has to gain more than 1½ lb. per day during the winter development period. Targeting modest gains from grazed cornstalks and supplemental protein can help contain feed costs. An increased rate of gain after going to green grass in the spring should put heifers in good shape to breed.

"You know that compensatory gain thing that feeders of yearling cattle have known about for years? Well, it works in (replacement) heifers, too," said Funston.

In Funston's opinion, targeting heifer-breeding weights that approximate 50 to 55 percent of mature weight is optimum. He sees advantages in having heifers that are managed more like stocker cattle and are lighter by design. For one thing, the percentage of heifers that do not breed during a defined breeding season might be higher. However, Funston's research team has achieved artificial insemination pregnancy rates of up to 86 percent with heifers developed to lighter weights in lowinput systems.

Funston said heifers found open probably shouldn't be cows anyway. Adaptability to the production environment is determined early, and open heifers should still be profitable when sold as yearling feeder cattle.

—Troy Smith is field editor for the Angus Journal. This article is reprinted with permission from www.BIFconference.com, the Angus Journal's online coverage site of the 2014 Beef Improvement Federation Research Symposium and Annual Meeting.

Profitable Cow Herds

Economic considerations for profitable cow herds

Story By Kasey Brown

66Most people don't get into the cattle business because they have a passion for accounting, but it is still needed," observed Clay Mathis, director and endowed chair of the King Ranch Institute for Ranch Management. He addressed the 2014 Beef Improvement Federation (BIF) Annual Meeting and Research Symposium in Lincoln, Nebraska, June 18-21.

Mathis emphasized that profit-minded managers should seek practical, high-leverage interventions to the production system. They focus on optimizing weaning rate, weaning weight, feed, labor and depreciation.

All managers need a clear view of the operation's financial position, and excellent managers make strategic changes that have long-standing systematic benefit to the operation, he said.

He noted that revenue increases with heavier calves and improved reproduction performance. Expenses have increased across the board during the past 10 years, but he emphasized the "Big Three" expenses: labor, depreciation and feed.

"All decisions should be conscious of how it will affect these three costs. The most profitable operations work hard to minimize depreciation," he suggested.

Putting revenue and costs together is the key point. He emphasized that profit-minded managers should seek practical, high-leverage interventions to the production system. They focus on optimizing weaning rate, weaning weight, feed, labor and depreciation.

To do so, managers must pay attention to financial information, even though it is not the "fun part." Mathis suggested implementing a managerial accounting system, which provides financial and statistical information required to make day-to-day decisions.

Drought has been a big issue for financial viability, he noted. When cows left the Southwest starting in 2011, the financial denominator changed, he explained. There were fewer cows, but the same fixed costs remained. Revenue was stretched tighter.

He reiterated that good managers make many small decisions to keep costs low relative to the value of the weaned calves they produce. Excellent managers take that a step further. They do the same, but they also understand and find leverage in the production system.

He recommended taking a look at many options that could impact your production system. These include purchasing bred replacement females instead of raising your own, contracting hay production/farming tasks, or implementing a crossbreeding system. These are not blanket recommendations, he said; however, they can provide ideas of options to consider.

"Listen for information that may lead to high-leverage improvement in your operation," he concluded.

—Kasey Brown is associate editor for the Angus Journal. This article is reprinted with permission from www.BIFconference.com, the Angus Journal's online coverage site of the 2014 Beef Improvement Federation Research Symposium and Annual Meeting.

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Is There a Genetic Edge to **BRDC Resistance?**

Moderate heritability for resistance to the bovine respiratory disease complex offers economic incentive for calculating GE-EPDs for the trait

Story By Troy Smith

The development of genomic breeding values for sires that produce calves that are less susceptible to bovine respiratory disease is under way. According to Washington State University animal geneticist Holly Neibergs, the effort to calculate genomic-enhanced expected progeny difference (GE-EPD) values for disease susceptibility is part of ongoing, multi-institutional research driven by USDA-grant funding. Neibergs explained why the research matters in a presentation to the 2014 Beef **Improvement Federation (BIF)** symposium June 18-21 in Lincoln, Nebraska.

Washington State University

animal geneticist Holly Neibergs noted costs attributable to BRDC include prevention and treatment products, labor and death loss, but the biggest hit comes from reduced carcass value.

According to Neibergs, the bovine respiratory disease complex (BRDC) is the most prevalent and costly disease challenge for the U.S. beef industry. Despite efforts to suppress the disease through vaccination and metaphylaxis (mass treatment with antimicrobials) incidence of the disease remains relatively unchanged. BRDC morbidity and mortality rates have stood at about the same levels for 20 years. Neibergs called BRDC a significant health management challenge for 97 percent of U.S. cattle-feeding operations.

