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VIEW FROM THE BLOCK

7e're starting to see some re-aligning in market prices. If we compare prices the last 40 years, the market declined about 20 percent from Jan. 1 through April 1 on cattle that weighed over 650 lbs. In the old days when cattle were 70-80 cents a pound, that wasn't such a big deal. It makes us panic now because it is such a big number. The market is really just doing the normal thing we see this time of year. Cattle weighing 700 lbs and up are a little tough to sell right now, but those under 600 pounds are still trading very well.

All in all, the market is pretty normal despite the bit of panic we all go through when prices go lower. We might see some competition from other protein sources. I'm not really worried about the market long-term; short-term we'll likely struggle a bit, especially on the yearling cattle.

As we wrap up this issue, here's a little cowboy humor for you.

The Saga of Bart — Trials & Tribulations of a Cattle Buyer:

Two cattle buyers hired a pilot to fly them to Canada to hunt moose. They each bagged two moose. As they started loading the plane for the return trip home, the pilot

told them the plane could only handle two moose and that they would have to leave two. The cattle buyers objected strongly. Bart told the pilot, "Hell, last year we shot four moose and the pilot let us put them all on board and he had the same plane as yours." Ace chimed in, "Yeah, but then he was a damned good pilot." Reluctantly, the pilot gave in and all four moose were loaded. Unfortunately, even at full power, the plane couldn't handle the load and went down shortly after takeoff. Climbing out of the wreckage, Ace asked Bart, "Any idea where we are?" Studying the terrain, Bart replied, "I think we're pretty close to where we crashed last year."

Good luck and God bless.







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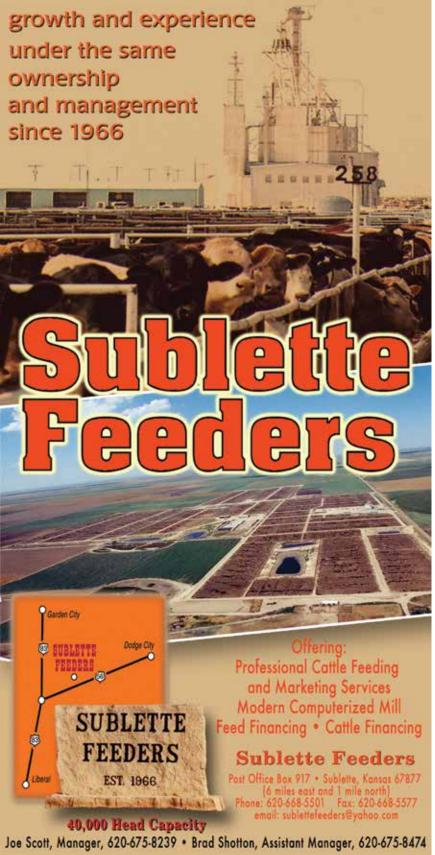
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INSIDE THIS ISSUE

Breeding season is right around the corner. Get your cows and bulls in shape for a successful experience.

—Cover photo by Joann Pipkin

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BEEF IN BRIEF

Cattle continue to trend higher

The song remains the same for the cattle market: tight supplies and high prices.

"Supplies are going to remain tight for some time, and domestic and export demand for beef looks good," says Ron Plain, University of Missouri Extension agricultural economist. "So we expect 2015 cattle prices to average higher than what we saw last year."

Plain's comments came during the Jan. 21 during the MU Ag Marketing Outlook Conference.

He notes that the 19-year trend of fewer calves is going to end in the next couple of years. In recent months, heifer and cow slaughter has been down sharply. Female slaughter was 10 percent lower in 2014.

"We are saving more heifers and cows for breeding, but it's a slow process – nine months from breeding to birth and another two years before those calve reach slaughter weight," Plain says. "So yes, more beef is coming in 2017 and 2018, but for the time being tight supplies and high prices will continue."

Plain also says cattle slaughter weights are higher.

"Whenever supplies get tight and there aren't many animals to slaughter and prices are high, farmers tend to feed them a little bit longer," Plain says. "So that adds to the supply and moderates a bit the price we see in grocery stores because of that extra meat from each animal."

—Source: University of Missouri

Meat Export Volumes Lower, Value on Record Pace

With December totals yet to be recorded, U.S. beef exports already set a new full-year value record of \$6.49 billion during the first 11 months of 2014 (up 16 percent from 2013), according to data released by USDA and compiled by the U.S. Meat Export Federation (USMEF), contractor to the Beef Checkoff Program. For the year-to-date through November, exports were \$626.7 million, up 19 percent from the same period in 2013.

Reflective of tight supplies, meanwhile, U.S. beef export volumes trended 5 percent lower in the month of November 2014, compared to November 2013. But cumulative 2014 year-to-date volume totals remain ahead of 2013, with January-November beef exports up 2 percent to 2.425 billion pounds.

—Source: MyBeefCheckoff.com

U.S. Corn Crop Remains Strong Despite Yield Reduction

The U.S. Department of Agriculture lowered projected national average corn yield and planted acreage estimates this month, while leaving harvested acreage the same. Although projected demand from the feed and residual markets fell, projected demand from the ethanol sector increased. Together, these factors resulted in a lower carryout projection and a 15-cent-perbushel increased in forecast prices.

USDA estimates still indicate record-setting total production at 14.2 billion bushels and a record national average yield of 171.0 bushels per acre, despite being lowered since the previous month. These estimates also set the total supply at approximately 15.5 billion bushels, with estimated use at 13.6. Average farm price estimates were raised to \$3.35-\$3.95 per bushel.

—Source: National Corn Growers Association

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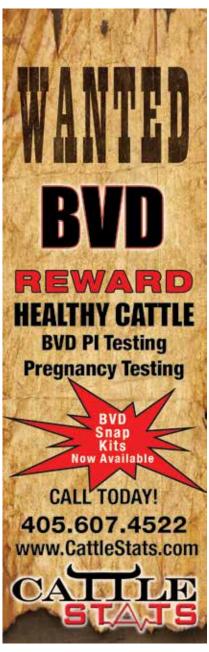
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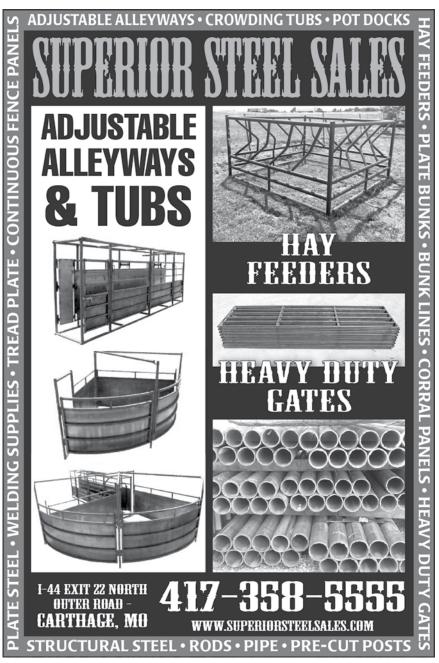
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NUTRITION KNOW-HOW

Bull Management 101

Are you making genetic progress?

Story By Justin Sexten for Cattlemen's News

Bull management is an often overlooked, but certainly not un-important, aspect of the beef production system. Many bulls are taken for granted until a high number of cows are open or short bred. At that point, bull management becomes top of mind. And, the first question a producer asks him or herself is, "What happened to the bull?"

Fall calving cow herds are preparing to, or already have, remove bulls from cows. Historically, I would recommend separating bulls from cows after a 45- to 60-day controlled breeding season. Depending on timing of pregnancy determination, being able to market short-bred cull cows might offer increased value.

There are two keys points to consider if bulls are left with

cows to capture this additional value. First, cows not calving in the defined 45- to 60-day calving season are still culled. Effective nutrition, reproduction and health management are easier when controlled calving seasons are maintained. The second point, and perhaps more important, is bulls are given adequate nutrition and time to recover to a body condition score of 6 before the next breeding season. For herds calving one time a year this is not as challenging as those with spring and fall herds.

Bull management should develop bulls so turn in condition is adequate but not excessive. Bulls with a body condition score of 6, ribs fully covered, topline smooth but not spongy, have adequate fat reserves to lose weight during the breed-



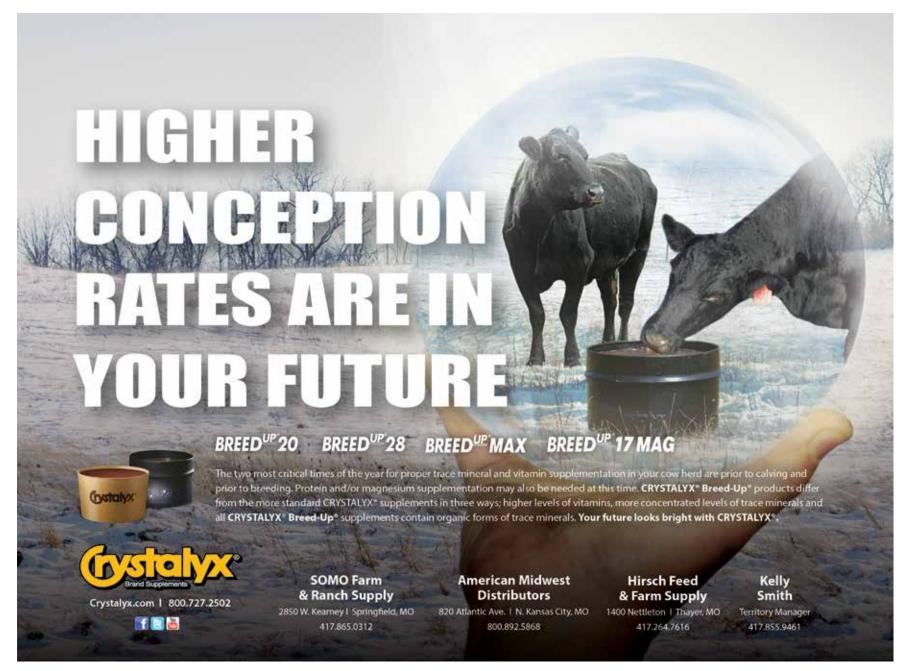
ing season without negatively influencing reproductive efficiency. Excessively conditioned bulls are commonly associated with poor reproductive performance due to time required to adjust to pasture breeding conditions and reduced nutrient diets. Bulls should be athletic with sound feet, legs and eyes, and be able to adapt to pasture conditions.

Ideally, bull diets are forageor fiber-based with adequate energy to promote gain. In mature bulls, forage supplementation will provide adequate nutrition. Yearling bulls will require greater dietary energy to promote adequate gain and growth. Avoid significant nutritional changes to bull diets around breeding, transitioning bulls prior to the breeding season to similar diets consumed by cows so plane of nutrition does not change at turnout.

The number of bulls required to cover cows will vary with pasture size, bull age, AI success and breeding season length. A rule of thumb on bulls under 2 years of age is they can cover one cow for every month of bull age. Mature bulls should cover 25-35 cows.

Bulls are a significant financial investment. The average bull sires 42-45 calves when those lost to breeding injury, low libido and failure to pass breeding soundness exam are included. Consider having an extra bull on hand or selected at the start of the breeding season. When a bull gets injured or sick during the breeding season is not the time to start looking for your next herd sire. In many herds, bulls are the sole source of new disease exposure so having time to isolate bulls in the event one goes bad or is injured can be a critical aspect of health manage-

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BULL MANAGEMENT • FROM PREVIOUS PAGE

ment in addition to the risk of increased open cows and the gap in the calving season. Bull vaccination programs should match those of the cow herd. Do not neglect annual booster vaccinations and de-worming. Consider vaccinations when bulls are evaluated for breeding soundness so bulls are up-to-date prior to the breeding season.

Bulls should pass a breeding soundness exam (BSE) 30 to 60 days prior to the breeding season. Early BSE allows producers time to procure an alternative bull or additional time for bull development if necessary. Remember, BSE's do not evaluate mating ability, libido or disease presence; BSE's are a relative measure of fertility, satisfactory or unsatisfactory potential breeder.

Yearling bulls more commonly have BSE conducted prior to sale. Bull fertility can, and will, change over time. Have mature bulls evaluated each year before the breeding season. Missouri regu-

lations mandate trichomoniasis testing of mature bulls if they change ownership or possession, so have a BSE conducted at the same time.

NEWS TO USE

New High-Protein Soybean to Hit Feed Market

Beef producers could reap benefits

By Fred Miller

Anew high-yield, high-protein conventional soybean variety from the University of Arkansas System Division of Agriculture makes an ideal choice for the animal feed market.

Division soybean breeder Pengyin Chen says the non-GMO soybean's high protein content offers improved feed efficiency for poultry, beef and aquaculture producers. He adds that the high yields and relatively low cost of a public variety will make the seed attractive to growers.

The new variety, called UA 5814HP, is a maturity group V soybean that averaged 58.8 bushels per acre over four years of testing in 12 locations around Arkansas, Chen says. It was also evaluated in seven southern region locations outside Arkansas where it averaged 64.8 bushels per acre.

In both tests, Chen says, UA 5814HP yielded at or near the top against popular varieties that were used for comparison.

UA 5814HP's protein level at maturity is about 45.5 percent of dry weight, Chen said. It produces a feed meal with about 52.6 percent protein. He said some poultry companies have expressed interest in it because of the soybean's potential offer of higher nutrition value per pound in animal feed.

—Fred Miller is with division of agriculture communications, University of Arkansas.