"That's probably underestimated, since more than 60 percent of all slaughter cattle show some evidence of lung lesions resulting from BRDC, even though some cases of illness in the feedlot went undetected," added Neibergs.

Costs attributable to BRDC include prevention and treatment products, labor and death loss, but the biggest hit comes from reduced carcass value. Generally, cattle experiencing BRDC produce fewer carcasses of Choice quality grade than do healthy cattle. Neibergs said recent research findings support that which virtually all cattle feeders have experienced.

"It wasn't slippage from Choice to Select. Instead, [BRDC-affected cattle] actually fell off the grid. They went to no-roll, were condemned at slaughter or died before they got there," reported Neibergs.

Research suggests the average

loss in value for BRDC cases, compared to healthy animals, was \$162.78 in 2013. That's money lost as a result of reduced carcass quality. Add in treatment costs, and the estimated cost of each BRDC case in the feedlot is more than \$200.

The good news comes through evidence indicating susceptibility to BRDC is at least partially a result of genetic predisposition. Differences in BRDC susceptibility have been found between cattle breeds and between sire lines. Heritability is estimated to be in the low to moderate range. This suggests that selecting for BRDC-resistant cattle could have a real effect on disease prevalence and industry profitability.

"If we want to get serious about this," Neibergs stated, "I think there is some opportunity." 🍸

-Troy Smith is field editor for the Angus Journal. This article is reprinted with permission from www.BIFconference.com, the Angus Journal's online coverage site of the 2014 Beef Improvement Federation Research Symposium and Annual Meeting.



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MANAGEMENT MATTERS **Interest Perks Up on Feeding**

K-State studies performance of limit-fed pregnant beef cows fed ammoniated wheat straw-based diets

Story By Justin Waggoner

Ammoniated Hay

The prevalence of drought L conditions across much of Kansas and the Great Plains in recent years has renewed interest in the use of anhydrous ammonia to improve the feeding value of low quality forages such as wheat straw. An application of 3.0 percent anhydrous ammonia (60 lbs/ton) on a dry matter basis has traditionally been recommended. However, a demonstration project conducted by the K-State Beef Extension team at six locations across the state in 2012, indicated that an anhydrous ammonia application rate of 1.5 percent (30 lbs/ton; dry weight basis) resulted in a proportionally greater improvement in forage quality than the recommended 3.0 percent application rate. A cow-feeding study, based on the results of that case study, was

recently conducted at the Agricultural Research Center in Hays, Kansas, during Fall 2013. The objective of this study was to evaluate the inclusion of wheat straw treated with 1.5 percent or 3.0 percent anhydrous ammonia (dry basis) in diets containing wet distillers grain limit-fed (1.9 percent of bodyweight, dry matter basis) to spring-calving beef cows for 84 days on cow bodyweight, average daily gain and body condition score. Three treatment diets were fed: 1) 64.1 percent wheat straw (CON); 2) 64.1 percent wheat straw treated with 1.5 percent (weight/weight) anhydrous ammonia (1.5A); 3) 64.1% wheat straw treated with 3.0 percent (weight/weight) anhydrous ammonia (3.0A).

Cows fed diets containing wheat

Item	CON	1.5A	3.0A	SEM	P-value	
Number of pens	4	4	4			
Body weight ²						
Initial, lb	1265	1239	1245	16.6	0.51	
Final, lb	1395	1399	1408	19.6	0.89	
Total Gain, lb*	130^{a}	160 ^b	163 ^b	3.9	0.01	
ADG, lb/d*	1.35 ^a	1.66 ^b	1.69^{b}	0.09	0.01	
BCS ³						
Initial	5.86	5.87	5.92	0.07	0.78	
Final	5.86 ^a	5.94 ^a	6.08 ^b	0.07	0.09	
Change	0.00	0.08	0.16	0.04	0.13	

Treatments consisted of 3 diets, limit-fed at 1.9% initial BW (DM basis) 1) CON = 64.1% wheat straw diet (no anhydrous ammonia): 2) 1.5A = diet containing 64.1% wheat straw previously treated with 1.5% (wt/wt) anhydrous ammonia: 3) 3.0A = diet containing 64.1% wheat straw previously treated with 3.0% (wt/wt) anhydrous ammonia ²To account for differences in gut fill cows were fed a common diet prior to collection of initial weight and were fed a common diet for 12 d prior to collection of final weight. Thus, calculation of ADG is based on 96 days on feed.