If multiple bull breeding pastures are used, make sure bulls are familiar with each other. Putting a newly purchased bull with an established herd sire at the start of the breeding season might result in bull injury or reduced cow coverage by both bulls due to competition and fighting. Research evaluation of multiple bull breeding pastures has demonstrated wide ranges in number of cows serviced by dominant bulls. One example demonstrated the dominant bull serviced 92 percent of cows while the other two bulls covered 3 percent each. If the dominate bull was not a satisfactory breeder, he may have prevented the other bulls from servicing cows.

Herd sires represent a small management group within the beef operation. However they represent 50 percent of the cow herd's future genetic. Focused herd sire management will improve reproductive success and, ultimately, genetic progress.

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



HEALTH WATCH

Herd Management for Reproductive Efficiency

Reproduction to calving – a domino effect

Story By Dr. Dave Rethorst for Cattlemen's News

In recent months, much discussion has focused on rebuilding the cowherd in this country. This discussion includes the question, "Can we rebuild soon enough to keep prices to our consumer from going higher, resulting in a drop in demand?" This is a legitimate concern. The discussion in my November column focused on the statement, "If we raise the cow herd reproductive efficiency 1 percent, we wouldn't have to retain as many heifers." We also looked at the weaned calf crop nationwide, which is in the low 80 percent range. While discussions have dealt with correcting issues in existing mature cows, or short term fixes, in order to improve

8

the percent weaned calf crop long term, we need to look at the cowherd as a system. What occurs in one phase of production influences what occurs in another phase. The goal of cowherd management is to create reproductive momentum, a concept frequently shared by my Kansas State colleague, Bob Larson, PhD.

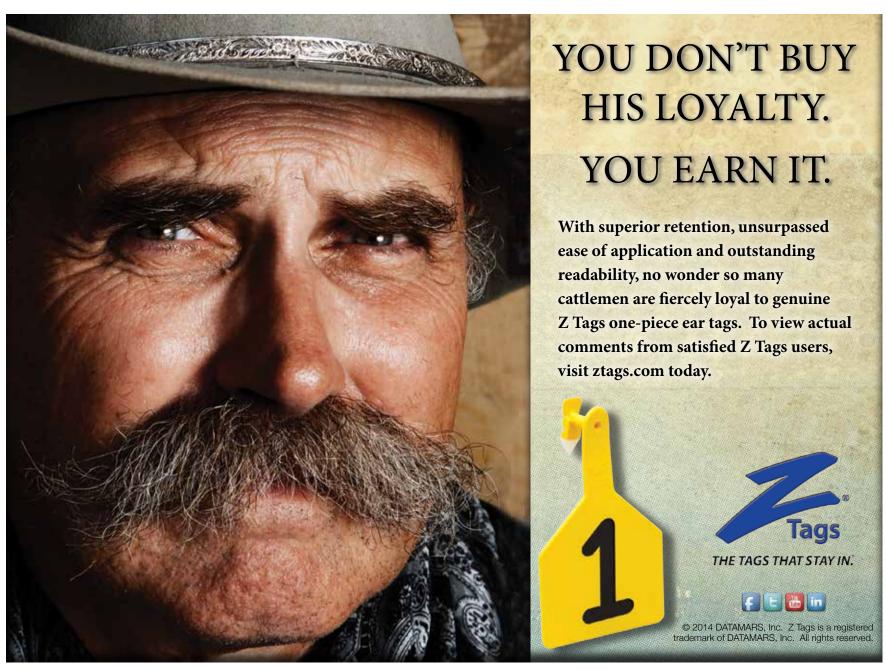
Reproductive momentum begins during selection of heifer calves to retain. The first step is to select heifers that were born early in the calving season. Heifers born early in the calving season tend to calve early as a 2-year-old. This is a result of the heifers being older, heavier and reaching puberty sooner as a yearling.



Development of the heifers between weaning and breeding is the next consideration. Traditionally, heifers have been developed to 65 percent of their mature body weight in preparation for breeding. Recent work at the University of Nebraska has shown developing heifers between 55 and 58 percent of their mature weight to produce very acceptable results. Compared to traditionally developed heifers, the cost of developing these heifers was reduced and the pregnancy rates were very similar, as were their calving dates. The rebreeding rate on these heifers was also very similar between the two groups. Another important factor in heifer development is to manage them in a manner similar to how they are going to run as mature cows. It is unreasonable to develop heifers on feedyard type ration, and then as they go into the breeding herd say, "Oh, by the way, that is the last time you will see that type of ration," and expect 95 percent of them to breed back on time, every year, for the rest of their lives.

Once the heifers are selected, developed and bred to calve early as a 2-year-old, the potential for a long lifetime of profitable production has been set. If heifers maintain an optimal body condition score of 5.5 - 6, the basic requirement for getting 95 percent plus to breed back each year (with 65 percent plus of the pregnancies in the first cycle) has been met. Protein, energy and trace minerals must all be considered in any nutritional plan. Each cycle that a cow calves after the first conservatively reduces weaning

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REPRODUCTIVE EFFICIENCY • FROM PREVIOUS PAGE

weight of the calf by 42 pounds. With today's calf prices, that is more than \$100 per cow for each cycle she fails to conceive that could be captured.

Once cows are properly developed and a good nutrition program is in place, we need to get them pregnant. Diseases such as IBR and BVD need to be addressed and controlled well ahead of breeding season. Use of a modified live viral vaccine in addition to testing for the persistently infected form of BVD do a very good job of controlling these diseases. Check with your veterinarian to determine other vaccines that should be used in your area. Bulls should be known to be fertile, sound and free of trichomoniasis. If you are using artificial insemination, use a synchronization program that is proven and pay attention to the details.

Recent studies involving fetal programming have shown that lifetime health and performance potential of a calf is deter-

mined before the calf is born. The number of muscle cells and fat cells a calf has are influenced by energy and protein levels in the first trimester. Too little or too much energy causes a decrease in the number of both muscle and fat cells. Trace mineral supplementation in the third trimester influences immune system function of the calf throughout its lifetime, including the critical first 50 to 60 days of life. Protein supplementation in the third trimester will affect how much colostrum is absorbed in addition to influencing feeding and reproductive performance of the calves.

Proper calving management is essential. How dystocia's are handled and the calving environment is critical for calf survival. If scours is historically an issue for an operation, implementation of the Sandhills Calving System should be considered to help manage the calving environment.

Preparing the calf for weaning begins as the calves are vaccinated before the next breeding season begins. Reduce weaning-related stress by castrating and disbudding at this early age. Respiratory disease prevention begins at this age in order to have optimal immunity at weaning, helping ensure feedyard performance.

Control of internal parasites prior to weaning will enhance the function of the immune system during the weaning process. This can be accomplished as the pre-weaning respiratory vaccinations are given.

My goal with this column is to stimulate thinking. Many details that could be added to this discussion. If you experience a respiratory disease break in your calves, you should not only manage the break, but also ask the question, "What was the first domino that fell?" Many times, scours breaks or respiratory disease breaks can be traced to an event during pregnancy. Usually, they are multifactorial.

Implementation of sound animal husbandry practices can many times be

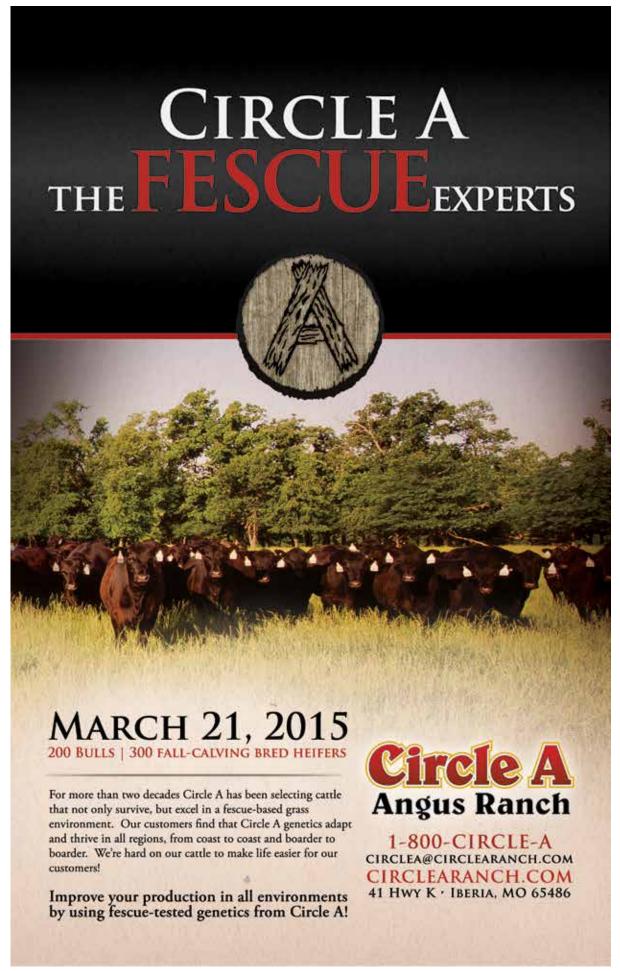
done with little or no additional cash expenditure. It's about managing the ranch resources while providing for the basic needs of the animal. If attention is paid to basic needs from conception to weaning, the number of calves weaned per cow exposed can be raised, thus creating more value for you — the producer. Improving reproductive performance in the cowherd should offer a quicker change in supply than simply heifer retention alone.

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



CELEBRATE!

National FFA Week Feb. 21-28, 2015



NEXT GENERATION

Get on the Same Page

Be intentional about your farm's future

Story By Darren Frye for Cattlemen's News

n today's farms, so much trouble and confusion among Ois going on – so much at the family members. Somestake – that many farmers are looking further into the future as they make their overall business plans.

Forward-looking farmers are getting these plans in place and carrying out the plan. Then, they make progress on their goals, which allows them to be even more proactive and future-oriented, and set even more ambitious goals. It's a virtuous cycle - a good thing for everyone on the farm.

On the same page

In the planning process, the people on the farm figure out where they want the farm to be in the future. The process also helps get everyone on the same page with each other.

That's a big deal when you're thinking about the long-term future of your operation, and the legacy and transition-related conversations your family will be having around who will be involved on the farm in the coming years, and how that transition will take place.

Family dynamics can often make the difference between a successful transition to the next generation – or a lot of

times, it can even mean that the farm operation – that the older generation worked so hard to build and develop ends up split up into smaller units because family members aren't in step with each other about what the future will look like.

Dreams and goals

Here's the key thing about future business planning for the farm. If you don't create a road map to the future through planning or setting clear goals – you've actually just decided what the future for your operation will be like, anyway.

The lack of a plan or hesitation to create a plan for the future determines what the future of your farm will be like – by default. And, usually that's not going to be the type of future you really want. It's going to look a lot different. Unfortunately, it could even turn into the opposite of what you want for your farm operation – and for your family.

If we don't set clear goals and create a long-term business plan for the farm, the dreams we have for the future and

legacy of our family farm will stay exactly that - dreams. It could mean missing out on creating what you want to transition to the next generation one day.

When both the older and younger generation make these plans together, that helps when it comes time for the farm's transition. Everyone is already on the same page about where the operation is heading and what the future will be like.

It will take a clear plan and strategy to move our farm operations toward what we want them to be. And getting the right strategy in place for the farm often means setting aside some time – with other key leaders in your operation – to develop that plan together.

Then, having a strategy plan in place gives you – and everyone else in your operation a clear way to work toward the farm's biggest goals. That encourages and makes action toward the goals possible.

Focusing on the results is very important. Without that focus, we might be hesitant to make a change in the farm operation – even if it's something that really needs to happen to reach a goal we have for the farm. We might stay just as we are, because we hesitate to take a leap toward something better.

Change is a tough concept, and even tougher to engage in – but when we focus on the results or the goals that we really want, we find the strength and the resolve to make it happen.

Set your goals

What goals do you have for your farm operation this year? Maybe your goals are tied to an opportunity your operation has – or a challenge it's facing. Take some time this month to consider what you really want for the future of your operation and your fam-

To start, you can ask yourself these questions: Where is my operation heading? How will I get there? What resources and people do I need to involve to help make sure we reach our goals? What skills do I need to develop and improve?

—Darren Frve 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.



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ECONOMIC INDICATORS

Protect Your Investment

Cattle insurance viable option in high market times

Story By Kevin Charleston for Cattlemen's News

Cattle values continue to find unprecedented support — a fact that significantly increases the financial consequences of cattle losses. With weather patterns also showing more volatility and severity, you should consider insuring your cattle just like you already insure most of your other property.

Insurance becomes even more important if you use your cattle as collateral for your operation's financial obligations. Remember, you would still owe the bank regardless of what happens to that collateral.

As outside animals living in parts of the country known for weather conditions that seem to change from one moment to the next, the biggest risks to cattle are severe weather and other natural perils. Wildfires, blizzards, windstorms, floods, tornadoes and thunderstorms can all kill large numbers of cattle in a very short period.

Undoubtedly, you have heard stories about fellow producers who lost their operation to one of these events — and 'event' is an accurate descriptor because these disasters are normally large and will impact most of an operation if they occur.

Recent examples of natural disasters include Nebraska's feedlot destroying tornadoes, South Dakota's massive smothering blizzards and the Western United State's suffocating wildfires. All should sound the alarm to any cattle producer.

While every part of the country is different, we are all exposed to our own set of weather or natural perils that could ruin the futures of affected cattle operations very quickly. It is not a matter of IF they will occur, but rather WHEN they will occur.