³BCS scale : 1 to 9 (1–emaciated, 9–obese; Wagner et al., 1988) ^{a,b}Within a row, means without a common superscript differ ($P \le 0.05$)

*Linear P = 0.01, Quadratic P = 0.10

straw treated with anhydrous ammonia resulted in greater bodyweight gain, average daily gain and tended to result in better body condition scores at the conclusion of the feeding period. Collectively, the results of this study indicate that the performance of pregnant beef cows may be improved by applying anhydrous ammonia to low-quality forages, such as wheat straw, at a rate as low as 1.5 percent (dry weight). Additionally, these improvements in cow performance were observed in diets containing wet distiller's grain. Treating wheat straw with 3.0 percent anhydrous ammonia resulted in the greatest bodyweight gain and average daily gain. However, the observed improvement in

these variables in response to the 1.5 percent application rate suggests that application of 1.5 percent anhydrous ammonia (dry weight) might be more economical when anhydrous ammonia prices are relatively high.

The table above outlines the performance of pregnant beef cows diets containing wheat straw treated with 0.0% (Control), 1.5 percent or 3.0 percent anhydrous ammonia on (wt/wt; DM basis) for 84 days.

This study may be viewed online at http://www.ksre.ksu.edu/ bookstore/pubs/SRP1104.pdf

-Source: Dr. Justin W. Waggoner is Kansas State University beef systems specialist, Garden City, Kansas.



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Feed More – Or Less?

Mineral supplementation in the correct form offers more cattle performance potential

Story By Rebecca Mettler for Cattlemen's News

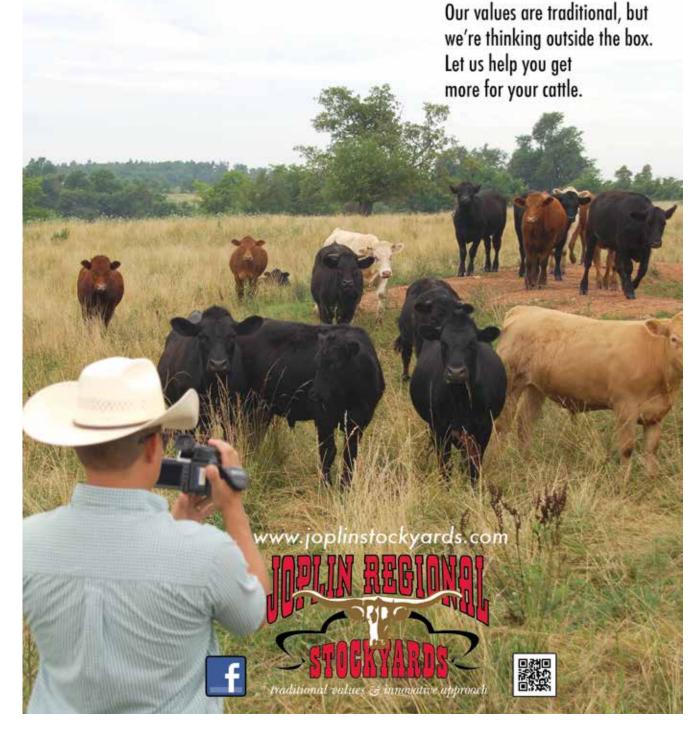
Cattlemen have been providing their animals with mineral supplementation for decades believing that the mineral they feed will end up being utilized by the cow. However, as discussed at an Alltech beef cattle nutrition meeting held in July at the Joplin Regional Stockyards, the bioavailability of the mineral depends on the form. Chelated organic trace mineral products offer more bioavailability than do inorganic forms of trace minerals. Cattle can utilize organic trace minerals at 80 to 90 percent verses the 20 to 25 percent utilization rate of inorganic mineral products, according to Simon Timmermans, DVM with Veterinary Research and Consulting Services, LLC (VRCS). "Take the copper, the zinc and the selenium and attach it to something like an amino acid or a protein, something that's digested by the animal in a different form, and it's much more efficiently digested," Timmermans said.

Alltech's Roger Scaletti explained that plants contain several different chelates as well as different combinations of amino acids with trace minerals. That chemistry has been mirrored in Alltech's Bioplex products.

"We are trying to put that into a form that the cow has evolved for a million years to absorb, digest and utilize," Scaletti said.



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"A lot of people take the traditionalist approach," Scaletti said. "Feed mineral to prevent deficiencies, but a lot of things go into improving health and immune function. We are trying to provide all the tools for optimum health and optimum production."

Scaletti said that it takes the highest trace mineral status to have optimal immune function. He has performed thousands of liver biopsies to determine the effects mineral supplement programs have on performance.

If producers aren't sure where to start or don't know the mineral status of the herd, Timmermans suggests conducting liver biopsies. The biopsies can be performed on a few head of cattle in the herd to determine if mineral deficiencies or toxicities exist.

"It's the best way to take an evidence-based approach to the mineral nutrition in your herd," Timmermans said.

Nutrition has a major influence on an animal's immune system. A marginal trace mineral status is known to decrease immunity, according to Timmermans.

"There have been a lot of changes in genetics," Scaletti said. "Animals are constantly evolving, and I think our nutritional approach needs to evolve as well."

Timmermans said known bottleknecks, or limiting factors, regarding deficiencies in trace minerals exist. He said that many bottleknecks happen in the realm of nutrition. If cattle are fed a lot of energy but not enough protein, a protein bottleneck will take place; the same goes for Vitamin E and selenium.

"We can feed a lot of Vitamin E, but if you are deficient in selenium, you are going to have problems with the selenium deficiency. The Vitamin E won't cover for the deficiency in something else," Timmermans said.

In addition, sulfur and iron are known to tie up copper absorption. In certain areas of the country, antagonists that can influence the ability for cattle to absorb minerals exist.

CONTINUED ON NEXT PAGE

MINERALS FROM PREVIOUS PAGE

Providing cattle with mineral that has the proper zinc to copper ratio is of the utmost importance, according to Timmermans. Copper and zinc compete for absorption sites. Too much copper competing for absorption sites might cause a deficiency in zinc.

"The zinc to copper ratio needs to be about3.5:1," Timmermans said. "Look at a bag of mineral, if you have 4,000 parts per million (ppm) of zinc, you probably don't want to have more than 1,500 to 1,200 ppm of copper."

Selenium has a role in immune function and should be considered by the cow/calf producer as a mineral to include in the diet if selenium deficiency is common.

If a cow is selenium-deficient the white blood cell function goes down. White blood cells are the backbone of the immune system because they swallow up bacteria and get rid of them, Timmermans said. A selenium deficiency can cause a decrease in immune health, which can ultimately compromise the overall health of the animal.

An overview of the organic mineral research regarding beef reproduction shows consistent data benefiting the use of organic trace minerals. Those studies show that a producer might see an improvement in conception, shortening of the postpartum interval and increased pregnancy rates, especially when used in an artificial insemination (AI) scenario, cited Timmermans.

He also warned producers of over-supplementation.

"It's not always that we have to feed more; it's sometimes we have to feed less," Timmermans said.

Both Scaletti and Timmermans suggest working with a set of advisors, veterinarians or other industry experts to determine which mineral supplement best fits a producer's herd.



Unsure of the mineral status in your cow herd? Simon Timmermans, DVM with Veterinary Research and Consulting Services, suggests conducting liver biopsies to determine if mineral deficiencies or tox-icities exist. —*Photo by Joann Pipkin*

"You can improve performance efficiency and optimize animal health by just paying attention to your form of mineral," Scaletti said.

Because of antibiotic resistance and predicted future regulation of antibiotic use, Timmermans estimates that the beef industry as a whole will need to rely on natural immunity even more in the future. The connection between nutrition, trace mineral status and overall immunity will always play a vital role in beef production.

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Video Sales from 7/7, 7/14 & 7/28 • Total Video Receipts: 1,975

Feeder Cattle & Calf Auction | July Receipts 14,764 • Last Month 36,539 • Last Year 24,421

Date:	South Central State	es Texas,	Okla., New Mex	tico, Kansas, Mo.	Offering: 779						
7/7/14											
	FEEDER STEERS		MED & LG 1				FEEDER HEIFERS		MED & LG 1		
HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY	HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY
60	850	850	\$211.00	\$211.00	Current	65	775	775	\$199.00	\$199.00	Current
51	985	985	\$192.00	\$192.00	Current	65	850	850	\$196.00	\$196.00	Current
55	900	900	\$204.00	\$204.00	August	62	800	800	\$201.30	\$201.30	Nov-Dec
116	850	850	\$209.50	\$209.50	October		FEEDER HEIFERS		MED & LG 1-2		
116	850	850	\$210.00	\$210.00	November	HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY
	FEEDER STEERS		MED & LG 1-2			65	725	725	\$199.50	\$199.50	Current
HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY						
52	925	925	\$197.00	\$197.00	Current						
72	685	685	\$229.50	\$229.50	October						