Unfortunately, these stories also often report that the affected cattle producers had no insurance on their cattle. Don't find yourself in a similar situation where the only partial salvation could be a very uncertain government handout. At affordable rates, cattle insurance for these devastating perils is widely available.

Once you have made the decision to insure your cattle, it is important to find the right policy to meet your needs. For today's cattle operations, a livestock insurance policy specially developed written to cover livestock is probably the ideal choice. A farm property policy might be able to insure livestock, but such policies are often not as suitable as they probably need to be for today's larger operations or alternative cattle values.

A livestock insurance policy also offer might more coverage options so you can tailor your policy to your operation and your area. Among many, these options may include a Valuation accurately Schedule to value your animals or could offer theft, hypothermia or contaminated feed/water (feedlots only). **Policies** covering livestock in transit are also available.

While very important and often overlooked at the time of insurance purchase, you should always consider how your policy and your selected insurance company will respond when they are needed most – Claim Time. Companies writing specially developed livestock insurance policies should also have a dedicated livestock claims unit. These units should be staffed with easily-

accessible and experienced livestock professionals who understand how to help you through what could be a very chaotic experience when a claim occurs.

To help you select and apply for a livestock insurance policy, an insurance agent who specializes in livestock insurance is recommended. Specialty Risk Management, LLC located in Carthage, Missouri, is such an agency, and we would appreciate any opportunity to serve you. We offer The Hartford's livestock insurance products. The Hartford has insured livestock continuously since 1916. They use a dedicated Livestock Department staffed with local underwriters throughout the country and livestock claim professionals who only adjust livestock losses.

—Editor's Note: Contact Specialty Risk Management's Kevin Charleston at 417-359-5470 or kevincharleston@prevent-risk. com.

This information provides an overview of coverage and service. Coverage may differ in availability by jurisdiction. For a complete description of all coverage, terms, and conditions, refer to the insurance policy. In the event of a conflict between this information and the issued insurance policy, the terms and conditions of the policy prevail.



TRENDING NOW

Color Counts

MU works to extend shelf life of ground beef

Story From University of Missouri Cooperative Media Group

Researchers at the University of Missouri are finding ways to extend the shelf life of ground beef.

They have found that store lighting plays a role in how

due to markdowns. And those markdowns have become increasingly costly: Increased demand and reduced supply have pushed retail ground chuck prices to an average of \$5.76 per pound. The price

Retail Display Lighting Changes Ground Beef Color



Comparison of color changes in ground beef under different lighting. —Photo from University of Missouri

long meat retains the bright red color that shoppers favor. After price, consumers consider color when buying meat.

MU meat scientist Bryon Wiegand said discolored meat accounts for an estimated \$1 million in lost revenue annually

gap between premium-priced meats and lower-quality ground product continues to narrow as consumers increasingly prefer ground beef for convenience, Wiegand said.

CONTINUED ON NEXT PAGE

Worth the Fight?

Research finds mandatory meat labels not economically viable

Story By Lindsey Elliott

When you pick up a pound of meat from the grocery store, have you noticed the label indicating where the meat originated? According to new research, most shoppers have no idea the label exists — but that little label is causing a big stir among U.S., Canada and Mexico.

In October 2014, the World Trade Organization ruled in favor of Canada and Mexico, finding that the mandated country-of-origin labels in the United States are not tradecompliant and hurt business in nearby countries. The United States is appealing the decision. However, research from Kansas State University, in collaboration with Oklahoma State University, finds that most consumers aren't willing to pay extra for the label.

"Less than one-third of the participants surveyed know that it is a law to label where the meat originates," says Glynn Tonsor, associate professor of agricultural economics at Kansas State University. "Effectively, producers lose and consumers lose because we have not observed an aggregate demand increase in response to that origin information."

The labels were implemented in 2009 to provide shoppers more information about the origin of their meat. In 2013, the labels were revised to provide more specifics about the origin, including where the animal was born, raised and slaughtered. Tonsor surveyed consumers in 2009 and in 2013 and found the same results: The majority of shoppers aren't interested in these labels.

"Time and time again, we find that food safety, price, freshness and taste tend to be attributes, regardless of the meat product we're talking about, that rank highly in importance and drive purchasing decisions," Tonsor says. "Social issues like origin, environmental impact and sustainability matter to consumers, but do not drive purchasing decisions."

A decision on the appeal is expected in early 2015. In the meantime, country-of-origin labels are still being used.

—Source: Kansas State University News and Communications Services.



COLOR COUNTS FROM PREVIOUS PAGE

Ground beef's shelf life is about three days. Extending that by even a single day can make a big difference. That's partly because hoppers typically fall into two main categories: planners, who shop for the week's meals Sunday night, and demand shoppers, who shop Thursday to Saturday. That leaves a day in the middle of the week when ground beef can lose its red appeal and retailers can lose sales.

Changes in meat color and odor result from a variety of causes, including fat content, packaging and exposure to oxygen. Heat from store lighting in display cases also causes color fade.

Wiegand and others at MU Extension and MU's College of Agriculture, Food and Natural Resources are studying how retailers can keep beef on the shelf a day longer before it's discounted for quick sale. The National Cattlemen's Association and Mizzou Advantage fund the study.

Wiegand and colleague Carol Lorenzen studied meat color changes under fluorescent and LED lights. Colors were compared against a control group with no light exposure. Meat not subjected to light kept its red color better than either, but meat under LED lights fared better than fluorescent-lit ground beef. Fluorescent lights produced higher temperatures than LED lights and meat turned brown quicker.

Wiegand's information may help retailers reduce losses as low supply and high demand intersect. "If beef is the new gold, let's do our best to preserve it for the consumer that stays loyal to its purchase," he said.

Sign-Up Deadline Feb. 20 for Water Quality Initiative

Missouri landowners might be eligible

Story From Natural Resources Conservation Service

The USDA's Natural Resources Conservation Service (NRCS) announced that landowners have until Feb. 20 to request assistance through an initiative to improve water quality in three Missouri watersheds.

State Conservationist J.R. Flores says NRCS will provide financial and technical assistance to help farmers, ranchers and forestland owners in the three watersheds install conservation practices that manage nutrients, pathogens and sediments. Funding comes through the agency's National Water Quality Initiative.

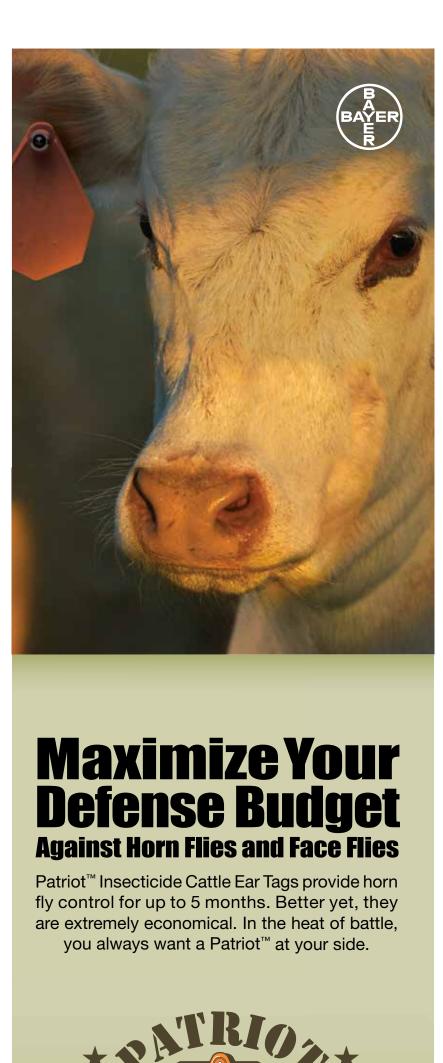
The watersheds include: Lower Little Medicine (Grundy and Sullivan counties in northern Missouri); Upper Troublesome (Knox and Lewis counties in northeastern Missouri); and Opossum Creek-North Fork Spring River (Jasper and Barton counties in southwestern Missouri).

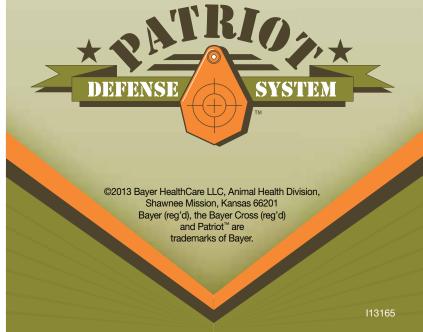
Eligible producers will receive assistance for nutrient management, cover crops, conservation cropping systems, filter strips, terraces, and in some cases, edge-of-field water quality monitoring.

"This initiative provides an opportunity for farmers in the project areas to do even more to improve the quality of their local water sources," Flores says. "It's also a good opportunity for farmers to try a conservation practice that maybe they haven't tried before, like cover crops."

Flores states NRCS will work with landowners with approved applications to determine how alternative conservation systems they are considering will impact water quality improvement. Additionally, state water quality agencies and other partners will do in-stream and watershed-level monitoring to track water quality improvements in the project watersheds.

NRCS accepts applications for financial assistance on a continuous basis, but applications for funding consideration during this fiscal year must be received by Feb. 20.





PASTURE PLANNING

Clover Overseeded on Pasture Boosts Forage, Calf Quality

Frost seeding takes worry out of planting legumes into grass

Story By Duane Dailey for Cattlemen's News

Aseason grass pastures is the best investment for forage livestock.

"I've said it hundreds of times; and I'll say it a hundred times more. Plant clover," says Rob Kallenbach, with University of Missouri Extension.

"Legumes make good grass better," the forage specialist says. "The most direct benefit is another quarter pound of calf gain per day per head."

Many studies show advantage of pastures with legumes over those without, he adds.

winter Late is the time to overseed legumes. In northern Missouri the old adage was to seed on top of the last snow of the winter. In southern Missouri, now's the time. When ground is frozen, you can get across the pastures.

Don't wait, plant now. The seed won't sprout until the temperature warms.

In Missouri a big added benefit is reducing fescue toxicosis. Calves on clover-fescue pastures have smoother hair coats, stand in water less and gain body condition.

Legumes don't eliminate the fescue toxin problems, but they dilute the toxin.

The word in the literature is and fertility up." "mitigate." Kallenbach guickly adds, "Let's just say that legumes are a big help."

With high costs of fertilizer, legumes add another benefit. Their root nodules make nitrogen, which grass uses for faster growth. More pounds of grass boost weight gains.

dding legumes to cool- There is no need to add grass.

> Reducing nitrogen bill cuts input costs to lower the cost of raising calves.

> nitrogen to the soil to establish clovers, and the nitrogen from the clover can add 10 to 100 pounds of N per acre for the



Red and white clover are inexpensive legumes that might be added to cool-season grass pastures. University of Missouri Extension Forage Specialist Rob Kallenbach says legumes might add a quarter pound of calf gain per head per day. —Photo by Joann Pipkin

Cutting N fertilizer doesn't cut need for other fertility.

Spreading lime is the starting point for getting legumes established. Correct the soil pH first, follow soil-test recommendations.

"If your soil pH is down to 4, don't even bother seeding legumes." Kallenbach says. "Spend this year getting pH

Red and white clovers do well when pHs are up around 5.5.

Lime helps plants take fertility from the soil.

Soil potassium levels should run 150 to 200 pounds per acre. Soil phosphorus should know the value of alfalfa on milk production.

be at least 20 pounds per acre

Those basic nutrients are

recycled through the cows

onto the pasture. That's best

rotational grazing. Reducing

fertilizer cost adds benefits

for dividing big pastures into

In his talks, Kallenbach

switches back and forth be-

tween saying "Legumes" and "Clovers." In Missouri the

most popular and least expen-

sive legumes are the clovers,

There are benefits for birds-

foot trefoil and lespedeza. His

favorite is for growing more

alfalfa in Missouri. Dairymen

red and white.

smaller grazing paddocks.

management-intensive

Bray I test.

Alfalfa works well as a standalone crop although planted with a novel-endophyte fescue it makes excellent grazing.

A frequent recommendation is for overseeding red clover at 3 to 4 pounds per acre. White clover needs only 0.5 to 1 pound. Seed both at same

Legume benefits just keep coming, says Kallenbach. Now, more than ever, economics favors more production from pasture lands. Seeding legumes takes the first big High calf prices make the case for adding daily gains. Clover-enriched grass adds to the cow's milk. Soon her calf learns to eat clover. Legumes give double benefits.

The latest change comes from rising land costs. In the last five years, Missouri lost 1.5 million acres of pasture, plowed up for crops. High corn and soybean prices drew marginal land into crops. That raised rent on all land.

To mitigate rising land costs, herd owners must increase returns per acre. That's when more pounds of calf at higher calf prices helps.

February is not too early for getting seed on the ground.

> Setting a no-till drill plant shallow enough for tiny clover seeds is difficult. With frost seeding, Mother Nature gets it right. Freezing and thawing work seed into the soil just deep enough to germinate. Short grass makes less shade allowing legume seedlings to start.

> Hard grazing slows grass emergence just enough in spring to cut competition as well.

> To cut competition, grass pastures should be grazed down hard. Bare soil should show between grass plant crowns. Grazing opens landing spots on bare soil for tiny

legume seeds.

There's another competition to be considered. If broadleaf weeds overrun the pasture, do weed control for a year before planting legumes.