Date:	South Central State	s Texas,	Okla., New Me	xico, Kansas, Mo	Offering: 505						
7/14/14											
	FEEDER STEERS		MED & LG 1				FEEDER HEIFERS		MED & LG 1-2		
HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY	HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY
65	800	800	\$198.00	\$198.00	December	170	575	575	\$210.00	\$210.00	Sep Value Added
	FEEDER STEERS		MED & LG 1-2			25	560	560	\$204.00	\$204.00	Oct Value Added
HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY	85	580	580	\$213.00	\$213.00	Oct-Nov Value Added
60	580	580	\$219.00	\$219.00	Oct Value Added	100	500	500	\$216.00	\$216.00	Dec Value Added

Date:	South Central State	s Texas,	Okla., New Me	xico, Kansas, Mo.	Offering: 691						
7/28/14											
	FEEDER STEERS		MED & LG 1				FEEDER HEIFERS		MED & LG 1-2		
HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY	HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY
75	675	675	\$240.00	\$240.00	Current	80	650	650	\$229.00	\$229.00	Current
	FEEDER STEERS		MED & LG 1-2			120	835	835	\$198.00	\$198.00	August
HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY						
355	715-725	721	\$222.00-\$227.50	\$225.35	Current						
61	850	850	\$207.00	\$207.00	Current						

Tune in to the JRS Market Report



Monday 11:38 a.m. Wednesday 11:38 a.m.



Monday

Monday 12:40 p.m. Wednesday 12:40 p.m.



KRMO M-F 9:55-10:05 a.m.

(during break before AgriTalk) M/W/F Noon Hour (during Farming in the Four States) T/Th Noon Hour (after news block)



Monday 12:50 p.m. & 4:45 p.m. Wednesday 12:50 p.m. & 4:45 p.m.





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ON THE CALENDAR

Annie's Project Events Celebrate Missouri Farm Women

Meetings to be held in two central locations

Story From Our Staff

Two celebration events will be taking place in Missouri in early fall to help celebrate the 10^{th} anniversary of Annie's Project, a program to assist farm women.

A one-day seminar held August 16 in Columbia and a two-day conference Sept. 19-20 in the Lake of the Ozarks area mark the celebration.

Annie's Project in Missouri empowers farm women to be better managers and owners of farming operations. Some of the Midwest's top agriculture professionals will be featured at the celebration events. The August seminar will feature Dr. Ron Hanson, University of Nebraska professor and widely traveled national speaker on estate planning and farm business/family succession issues. The September conference will feature beef producer and humorist Jerry Crownover, country music vocalist and guitarist Teddy Gentry, and Iowa State University Beginning Farmer Center's John Baker. Crownover will deliver the keynote address on Friday, Sept. 19, while Gentry, founder of the South Poll cattle breed, will discuss matching cattle to your environment. Baker's topic addresses how to treat heirs fairly when only one is taking over the farm. Other topics covered at the events include the 2014 farm bill; financial statements -beyond the basics; financing your farm; market outlook; climate trends; livestock production; and crop, forage and livestock insurance.

All farm women are invited to attend the conferences.

Registration for each event, which covers the costs of meals, breaks and conference materials, is \$35. A complete program agenda and online registration form can be found at http://extension.missouri.edu/annie or

by calling the Polk County Missouri Extension Center at 417-326-4916.

—Source: Wesley Tucker, University of Missouri Extension Service.

Field Day Set for MU Center

Event set for Sept. 12 in Mount Vernon

Story From Our Staff

Southwest Research Center Field Day is back on the calendar for this year on Sept. 12. The free educational event held at the center will feature a wide variety of topics and a chance to meet with new superintendent, David Cope.

Different tours of informational talks and demonstrations geared towards landowners will focus on beef and dairy productions, horticulture, vineyard growers, conservation and ways to live more energy efficient.

Since its inception in 1950, the Southwest Research Center has long been known for its livestock research, and today is no different. MU researchers will share information on fescue toxicosis and the new endophyte-free varieties, hay feeding efficiency and new technology available for forage management. Talks for dairy producers will include fescue variety trial results and findings with synchronization trials.

"To me, research centers are all about efficiency, and that is really the end goal of all research — trying to find more efficient ways to utilize your resources," said Cope. "We need to get people out to our farms and see where their food comes come. And for the people that are growing our food around here, they can truly benefit from the research going at the Southwest Research Center."

—Source: University of Missouri CAFNR release.

Replacement Cow & Bull Sale 6 p.m. | Friday | Aug. 15, 2014 Joplin Regional Stockyards | I-44 & Exit 22 | Carthage, Mo. EXPECTING 1000 HEAD WITH THESE EARLY LISTINGS 60 Charolais / Red Angus Cross Heifers-Al bred to Red Angus bull "Epic", CED +10 | BW -0.4 | WW 78 | YW 122. Pasture exposed to Express Ranch low birthweight bulls. CED +8 | BW +0.7 | WW +52 | YW +103 & CDE +11 | BW +0.3 | WW +51 | YW +91. Pre-breeding check and pelvic measured. On a complete herd health program. Start calving Sept. 14. Real fancy set of heifers that are COW MAKERS! 130 Santa Gertrudis / Hereford Cows—4-7 years old with 60 calves at side. Balance bred. Nice set of calf-raising cows. Watch Our Website For Listing Update 100 Braford Heifers—Bred to Express Ranch or 44 Farms low birthweight bulls. Start calving Sept. 1. Fancy set of heifers! 63 Beefmaster Heifers—Start calving Sept. 1. Bred to black bulls. 80 Mixed Cows—3 to 7 years old with 70 calves at side from 2 to 4 months old. Bred back to black bulls. 24 Angus Heifers—Bred to Circle A bulls. 210 Black and Black Whiteface Heifers—Bred to low birthweight Angus bulls. Sons of Net Worth, Final Answer, On Target, In Focus and New Design 1407. Start calving Sept. 1 for 60 days. 30 Heifers-Black and Black Mots, Red and Red Mots. Al bred in December to start calving Sept. 1. Load of Brangus First-Calf Bred Heifers-Double synchronized, Bull-bred on Dec. 26 for a 60-day calving window. Bred to Express Ranch low birthweight bulls. Provin Berinner www.joplinstockyards.com Jackie Moore 417.825.0948 Bailey Moore 417.540.4343 Chris Byerly 417.850.3813 Skyler Moore 417.737.2615

www.joplinstockyards.com





EVENT ROUNDUP

August

- Special Video Sale, Joplin Regional Stockyards, 7 Carthage, Mo. • PH: 417-548-2333
- Missouri State Fair, Sedalia, Mo. PH: 800-422-FAIR 7-17
- 11-14 K-State Beef Conference Series, various locations across Kansas • FMI: http://asi.k-state.edu/species/beef/k-statebeef-conference.html
- 13-14 Soil Health Expo, MU Bradford Research Farm, Columbia, Mo. • FMI: *http://bradford.cafnr.org*
- 14 Profitable Pastures for Your Farm Seminar, Joplin Regional Stockyards, Carthage, Mo. PH: 417-316-0101
- Special Monthly Cow Sale, Joplin Regional Stockyards, 15 Carthage, Mo. • PH: 417-548-2333
- 16 Cattle Baron's Ball, MSU Darr Agricultural Center, Springfield, Mo. • PH: 417-447-1485
- Annie's Project Anniversary Celebration Event, 16 Columbia, Mo. • PH: 417-326-4916

September

- 12 MU Southwest Center Field Day, Mount Vernon, Mo. PH: 417-466-2148
- 19-20 Annie's Project Anniversary Celebration Event, Lake of the Ozarks, Mo. • PH: 417-326-4916
- 23-25 Management Intensive Grazing School, Forsyth, Mo. PH: 417-581-2719, ext.3
- 30 Salute to Century Farms, Round Barn Event Center, near Ash Grove, Mo. • PH: 417-881-8909

October

- 3-5 Ozark Fall Farmfest, Ozark Empire Fairgrounds, Springfield, Mo. • PH: 417-833-2660
- 7-9 Management Intensive Grazing School, Bois D'Arc, Mo. PH: 417-831-5246, ext.3
- Mark Yazel Cattle Co. Fall Finale, Ratcliff Ranch Sale 11 Facility, Vinita, Okla. PH: 918-256-5561



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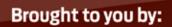
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- 4. Using data from the National Agricultural Statistics Service, each MCA County Affiliate will be given a Fair Share Potential number (50¢ multiplied by the number of cattle in the respective county). The goal for county affiliates is to get as close to the potential as possible.
- The top three county affiliates will receive a match of the fair share contributions to use exclusively at the county level. The matching funds will be provided up to a total of \$10,000 by MFA and QLF.