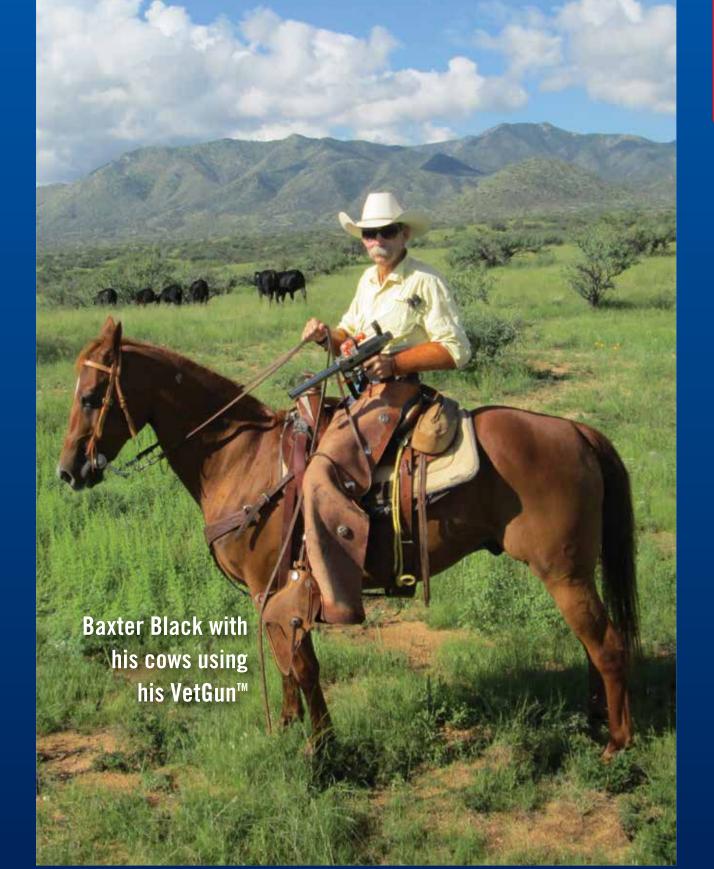
Once sensitive legumes are growing no herbicide kills weeds without wiping out clo-

Kallenbach urges winter seeding. But first, two priorities exist in the year ahead of over seeding — adequate fertility and weed control.

For most, it's time to avoid adding spring nitrogen and starting the seeder.

See Page 16 for additional information on frost seeding pastures.

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PASTURE PLANNING

6 Steps for Successful Frost Seedings

No substitute for poor fertility management

Story By John Hobbs

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- **1. Site Selection**—Frost seeding can be used at any geographical location but is particularly effective where tillage can create potential erosion problems. Sites where maximum seed-to-soil contact can be achieved are essential.
- **2. Soil Fertility**—Proper soil pH and fertility are essential for

efficient forage production. Soil tests should be taken every 2 to 3 years to determine nutrient status. Tests should be taken at least six months prior to seeding to allow for corrective measures.

Frost seeding should not be considered as a substitute for poor fertility management. If a poor pasture is the result of low fertility, frost seeding will not remedy this situation.

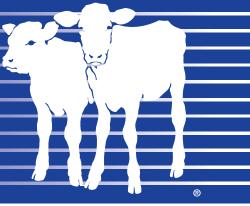
- **3. Species Selection**—Historically, most frost seedings have been made to introduce or increase a forage legume species into an established grass stand. Select the legume best suited to the soil conditions and intended use.
- **4. Seeding Rates**—Use proper seeding rates. Refer to the chart below for recommendations.

These stated seeding rates are based on traditional establishment methods. Frost seeding might require higher seeding rates depending on the given location and desired level

of production.



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Forage Species	Seeding Rate (lb/A)
Red Clover	8
Birdsfoot Trefoil	6
Ladino Clover	1 to 2
Alsike Clover	3 to 4
Alfalfa	10
Annual Lespedeza	20
Orchardgrass	2 to 5
Ryegrass	3 to 5

5. Seeding Time and Method—The basic principal behind frost seeding is the "honey-combing" action that is created by alternating freezing and thawing cycles in late winter. This activity helps to incorporate broadcast seed into the soil surface. To take advantage of these environmental changes, frost seeding should occur in late winter in southwest Missouri.

Frost seeding can be accomplished with any broadcast type seeder. Tractor 3-point hitch mounted seeders have been typically used. In recent years, seeders mounted onto all-terrain vehicles (ATVs) such as four-wheelers have become a popular choice for seeding.

6. Seed Treatments—Seed treatments containing nitrogen-fixing rhizobia bacteria are widely available for most common legumes. Rhizobia do survive in soil, so if the legume of interest is present in low amounts in the field to be seeded, rhizobia coating is usually not required. If the legume is not present in the pasture, then a rhizobia seed coating is recommended.

—Editor's Note: Adapted from an article written in University of Missouri Extension Ag News and Views/Jan. 2015.

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TRENDING NOW

Sky's the Limit

No boundaries for UAVs in Ag

Story From University of Missouri Cooperative Media Group

The next generation of farm-hands might be able to leap over barbed-wire fences and towering cornstalks in a single bound. Rules restrict use of unmanned aerial vehicles (UAVs) now, but the future holds promise for many agriculture uses, say University of Missouri Extension specialists Bill Wiebold and Kent Shannon.

The remote-controlled devices can fly above fields and quickly send information from attached sensors and cameras back to farmers on the ground. Farmers can download, evaluate and react to data quickly. Dense rows of crops do not obstruct views. Unlike the aging farm population, UAVs are not hampered by medical issues, muddy fields or fence rows. They overcome these barriers to zoom in and immediately send photos electronically to off-farm advisers.

Federal Aviation Administration (FAA) rules currently restrict usage, but farmers should plan now for the future, Wiebold told those attending the recent MU Extension Crop Management Conference. He flies UAVs for personal enjoyment and follows "line of sight" guidelines set by FAA.

Wiebold says UAVs can scout for insects and diseases that can't be seen from the outside of a field. They can scan large acreages from a unique perspective without physical barriers or time restrictions. And there are other benefits. "It's relatively easy and fun," he says. Sensors and cameras can let farmers assess plant size, crop maturity, stand density, nutrient needs, stress and pests, among other things. Producers can check on livestock, fences and equipment with a bird's-eye view.

Data collected by UAVs helps farmers make plans for the current season and can be archived for future management decisions, Wiebold says.

Shannon says costs run from \$1,200 to about \$4,500 for models suited for agricultural use. UAV owners can expect

crashes and errors as they learn.

The Associated Press reported in December 2014 that the United States lags other countries in developing safety regulations that would permit a wide array of industries to use UAVs. The FAA bars all commercial use of drones, except by 13 companies that have been granted limited-use permits. Europe and Canada have issued more than 1,000 permits each and 180 Austra-

lian operators have received permission to fly. Japan has allowed UAVs to monitor and spray crops for more than a decade.

Wiebold says it's important to follow FAA rules, but the rules may change again in 2015. "We need to be good stewards

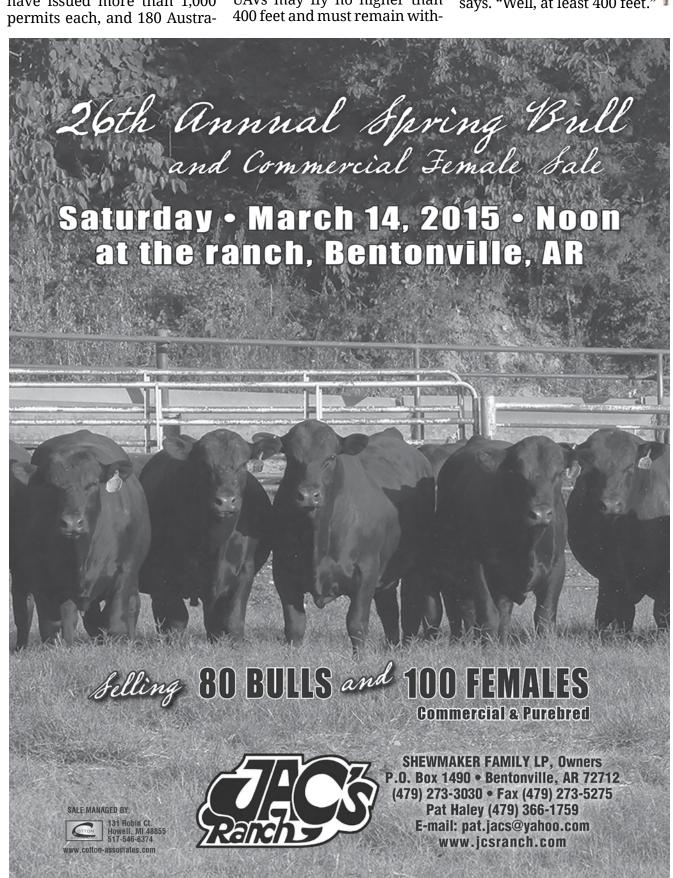
of this technology like we have been with other technologies," he says. Current guidelines say UAVs may fly no higher than 400 feet and must remain with-

rules may Unmanned aerial vehicles have a promising future change again in agriculture, according to Kent Shannon, MU Exin 2015. "We tension natural resource engineering specialist.

—Photo from University of Missouri Extension

in the operator's line of sight.

What's possible with UAVs? "The sky's the limit," Wiebold says. "Well, at least 400 feet."



Addressing Weak Calf Syndrome

What leads to the condition, suggestions in caring for these newborn calves

Story By Katie Allen

The word "syndrome" can be defined as a concurrence, a pattern of events occurring together due to known or unknown causes. When veterinarians use the word, it usually means the latter. Many different possibilities could cause a syndrome in animals, says Gregg Hanzlicek, director of production animal field investigations for the Kansas State University Veterinary Diagnostic Laboratory.

Weak calf syndrome is no different. Calves with the syndrome are typically born with no noticeable problems, but they cannot get up. They are so weak that they might fall over on their side and

usually come around slowly.

Hanzlicek points at disease or nutritional deficiencies as some of the causes of weak calf syndrome.

"BVD (bovine viral diarrhea) in the herd is sometimes associated with weak calves," he says. "From a nutritional standpoint, vitamin A deficiency or selenium deficiency in the dam has been associated with weak newborn calves."

Diagnostic tests can pinpoint BVD or vitamin A and selenium deficiencies, Hanzlicek states. These tests require tissue or blood samples from the calf or its dam, and they provide a way for the producer to determine why calves are born in a weakened situation.

Depending on the cause of the weakness, a high percentage of these calves sometimes do not survive, he said, which can damage producers economically given current record-high cattle prices.

Prevention: know your nutrition

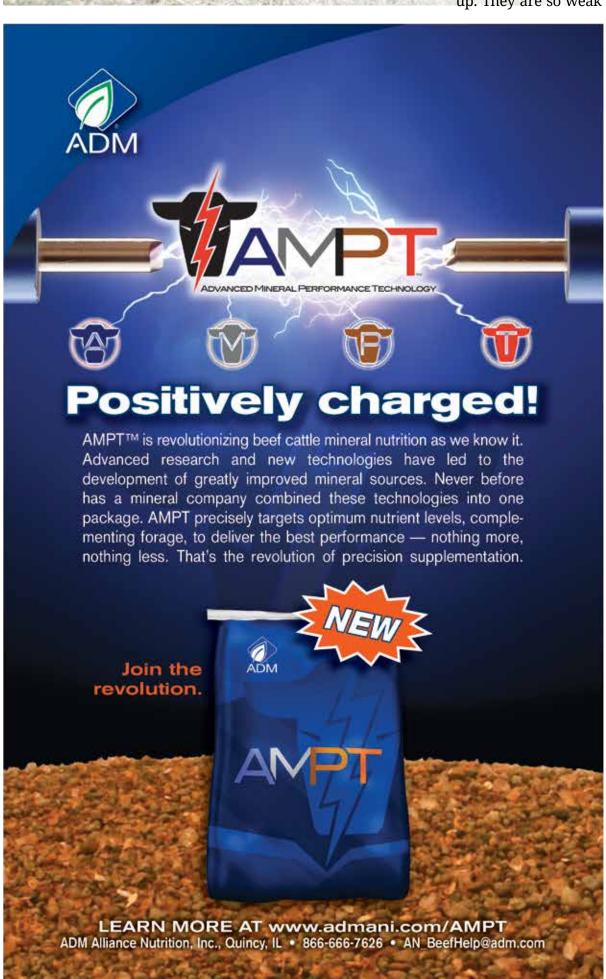
Nutritional balance in cows and heifers prior to and during calving season is crucial, Hanzlicek says, especially during periods of cold temperatures. One of the main reasons for weak calves is that their mother consumed a diet deficient in energy and protein, although lack of protein in late gestation is usually the main culprit.

He notes cows and heifers should have at least a body condition score (BCS) 5 prior to calving. In the last trimester of gestation, the demands of the cow and her unborn calf are huge, and the demands increase even more in cold weather.

"We know that for calves born to cows that are less than a BCS 5, it takes them a much longer time to get up and nurse once they are born," Hanzlicek explains. "All calves are born with a small amount of body fat they can use for energy. If they are born in a cold environment, they are trying to keep warm, but they don't have much body fat to use for energy. Therefore, they can get weak quickly."

Although it might be too late to prevent weak calves from nutritional imbalances





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WEAK CALF SYNDROME FROM PREVIOUS PAGE

for the current calving season, Hanzlicek says producers should still test forages to know the protein, energy and trace mineral content. The analysis process requires the producer to take samples of the hay they plan to feed during winter, have those samples tested by a lab, then work with a veterinarian or animal scientist to balance an appropriate diet for the herd.

Also discuss with a veterinarian or animal scientist how to appropriately adjust those rations for colder temperatures, he said, as cows and heifers will need more protein and energy during 10 degree Fahrenheit days compared to 30 and 40 degree days, for example.

Hanzlicek adds that injectable products are available as a short-term remedy for diagnosed vitamin A or selenium deficiencies. They can be given to pregnant cows and heifers to supplement their unborn calves, but producers likely would not need them if they perform a forage analysis and feed an appropriately formulated diet.

Response: make an intervention

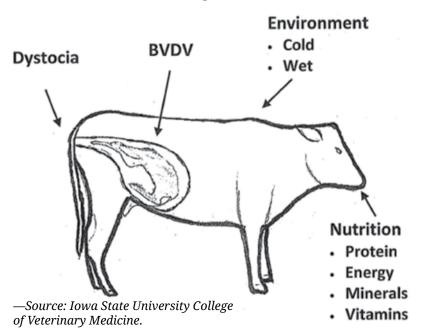
Prevention is more favorable than response, Hanzlicek says, but if producers are experiencing weak calf syndrome in their herds this calving season, they must get the calves up, warmed and nursing within a short time after birth.

During cold days, he says producers should consider warming the calves on the floorboard of a pickup, in a hot box or using a warm water bath. Research has shown that a heat lamp alone usually won't warm calves sufficiently.

"We need to warm the calf up, but then we need to provide some type of oral energy for that calf, because it's hypothermia and perhaps hypoglycemia that explain the weakness," Hanzlicek says.

Providing oral energy doesn't mean giving the calves electrolytes, a remedy used to treat scours, he states. Even the highest-energy electrolyte products have a small amount of total energy, so he recommends colostrum or milk replacers to help treat weak calves.

Weak Calf Syndrome



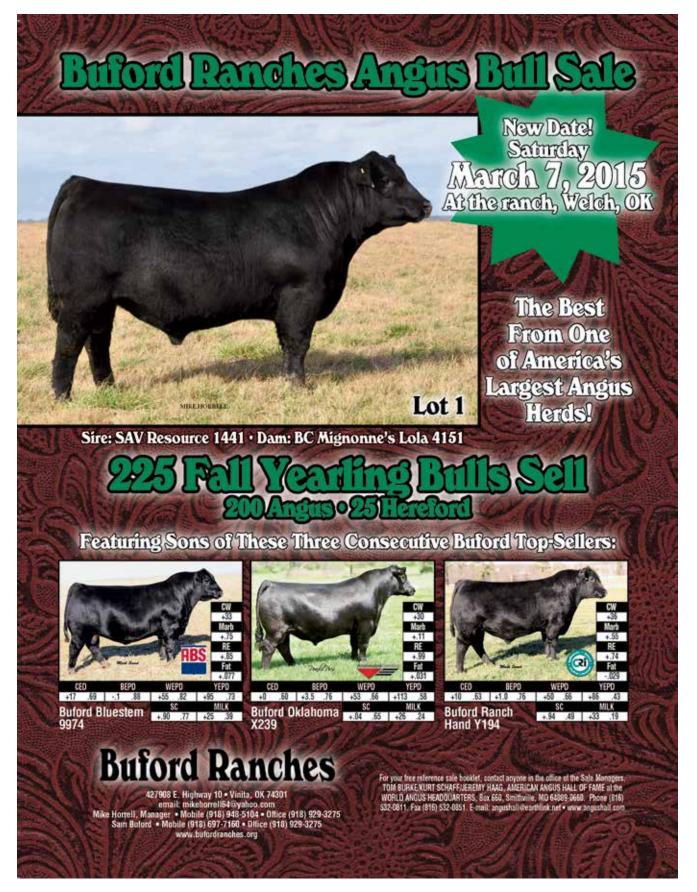
"The reason why we like colostrum replacers is that it's likely

the weak calf didn't get up and consume its colostrum," Han-

zlicek says. "Colostrum contains the necessary antibodies to protect the calf, so we want to try to provide antibodies to them to protect them from scours and respiratory disease. It is best if we can get the colostrum in them within two hours after birth, certainly less than six hours after birth. In a cold spell, it may make sense to intervene earlier, maybe within the first hour."

"It's amazing once you warm them up and administer highenergy products how fast those cold, weak calves will get up on their own," he adds. "Many times you can send them out with their mother the next day."

—Source: Kansas State University Extension



TRENDING NOW

Making Strides

Trichomoniasis in Missouri shows rapid decline

Story By Joann Pipkin, Editor

Tn a word — progress. Since information offi-Sept. 1, 2011, the number of trichomoniasis submissions has dropped from 213 to just 24, according to the Missouri to the new regu-Department of Agriculture's lations, the per-Animal Health Division.

"Since September 2011, when regulations were implemented to test bulls sold within Missouri, the percentage of positive bulls has dropped greatly," says Sarah Alsager, public

cer, Missouri Department of Agriculture. "Prior centage of positive submissions was 4 percent. Positive submissions have now dropped to below 0.75 percent."

Positive herds identified in Fall 2014 have primarily been south of I-70.

New trich regulations include these changes to the current statutes:

• Trichomoniasis test will be

valid for 60 days. Currently, the test is valid for 30 days.

• Producers may submit samples to any AAVLD (American Association of Veterinary Diagnosticians) Laboratory or NAHLN (National Animal

Trichomoniasis Positives in Missouri

Time Frame	# Positive Submissions
Sept. 1, 2011-Aug. 31, 2012	213
Sept. 1, 2012-Aug. 31, 2013	134
Sept. 1, 2013-Aug. 31, 2014	73
July 1, 2014-Dec. 31, 2014	24

-Source: Missouri Department of Agriculture



Health Laboratory Network) laboratory.

- Owners of adjoining cattle herds will be notified of positive animals, and the owner of the positive bull must supply the Missouri Department of Agriculture with a list of individuals and their contact information.
- An epidemiological investigation will be conducted on all adjoining herds.
- Owners of positive bulls may submit a request to the state veterinarian to have their bull reclassified as negative.

"We continue to educate producers about trichomoniasis and the benefit of biosecurity," Alsager says. "We also provide them with tools to assess the risk of the animals they are purchasing. The Animal Health Division has relied upon input from accredited veterinarians, producers and livestock market owners to provide input regarding the effectiveness of regulations."

She adds the Missouri Department of Agriculture will continue to evaluate the effectiveness of the proposed regulations to ensure the number of positive animals in Missouri keeps decreasing.

"Input from accredited veterinarians, producers and livestock marketers throughout our state will, as always, be sought so that we can guarantee our regulations are effective."

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TRENDING NOW

Beef Checkoff Launches MBA 2.0

Sign up now for Masters of Beef Advocacy

Story From Our Staff

The beef checkoff's Masters of Beef Advocacy (MBA) program has launched MBA 2.0, an opportunity for beef and dairy producers to step up and be true leaders – 'Agvocates', if you will – for the industry and all of agriculture. Building on the success of the original MBA courses, with nearly 6,000 graduates to date, the program hinges on the need for consumers to hear directly from those growing and delivering their food to them.

Each course, which has all new content based on consumer research about questions regarding the beef industry and end product, takes about an hour to complete and follows the beef lifecycle:

- **1. The Beef Community** all about the people involved in producing beef, from pasture to plate.
- **2. Raising Cattle on Grass** covering the cow/calf and stocker/backgrounder stages of production.
- **3. Life in the Feedyard** what goes into ensuring cattle receive proper care and a healthy diet in the finishing phase.
- **4. From Cattle to Beef** how cattle are humanely slaughtered and processed into beef products.

5. Beef. It's What's for Din-

ner – consumer information about how to properly store, handle and cook beef to ensure a safe and enjoyable eating experience.

"When I started to get asked questions from consumers and groups about how we farm and feed cattle, I was struggling to find answers that I could back up with hard facts, and it felt like I also needed to learn more about other sectors of the industry with which I had little experience," says Joan Ruskamp, Cattlemen's Beef Board (CBB) member from Dodge, Nebraska.



"When I found out about the MBA program, I jumped at the chance to complete the courses. For me, it turned out to be a great teaching tool to help me become an informed advocate – not just for my own family's benefit, but for the good of the entire industry.

"Since then, I have had the opportunity to talk about beef and the beef industry to everyone from neighbors and friends to large groups of activists. Remember, though, getting your MBA doesn't necessarily mean that you have to start booking appearances as a traveling speaker," says Ruskamp. "It also prepares you well for daily conversations that you have or hear, and it gives you the ability to share hard facts and figures that help increase confidence in our end product and our industry. While our personal stories are important in putting a face on our industry, the ability to build trust in farming and ranching – and beef – is greatly enhanced by facts versus opinions and emotions."

Those individuals who completed the original MBA courses will remain enrolled in the program and can take the 2.0 classes to update their certificate. MBA grads then have the opportunity to join the private Facebook group where they can have interaction and dialogue about emerging industry issues.

Ruskamp and fellow Cattlemen's Beef Board member Brenda Black of Missouri have challenged every CBB member to join them in completing MBA 2.0.

"I earned my MBA during the initial run of the program and am working on completion of the updated program with all of you who accept this challenge," says Black. "From my experience, I can tell you that the courses are truly interesting, engaging and informative, which make the quizzes

at the end of each section a breeze. And you come away with a clear and useful understanding of issues that are so important to consumers and, as a result, important for us to share with them."

The MBA program is funded by the beef checkoff, and there is no cost to participate.

—Source: MyBeefCheckoff.com

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For subcutaneous use in beef and non-lactating dairy cattle only. Not for use in female dairy cattle 20 months of age or older or in calves to be processed for yeal.

BRIEF SUMMARY: For full prescribing information, see package insert.

INDICATION: RESFLOR GOLD® is indicated for treatment of bovine respiratory disease IRRIO) associated with Mannheima haemolytica, Pasteurella multocida, Histophilus somni, and Mycoplasma bovis, and control of BRD-associated pyrexia in beef and non-lactating dairy cattle.

CONTRAINDICATIONS: Do not use in animals that

Naws shown hypersensitivity to increnicol or fluenzin.

WARNINGS: NOT FOR HUMAN USE. KEEP OUT OF REACH OF CHILIDREN. This product contains material that can be irritating to skin and eyes. Avoid direct contact with skin, eyes, and clothing. In case of accidental eye exposure, flush with water for 15 minutes. In case of accidental skin exposure, wash with soap and water. Remove contaminated clothing. Consult a physician if irritation persists. Accidental injection of this product may cause local irritation. Consult a physician immediately. The Material Safety Data Sheet (MSDS) contains more detailed occupational safety information.

call 1-800-211-3573. For technical assistance or to report suspected adverse reactions, call 1-800-219-9286.

Not for use in animals intended for breeding purposes. The effects of florfenicol on bovine reproductive performance, pregnancy, and lactation have not been determined. Tooicity studies in dogs, rats, and mice have associated the use of florfenicol with testicular degeneration and attophy. NSAIDs are known to have potential effects on both parturition and the estrous cycle. There may be a delay in the onset of estrus if flunixin is administered during the prostaglandin phase of the estrous cycle. The effects of flunixin on imminent parturition have not been evaluated in a controlled study. NSAIDs are known to have the potential to delay parturition through a tocolytic effect.

RESFLOR GOLD*, when administered as directed, may induce a transient reaction at the site of injection and underlying tissues that may result in trim loss of edible tissue at slaughter.

RESIDUE WARNINGS: Animals intended for human consumption must not be slaughtered within 38 days of treatment. Do not use in female dairy cattle 20 months of age or older. Use of florfenicol in this class of cattle may cause milk residues. A withdrawal period has not been established in pre-ruminating calves. Do not use in calves to be processed for veal.

ADVERSE REACTIONS: Transient inappetence, diarrhea, decreased water consumption, and injection sits swelling have been associated with the use of florfenicol in cattle. In addition, anaphylaxis and collapse have been reported post-approval with the use of another formulation of florenicol in cattle.

In cattle, rare instances of anaphylactic-like reactions, some of which have been fatal, have been reported, primarily following intravenous use of flunixin meglumine.

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High Stakes

Bull buying in good times requires extra thought

Story From Our Staff

enetic decisions have al-Ways been important, but the stakes have never been tional consideration. higher than they are now.

the basics haven't changed, some factors are worth addi-

"We're witnessing a cattle market for calves, feeder and live cattle unlike anything we've ever seen," said Warren Rusche, South Dakota State University Extension cow/ calf field specialist. "That's the good news. At the same time, the amount of capital at risk and the dollars at stake with every decision have never been higher."

Bull Cost Per Calf

Purchase Price of Bull

Years of Service	\$5,000	\$8,000	\$10,000
1	\$195	\$345	\$445
2	\$120	\$195	\$245
3	\$95	\$145	\$178
4	\$83	\$120	\$145

Assumes 20 calves per year, \$900 annual maintenance cost per bull, \$2,000 salvage value. -South Dakota State University Extension. See more at: http://igrow.org/news/bull-buying-decisions-in-good-times/#sthash.kdU8WdCV.dpuf

The average bull bought this year will very likely cost more dollars today than at any other time in recent memory, said Rusche.

So how does that change bullbuying decisions by producers? Rusche said that although **Longevity:** One way to reduce the cost per calf of higher-valued bulls is to increase their productive life. The table above shows a simple example of how getting more years of service from bulls lowers the cost per calf.

bull just because he is cheaper will be more costly than spending too much," he said.

"High-priced bulls that don't

last are incredibly expensive,"

Rusche said. "Buy bulls that

have been developed to last

and manage them so that they will hold up and not crash."

Genetic Merit: Looking at

the Table Bull Cost Per Calf,

below, a producer would be

easily tempted to lower their

standards, Rusche said. "Ev-

ery operation has budget re-

straints, but buying the wrong

The SDSU Calf Value Discovery project has consistently seen profit spreads between high and low profit steers hit \$500 per head.

Accuracy of Selection: As the cost of breeding assets increase, the costs of making mistakes go up as well.

"Any tool that helps producers more accurately identify bulls that meet their goals will reduce that risk," Rusche said.

Genomic-enhanced **EPDs** combine the power of DNA testing tools like the 50K test with traditional performance testing to improve genetic selection and increase the accuracy of EPDs.

Reproduction: In the simple terms, the bull has one primary job — get cows bred. In today's market, it's nearly impossible for a cow to lose money, provided that she's pregnant and weans a calf. Breeding soundness exams, managing bull condition and reducing the environmental stress on the bulls are musts.

"Having extra bull power as an insurance against injury may be worth considering as well," Rusche said.

-Source: Story from South Dakota State University Extension





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Fat and Fertility

How fat-soluble vitamins affect fertility

Story By Elizabeth Walker for Cattlemen's News

It is my opinion that vitamins A, D, E and K are the tastiest of all vitamins because no other group of vitamins are stored or produced in fat. I am a firm believer that some type of fat should be served at every meal. Even brussel sprouts are tasty if they are fried in real animal fat.

Vitamins A, D, E and K are known as the fat-soluble vitamins because they can be stored in fat. Other vitamins mentioned in previous articles are water-soluble and are not stored in the body. Unlike the fat-soluble vitamins, an animal can never overdose on the water-soluble vitamins as any not absorbed are just excreted in the urine.

While a deficiency in all the fat-soluble vitamins can impact reproduction, vitamins

A and E are probably the most important. Vitamin K certainly has a role in overall health since it is an integral part of the blood clotting system. In fact, compounds in rat poison inhibit vitamin K function. Vitamin D is not stored in large quantities in the animal as the animal when exposed to sunlight may synthesize it. Sun-cured forages are high in vitamin D, thus D is rarely needed as a supplement for beef cattle.

Vitamin A might be the most important in regard to overall fertility and is essential for normal reproduction as well as maintenance of the tissue lining the reproductive tract. Vitamin A is synthesized from beta-carotene found in green, leafy plants. Beta-carotene is converted into vitamin A in the animal. Cattle that have ei-



ther been exposed to drought or are grazing low-quality stockpiled forages are most susceptible to vitamin A deficiency. Ensiling preserves beta-carotene, but the amount available to the animal may be variable. High quality forages typically provide adequate amounts of beta-carotene, but again, amounts may vary due to environmental stressors such as drought.

Typically, an animal stores between two and four months' worth of vitamin A in its liver. Late winter and early spring might be times to supplement vitamin A in a mineral mix or provide animals with an injectable vitamin A supplement. As a rule, vitamin A deficiencies are most likely seen

when cattle are on high-concentrate diets, especially feeds that have had excess exposure to sunlight and high temperatures or those that have been stored for long periods of time. Dry, mature pastures or hay grown during drought conditions will typically be deficient in beta-carotene.

Signs of vitamin-A deficiency include reduced feed intake, rough hair coat, slow growth, low conception rates, abortions or stillbirths, reduced birth weight of calves, and even abnormal semen. Prior to a winter, early spring breeding season, animals should be provided with a good quality, leafy hay and a mineral mix that includes vitamin A. Keep in mind that correcting an animal's vitamin-A deficiency will not happen quickly, and the best bet is to prevent a deficiency from occurring in the first place.

Colostrum carries vitamin A, as well as D and E, to the calves, so a dam deficient in

CONTINUED ON NEXT PAGE



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HELPING HANDS

Conservation Innovation Grants Available

Pre-proposals due Feb. 24

From Our Staff

Applications are being accepted for up to \$20 million in grants to facilitate the creation of new, innovative markets for carbon credits, providing additional revenue sources for producers and address natural resource conservation challenges. These grants are part of the Conservation Innovation Grant (CIG) program, authorized through the 2014 Farm Bill.

For 2015, approximately half of the \$20 million is available for environmental markets and conservation finance projects that engage agricultural producers. In past years, CIG has helped fund the development of the basic infrastructure of these markets. This year, USDA, through the Natural Resources Conservation Service (NRCS) is seeking applications for projects that

will build on these efforts by maturing and scaling markets and accelerating efforts to leverage private capital and investment in private lands conservation. Improved quantification tools, multi-resource crediting, and projects that substantively engage corporate or financial partners are the types of activities NRCS is pursuing.

As in prior years, NRCS will accept pre-proposals for initial review before inviting entities to submit full proposals. Pre-proposals are due Feb. 24, 2015. The full announcement of program funding is available at http://go.usa.gov/4Kvx. To apply electronically, visit http://www.grants.gov or contact a local NRCS office.

—Source: Adapted from a USDA release.

FAT AND FERTILITY FROM PREVIOUS PAGE

any of the vitamins will have a calf that is also deficient.

Vitamin E is probably the trickiest vitamin of all. Like vitamin C, it is an antioxidant and like vitamin A, it is important in maintaining the cells lining the reproductive tract. Vitamin E also plays a major role in the immune system, increasing the absorption of beta-carotene and the storage of vitamin A. Animals who are deficient in vitamin E might have symptoms masked by selenium, and often vitamin E and selenium have similar roles.

Vitamin E is stored in almost every tissue, indicating that all tissues have a requirement for vitamin E. Additionally, Vitamin E is passed through the dam via her milk to her calf. A cow deficient in vitamin E will wean a calf also deficient in vitamin E.

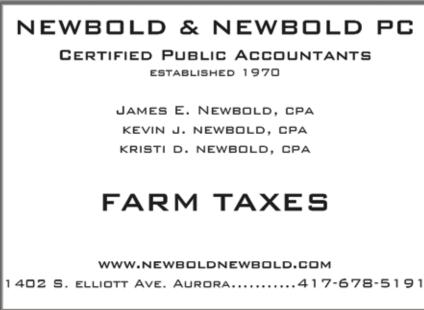
Both vitamins A and E can be supplemented via an injectable source. However, because these vitamins might be stored, you can overdose an animal, which could have deadly consequences. If you do supplement, it is always wise to visit with a ruminant nutritionist or your local veterinarian. Also, keep those bottles of A and E out of direct sunlight since sunlight will degrade the vitamins.

—Elizabeth Walker is associate professor of animal science at Missouri State University.

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Finding Added Profit

Crossbreeding enhances fertility value

Story By Rebecca Mettler For Cattlemen's News

L efficiency in beef cattle production spans each sector of the industry. However, for the cow-calf producer, finding efficiencies related to the most important production traits is a logical place to start.

Fertility is one of the most important traits in cow-calf production and determines all of the forward-looking production capabilities, explains Bob Weaber, cow-calf extension specialist and associate professor with Kansas State University.

"It's the first thing that has to be obtained in the production cycle," Weaber says. "All bets are off if we don't get the cow settled."

Megan Rolf, Oklahoma State University beef genetics extension specialist believes there is an industry consensus that fertility is an incredibly important trait, and it's important to think about fertility when making selection and management decisions.

"Carrying open cows is costly, but maybe more important is the value of the missed breeding opportunity and the value of the calf produced is missed profit," Weaber says. "It's a very profitable phase at present for the cow-calf producer, and they can leave a lot of money on the table."

Besides the missed opportunity to produce a calf, the producer must think of the cost of culling an open female, especially if it's medium age or older. Replacing open cows with younger replacement females requires a substantially larger capital investment than in years past, according to We-

Reproductive efficiency is critical, but from a genetics perspective, most of the traits associated with fertility have lower heritability. This means opportunities for genetic selection, such as heifer pregnancy EPDs, should be capitalized on, and producers shouldn't forget the benefits of crossbreeding and management to improve fertility, Rolf says.

The possibility for increased "Through crossbreeding and the use of maternal heterosis, it's easier to increase calving rate, improve survival of those calves, improve the maternal environment, and the cows will last longer," Weaber said.

> Rolf notes that the primary advantage of heterosis is in the crossbred cow. She sees the crossbred cow as the best way to capitalize on gains in fertility and longevity as resulted by heterosis.

> "Sometimes producers think that heterosis means the animal will outperform it's parents, but it's really about outperforming the average of the parents," Rolf explains.

> In addition to the benefits gained from heterosis, crossbreeding contributes to genetic improvement through complementarity. breed Some breeds aren't known for their marbling potential, but are more heavily muscled animals. Breeding the highyielding animal to the superior marbling breed puts both traits into a single animal, Rolf notes.

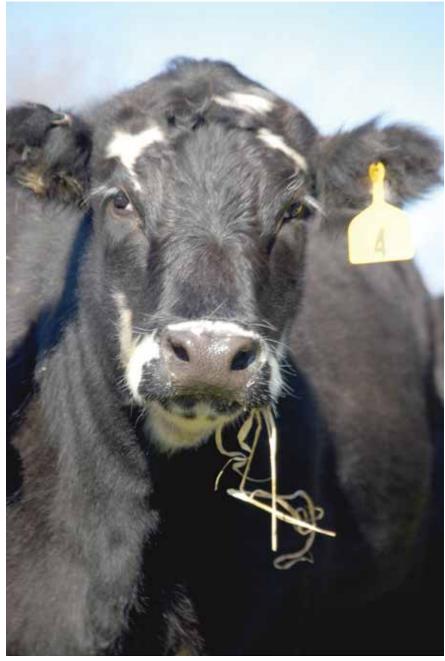
Heterosis at Work

"Two-thirds of the economic value in crossbreeding comes from maternal heterosis and the other one-third is from crossbred calves." Weaber says.

Putting more calves on the ground each calving season has a much better impact than 20 to 30 pounds on a calf at weaning. Throughout their lifetimes, crossbred cows boast a 4 percent increase in calving rate and 1.5 percent increase in calf survival to weaning.

The crossbreeding effect increases output by increasing the rate of reproduction. This leads to a decrease in culling by one-third to one-fourth because crossbred cows have increased longevity of 16 months in comparison to the average of their straightbred counterparts. As a result, fewer replacement heifers are required to be kept back each year decreasing production costs.

"With maximum maternal



Kansas State University Extension Cow/Calf Specialist Bob Weaber says two-thirds of the economic value in crossbreeding comes from maternal heterosis. —Photo by Joann Pipkin

heterosis, you can gain north of \$250 per cow per year in your herd," Weaber explains. "Look at the cow's productive lifetime of six years and it's \$1,500 per cow. That's real money. A 23 percent increase in weaning weight per cow exposed and marginal difference in input costs or cow manage-

At \$250 per cow in added value of production, the money adds up quickly. A herd of 100 cows could mass \$25,000 in additional profit each year. That's enough money to buy a pickup truck every other year, Weaber exclaims.

Even though quick math can be calculated in the above example, it's still challenging for producers to visualize what the value of crossbreeding might look like within an individual herd. Without an experimental system with a control, it is easy to lose track of the value of heterosis.

"Some may not consider crossbreeding for marketing reasons, but I think for the vast majority they can hit those market targets and still take advantage of having crossbred cows in the herd," Rolf said.

Crossbreeding can be cast as too difficult. That mindset is largely driven by the inability to think pragmatically. A producer must analyze what is the most realistic expectations are for their herd, Weaber says.

"The goal shouldn't be to maximize heterosis, but to optimize heterosis," Weaber says on the value of implementing a crossbreeding program.

Even if maternal heterosis is utilized at 50 percent, Weaber reminds producers that \$125 added revenue is more than zero.

For more information on crossbreeding, including specific crossbreeding programs, Rolf suggests visiting the National Beef Cattle Evaluation Consortium website's Sire Evaluation Manual at www.nbcec.org/ producers/sire.html.

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Ensuring Healthy Animals

A passion for veterinary medicine

While being a veterinarian in private practice for more than 20 years, Kerry Keffaber, D.V.M., advisor for Scientific Affairs and Policy at Elanco, developed a passion for helping animals get healthy and thrive in their environment.

"What is most fulfilling is helping ensure animals are healthy and free of pain and suffering," said Kerry. "If I can help provide tools with Elanco's Research and Development and Market Access teams so that animals can survive and producers have the resources they need to get animals thriving and highly productive, that's what motivates me every day."

Twelve years ago Kerry started as a field technical consultant for Elanco. Since then, he has had other roles, but in his current position, he helps the foodchain team communicate complex data and insights to educate a broader audience about contemporary agriculture and how technologies play an important role in food production.

Antibiotic acceptance in an evolving world

At a time when more and more consumers are looking for information about how their food is produced, it is imperative to build confidence in the food they're eating. While practicing veterinary medicine and working on Elanco's Research and Development team, Kerry knew that veterinarians and producers needed tools such as antibiotics for animal health and well-being.

"Regardless of how safe, effective and valuable any tool is to producers, consumers need confidence in that technology, which is why there has been more focus on antibiotics," said Kerry.

Consumers' mindsets shift the industry's outlook

"Because consumers have a growing interest and impact on food production, Elanco has made a commitment to better understand consumers' needs," said Kerry. "Being able to frame discussions and help consumer groups understand what is going on in farming is imperative so they have confidence in the food they eat."

As part of this effort, Elanco conducted market research in multiple countries and cities across the United States to better understand what consumers know about antibiotics and particularly how the agriculture industry can better communicate its needs and build confidence in beef products.

"There's always going to be 5 to 10 percent we'll never agree with, but that leaves 90 percent in the middle that we can engage with and find common ground," said Kerry.

Part of that communication begins with visiting various food-chain groups, such as processors, retailers and quick-service restaurants, to help them educate consumers about how antibiotics are used.

These conversations also focus on new regulations on antibiotic use and how they compare with policies in other countries.

"People in agriculture are not the moveable middle since we only make up 2 to 5 percent of the population," says Kerry. "Finding solutions that support only agriculture will not build confidence in consumers and allow us to maintain the freedom to operate and use the tools we need. While continuing to use all products responsibly, we must do a better job at communicating with consumers in a language they understand."

Antibiotic regulation changes

In December 2013, the U.S. Food and Drug Administration (FDA) finalized rules regarding veterinary feed directives (VFD) and how antibiotics should be used in production agriculture to better protect public health as it pertains to antibiotic resistance. Antibiotics in a shared class, which are medically important and used in both humans and animals, will be available only for therapeutic use under the oversight of a veterinarian. Antibiotics used in animals only will still be available over-the-counter for production and therapeutic reasons.

"Producers realize that if they're going to raise animals, they're going to need antibiotics and we want them to be used responsibly," said Kerry. "That means using the shared-use-only antibiotics for therapy prescribed by a veterinarian."

This transition is driven by three FDA reports. Guidance for Industry No. 209 establishes key principles for the use of medically important antimicrobial drugs in food-producing animals. The second report (No. 213) provides a road map for implementing those principles by addressing issues including label claims. The final report (CFFR 558) aims to modernize and streamline the VFD process.

"While the principles and labeling process are voluntary, once those labels have been changed, compliance with those labels is not voluntary," says Kerry. "Veterinarians, feed manufacturers and producers will have to use these products only according to label."

Producer involvement

"Antibiotics aren't going away, but how we use them will change," explains Kerry.

For cattle producers, the goal is to maintain access to the tools they need while doing the right thing in treatment of their animals. Demonstrating responsible use will allow them to maintain access to tools that are important for an animal's well-being and for overall sustainability.

"Several producer associations are providing input that will be used to make the system workable," said Kerry. "But it's also important to know where the process is going."

Kerry says it will be critical for producers to have an ongoing relationship

with a veterinarian, one who knows your herd and its health needs, understands the processes and will help make the transition.

"I think it's a win-win. Having a veterinarian involved helps ensure you're preventing antimicrobial resistance by implementing a protocol that is effective and provides producers the best return," says Kerry.

Elanco's role in antibiotic assurance

"Elanco had the first and only VFD product for swine over 10 years ago," explains Kerry. "We helped develop both the paper and electronic forms and educated different groups on that process. Moving forward, we will support a webbased system that minimizes errors and manages VFD-related records."

Elanco is committed to investing in systems to ease the transition and demonstrate antibiotic stewardship. It is also ready to educate producers, veterinarians, feedmill manufacturers and feedmill inspectors to help get everyone on the same page.

"We're really focusing on helping build the sophistication of tools and educating those involved throughout the production process to be better equipped to use those tools correctly," said Kerry.

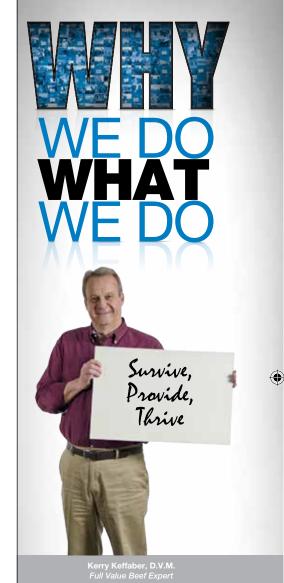
Why Kerry does what he does

Every day at Elanco, people like Kerry are working to provide tools, education and support for producers. Kerry's why — "Survive, Provide and Thrive" — applies to animals and more importantly to what he believes are the stepping stones a person takes to have an extraordinary life. Helping others on their path from survive to thrive applies to his work with people and his work with animals as a veterinarian.

"The first thing we all need is the basics to simply survive, which is especially true in animals. One must meet these needs before they can provide to others" says Kerry. "It's transformational when we get to thrive. People excel and impact others around them while animals thriving are extremely healthy."

As a veterinarian, there is nothing more appealing to Kerry than an extremely healthy animal that is thriving in its environment. In his role, he is able to not only help producers and veterinarians get to that level, but also help them get their animals there as well.

"In the beef industry, there will be challenges in implementing these changes, but the industry is working together to make sure it's a practical solution going forward," says Kerry. "We will get there, so remain calm and confident as we move through this time of change."





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Why It Pays to Preg-Check

An economical, sustainable investment for bettermanaged beef operations

Story By Alison Bos for Cattlemen's News

Looking for a way to positively impact the bottom line of your cattle operation?

Implementing routine pregnancy checks will have both economical and herd health benefits, according to Dr. Voyd Brown, Barry County Veterinary Service, Cassville. He explains the economic impacts preg-checking can have using the following scenario:

If a client has a herd of 100 bred cows or heifers, an investment of approximately \$130,000 to \$270,000 in cattle values alone can be presumed, based off of data obtained using January 2015 market reports from Joplin Regional Stockyards. The current daily maintenance cost per cow or heifer is about \$1.50 per head per day — which includes feed, fuel, fertilizer, property taxes and insurance.

Brown provides a scenario for a typical 100-head Missouri spring calving herd. Bull turnout would be approximately May 1 and bull removal approximately June 30. Pregchecks should be conducted in mid-September and open cows culled. Projected calving dates would be the first of February.

"Well-managed herds can expect 10 percent of the cow herd to not be pregnant," Brown explains.

The time allotted from pregchecking to the first calving date is about 149 days. Using the above scenario, if pregchecks were not performed, the farm would have potentially retained 10 open cows for an additional 149 days just to reach the start of calving season. If waiting until the end of the 75-day calving

window, open cows would be retained 234 days. Ten head of open cows would cost a producer approximately \$2,235 in a span of 149 days and approximately \$3,510 in a span of 234 days.

According to Brown, the average cost to preg-check is \$3.50 per head. To check a herd with 100 cows, it would cost about \$350. Compare this to the cost of retaining open cows. A savings of between \$1,885 and \$3,160 can potentially be realized just by preg-checking.

"The above examples utilized real numbers to demonstrate the need for every (cattleman) who would like to maximize the dollar returns on the farm to preg-check (his or her) cows and heifers," Brown explains. "The economics of preg-checking are very clear."

In addition, improved herd health can also be expected when preg-checking takes place as reveals reproductive problems. If a preg-check discloses a large percentage of a herd is not pregnant, the veterinarian and client could collaborate to determine a cause. Insufficient nutrition, infectious disease and bull failure

are all potential causes of low pregnancy rates that could be assessed.

Brown states pregnancy status can be determined as early as day 28 to 30 via ultrasound or blood testing. Still, he will not confirm a pregnancy until day 42 as pregnancy loss may be experienced in preg checks prior to that.

"I recommend preg-checking the cow or heifer herd 45-65 days following the removal of the bull," Brown notes.

Preg-checking also aids in the sustainability of the beef industry as a whole. Brown states preg-checking allows the producer to obtain data that can be used to directly impact the management protocols and economics of the operation. Plus, it increases the focus on maximizing reproduction in the cowherd.

Adequate nutrition, an appropriate vaccination program and a sound bull battery are all contributors to attaining a high pregnancy rate. However, according to Brown, if a producer does not attend to the details of nutrition, disease prevention and bull management, the pregnancy

rate will decrease. He emphasizes that reproduction is a luxury and only occurs if adequate nutrition and body condition is present.

"(Producers) need to understand the economics and cost(s) of beef cattle production, and how the implementation management practices can influence the cost of production," Brown says. must utilize the availinformation. able such as preg-checking data, to more effectively manage our beef operations."



the cowherd increases the focus on maximizing reproduction. Diagnosis might be made 45 to 65 days following the removal of the bull or post artificial insemination. —Photo by Joann Pipkin

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Increase Beef Profits with Artificial Insemination

Get increased weaning weights, tighter calving season *Story By Robert Wells*

Calf prices have steadily increased for several years. Since spring 2014, replacement female prices have remained at record levels as well. It is only reasonable that bull prices would follow the trend. This has led many producers to explore options to owning enough bulls to cover their cows in a defined breeding season. Estrus synchronization and timed artificial insemination (AI) are an economically viable alternative to

Table 1, the synchronization/timed AI program seen in Table 2 can significantly improve subsequent calving distribution. It is not uncommon to see a 65 percent or higher conception rate in the first 30 days of the calving season when using timed AI followed by natural bull exposure. More calves born early in the calving season will be older and weigh more at weaning. The value of the pounds of beef produced in each breeding system was

range. In a multiple bull battery, timed AI can reduce herd bull requirements by 50 percent, thus saving the purchase cost of a replacement bull.

The gross revenue increase for timed AI followed by natural breeding is \$8,210. The cost of the estrus synchronization and timed AI program was \$50 per head, for a total of \$2,500. This includes the cost of synchronization, semen and an AI technician. No cost was assigned for labor to process the cows three additional times through the chute since these costs are highly variable. Thus, the net increased value of the calf crop due to the estrus synchronization and timed AI program is \$5,710. Now add in the savings of not

Strategies for Successful Al

Area technicians share secrets to success

Story By Joann Pipkin, Editor

Artificial insemination might be intimidating to the average commercial cattleman, but it doesn't have to be.

If you are contemplating adding AI to your breeding program, putting your best foot forward from the beginning can help ensure you are one step closer to having a successful calf crop.

According to Cody Washam, Wide Range Bovine Unlimited, Pierce City, Missouri, for him the golden rule for implementing AI into your breeding program is to have a positive attitude. "So many cattlemen in our region equate AI to more labor and more expense," Washam explains. "Instead, equate AI to increased income through the use of industry-leading genetics and a more profitable calf crop."

Tammy Wallace, team leader, Genex Cooperative, says maintaining a good nutrition and mineral program for your cowherd will help ensure a successful outcome in your breeding program. She recommends females be at body condition score of 5+ and that the herd is on a complete health program recommended by your veterinarian.

"Heifers should have a reproductive tract score and pelvic measurement performed by your veterinarian," Wallace explains. "They should also be 60-65 percent of mature body weight at breeding. Cows should be 50 to 60 days post partum calving."

Other tips include implementing proper cattle handling procedures and maintaining good facilities.

"Investment in a synchronization and AI program is the best way to inject prolific genetics into a calf crop," Washam says.

Wallace suggests contacting an AI technician 60 days prior to breeding to discuss synchronization protocols.

Table 1.
Typical Calving Distribution Using Natural Bull Service in a 90-Day Season

Typical carring bloth battern coming material battern a 70 bay couldn						
	Percent	Number of	Age at Weaning,	ADG,	Total Pounds	Avg. Calf
	Calving	Calves	Days	Pounds	Weaned	Weight, Pounds
First 30 days	40%	19	213	2.2	10,423	549
30-60 days	35%	16	183	2.2	7,722	483
60-90 days	25%	12	153	2.2	4,999	417
Total pounds					23,144	483
Total G	ross Revenu	\$58,698				
* Assumes an 80-pound birth weight						

Source: Samuel L. Roberts Noble Foundation

Table 2.

Typical Calving Distribution Using Timed AI and Natural Bull Service in a 90-Day Season

	Percent	Number of	Age at Weaning,	ADG,	Total Pounds	Avg. Calf
	Calving	Calves	Days	Pounds	Weaned	Weight, Pounds
First 30 days	64%	30	213	2.6	19,014	634
30-60 days	26%	12	183	2.2	5,791	483
60-90 days	10%	5	153	2.2	2,083	417
Total pounds					26,888	511
Total Gr	oss Revenue	\$66,909				
* Assumes an 80-pound birth weight						

Source: Samuel L. Roberts Noble Foundation

owning a bull if the producer has multiple bulls. Synchronization and AI have many benefits, including a tighter calving season, increased weaning weights from older calves and better genetics.

The tighter calving season is a result of estrus synchronization and timed AI, followed by natural breeding for the remainder of a 90-day season. Some scenarios are explored in the tables. Each of these assumes a 50-cow herd with a 94 percent conception rate; calving in March and weaning in October. Compared to natural service for 90 days as noted in

estimated using the forecasting tool at www.beefbasis. com for mid-October.

Additionally, most producers will be able to buy better growth genetics from an AI bull stud than they could afford to purchase with the live animal for natural service. Therefore, the AI-conceived calves are likely to have better average daily gain (ADG) values than those conceived through natural bull service. During fall 2014, bulls with high growth genetics (weaning and yearling EPDs in the top 20 percent) have been selling in the \$7,000 to \$9,000

purchasing an additional bull, amortized over a five-year life span (\$7,000 to \$2,000 salvage value/five years=\$1,000) and the annual maintenance cost of the bull (\$400). This equates to an annual total increase in revenue to the ranch of \$7,110 for a 50-cow herd.

Before you buy your next bull, consider if an artificial insemination program is right for your operation. It does require three additional trips through a chute, but the potential increase in revenue is significant.

Do Away With Disease

Timely vaccination helps ensure healthy cowherd

Story By Samantha Warner for Cattlemen's News

There's still plenty of time for Mother Nature to make us remember it's winter before the first breath of spring air arrives. However, excitement is also in the air as breeding season nears and cattlemen begin dreaming about the next calf crop.

With the excitement, though, also comes concerns and precautions producers need to take to ensure a disease-free breeding and calving season. "Diseases occur, and it's probably preferable to vaccinate prior to breeding because a lot of the diseases occur early in gestation," explains Dr. Peggy Thompson, Boehringer Ingelheim Animal Health.

According to Thompson, common reproductive diseases are BVD (bovine virus diarrhea), IBR (infectious bovine rhinotracheitis), lepto (leptospirosis), vibrio (vibriosis) and in some cases trich (trichomoniasis).

Dr. Beth Walker, associate professor of animal science at Missouri State University, knows there are some cattlemen who might not vaccinate for years. However, many diseases can be transmitted through fence line contact.

"So, if a neighbor happens to have a disease, an unvaccinated herd could be susceptible," she explains. "In addition, animals sometimes get out of their pastures and travel miles down the road. Contagious diseases can be spread too easily not to vaccinate."

Thompson says the best time to immunize is 30 days before breeding with a modified live vaccine.

Walker maintains vaccination

only accounts for about 80 percent of protection, though. "How the vaccination is handled, (how) the syringes (are) used, improper injection site, giving the vaccination to sick or stressed animals, or not giving a booster can all decrease the efficacy of the vaccine," she explains.

Signs of Disease

In cases of vibrio, Thompson says early embryonic death might be a sign of the disease. "With lepto, you could see infertility or abortions later in pregnancy," she explains. "IBR is going to (cause) abortions later, after four months of pregnancy. BVD is the one that could cause a PI (persistently infected) calf."

A PI calf is formed between 40 and 125 days of gestation, Thompson notes. She went on to say the PI calf sheds viruses its entire life and constantly re-infects the herd, causing other potential problems, like abortion or congenital defects.

In cases of trich, Thompson says the cow actually conceives but loses the embryo after one or two months of pregnancy. "So again, more like abortion or early embryonic death," she explains.

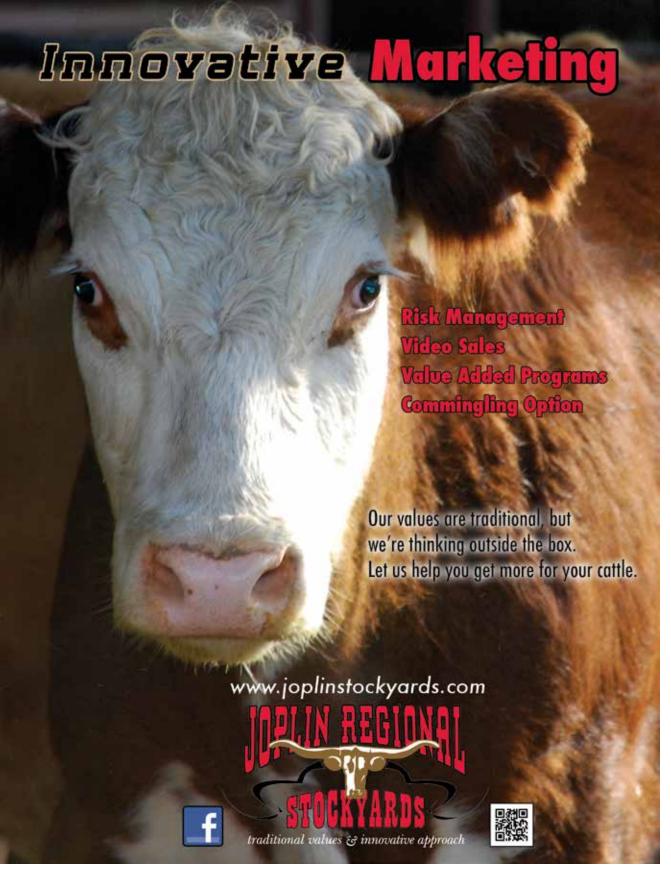
How are we doing with disease prevention?

Thompson says cattlemen are typically doing a great job preventing vibrio and lepto as most cattlemen vaccinate for those diseases. "I think that shows how our vaccines have done a good job," she says. "Lepto is the same way. Occasionally you'll see an outbreak of lepto and late term abortions, but you don't see it as often."

Although Thompson says the kill products for bacteria seem to be doing a good job, a lot of PI calves are entering stocker operations and feedlots when it comes to viruses,.

"We know the way they're formed is in the cow, so obviously BVD is circulating in some operations," Thompson says. "And, killed vaccines in a cow cannot protect as well against BVD as a modified live vaccine. When you look at the data as what people are using

CONTINUED ON NEXT PAGE



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The best time to immunize is 30 days pre-breeding with a modified live vaccine.

—Photo by Joann Pipkin

DO AWAY WITH DISEASE FROM PREVIOUS PAGE

on their cows it is more killed (vaccine) than modified, if they're using anything."

Bottom Line

Some cattlemen may have been vaccinating the same way for 20 years and never had an issue, Thompson notes. However, there could be issues some producers don't

know they have. Work closely with your veterinarian to get the best protocol.

"Bottom line, in my opinion" Thompson says, "is to vaccinate pre-breeding with a modified live vaccine when the cows are open. That's going to take care of a lot of problems down the road and end further issues in beef production management we see all the time."

PENNIES FOR PROFIT

8 Tips to Increase Your Calf Crop

- **1.** Condition the cow herd for breeding by supplying adequate energy, protein, phosphorous and vitamin A.
- **2.** Match the cow herd's nutrition cycle to your forage cycle.
- **3.** Obtain and prepare the bull for breeding at least 60 days before breeding season. Young, growing bulls may need 8 to 12 pounds of grain daily for high conception rates during the first half of the breeding season.
- **4.** Be sure the bull is fertile. Before breeding season, have the herd sire or sires examined for breeding soundness.
- **5.** Supply enough bulls for the cow herd and mating system. Use this as a guide for the number of pasture-bred cows per bull:

Yearling bull — 10-20 cows pasture-bred

2-year-old bull — 25-30 cows pasture-bred

3-year-old bull — 30-40 cows pasture-bred

- **6.** Establish a definite breeding season.
- **7.** Pregnancy check all females in the breeding herd. If using a single calving season, pregnancy check 45 to 60 days after the bull is removed.
- **8.** Use a regular blood testing, vaccination and sanitation program to detect and prevent diseases.

-Source: University of Missouri Extension



Off the Starting Blocks

Giving replacement heifers a good start

Story By Rebecca Mettler for Cattlemen's News

enetically speaking, heif-Gers are the best animals in the herd if a progressive breeding program is in place. Managing replacement heifers properly is seen as an investment for the future of the operation. As the nation slowly rebuilds its cowherd, emphasis on increased fertility is a goal commercial cow/ calf producers should strive toward.

"Even though fertility is a lowly heritable trait, we must pay attention to it as we want to raise replacement heifers with increased fertility," says Tom Troxel, University of Arkansas animal scientist.

Longevity, or the ability for a female to stay productive within a herd, encompasses many traits. One of those traits is reproductive performance.

"Longevity not only pays for development, but also longterm income," Troxel says. "If she becomes a good cow and produces heifers, her return on investment doubles and triples. She becomes more valuable as she has daughters in the herd."

In order to be successful at developing heifers, it's imperative to understand the dynamics of heifer fertility and management strategies to enhance fertility.

"Heifer fertility is measured by puberty, and puberty is a function of two things, weight and age," Troxel explains.

The age at puberty has a lot to do with the breed of cattle and can even be affected by the sire or sire line that is selected, according to Dan Stein, livestock production specialist with Oklahoma State University (OSU). He suggests producers research the age at puberty for the breed(s) in the herd.

Traditionally, the target weight for females is 65 percent of the heifer's mature weight at the time of breeding. Recent research from the University of Nebraska indicates replacements can be developed on a forage-based system and acceptable results can be seen in heifers that achieve 55 percent of their mature weight.

Ultimately, the target weight reached by breeding time is a matter of preference. However, Stein still recommends producers have heifers achieve 65 percent of their mature weight before breeding season.

Stein notes.

It's easier to maintain body condition scores in heifers during breeding and before calving compared to trying to change after calving. The body condition score drastically affects the days post partum when the female cycles back after calving, according to Stein.

Both Troxel and Stein encourage the use of reproductive tract scores to evaluate the maturity of the reproductive system of replacement heifers.

range from one to five for maturity of the female tract. Heifers that receive a score of five have a mature tract. Stein considers scores of three, four or five acceptable and places lower scores into the cull pen.

"Culling is one way to improve fertility," Troxel says.

A short breeding season of 45 to 60 days works well for replacement heifers. Limiting the number of breeding opportunities separates out those females who could develop into the later-calving, lower-

"A lot of people try to extend the breeding season, but that's been shown not to increase pregnancy rates," Stein said. "It may sound good the first vear, but when they come back around for that second season, the late calvers aren't going to sync back with the others."

condition score of 5.5 to 6," Troxel encourages producers to take advantage of the current high cattle prices and market those heifers that don't get bred or don't perform well.

> Stein also suggests breeding at least 10 percent more heifers than you need roughly 20 to 30 days ahead of the start of the breeding season for the cows.

"We want to get a calf on the ground by the time (the heifer) reaches two years old," Stein explains. "If they are late calving it's hard to back them up. If they are bred early, they are in sync with the rest of the herd."

Reproductive tract scores Sire selection for first-calf heifers can affect the breed-back potential as second-calf heifers. Choosing an easy calving sire for the first breeding will help the female rebreed with the second calf because dystocia, or calving difficulty, can cause delayed re-establishment of estrus.

> It's important to choose females that will fit the environment. Troxel says each producer must choose breed types that work in the environment and produce calves that fit the local market.

producing females in the herd. Again, replacement females are the future of the herd. Developing and managing heifers properly is extremely important and, if done correctly, can set up the operation for increased fertility within in the herd and increases the likelihood of future success.







Lot 47

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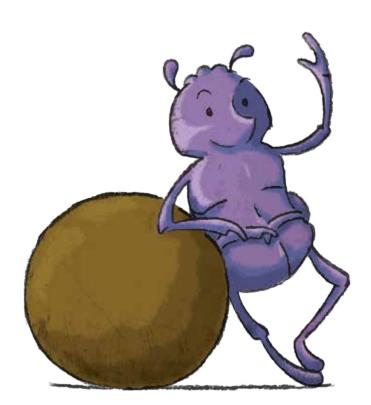
Feeding time impacts calving time

Story From Our Staff

When you feed the cows might be more important than you think.

A majority of beef calf mortality occurs within the first two months of life. Supervision of first-calf heifers and cows that need assistance is a proven method to increase calf survival. In most operations, observing birth is more easily done during daylight hours.

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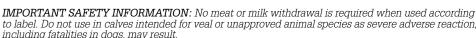


Our competitor would have you believe that all avermectins are unsafe for dung beetles. However, environmental studies, reviewed by the FDA, have shown EPRINEX is not expected to have an adverse impact on populations of dung-dependent insects when used according to the label.¹ So ask yourself — why the smoke screen? Maybe it's because they don't want to talk about how EPRINEX kills more species and stages of parasites than any other brand — and delivers more weight gain.^{2,3} Or how moxidectin may be driving resistance.4 So poop-a-chew on that next time they want to steer the talk to dung beetles.

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¹ EPRINEX FOI summary and product label. ² Based on FOI summaries and label claims.

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Beckett J. Efficacy of pour-on dewormers differing in active ingredient and carrier on weight gain and fecal egg count in stocker beef cattle. College of Agriculture, Cal Poly State University.
Rendell, et al. Evidence that moxidectin is a greater risk factor than ivermectin in the development of resistance to macrocylic lactones by Osteragia spp. in sheep in southeastern Australia. NZ Vet Jour. 2006;54(6):313-317.





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The time of day of calving is likely influenced by a combination of many variables. These factors would include the time of day that feed is provided, physical activity, daily rhythmic hormonal secretion, ambient temperature and day length. Time of day of feeding is the variable most easily changed by management.

The explanation of why time of feeding can affect time of calving is not known at this point. Research has observed that contractions of the rumen and body temperature of the cow or heifer both decline prior to birth. Maybe there is an interaction between these factors and time of feeding, or maybe not.

Numerous studies conducted support feeding in the evening to increase births during daylight hours. An Iowa study of more than 1,300 cows on 15 farms, found that feeding once a day at dusk resulted in 85 percent of the calves being born between 6 a.m. and 6 p.m. A study conducted in Great Britain involving 162 cows on four farms indicated that cattle fed at 9 a.m. calved during the daytime hours 57 percent of the time compared to

> 79 percent calving during the daytime hours when fed at 10 p.m.

> A comparison of two spring calving research herds in Kansas and Idaho confirms previous work and provides some interesting insight. Cows were checked every two hours, and all birth times were recorded. Those births that could not be estimated to within one hour were removed from the data. There were 1,210 observed births from 256 different cows during the 15 years of the Idaho study, and 537 observations from 201 different cows during the five years of the study conducted in Hays, Kansas. Calving season began in the third or fourth week in January and concluded either the second or fourth week in April depending on the location.

> Time of feeding in the Idaho herd was between 6 a.m. and 8 a.m. while the feeding time in the Hays, Kansas, herd was between 4 and 6 p.m. Fifty-three percent of the more than 1,200 calves in Idaho were born between 6 a.m. and 6 p.m, when cows were fed between 6 a.m. and 8 a.m. In contrast 86 percent of the over 500 births in the Hays herd occurred between 6 a.m. and 6 p.m. when cattle were fed between 4 and 6 p.m.

> Since this was a long-term study, calving data of replacements was compared to their dam. Daughters tend to calve close to the same time as their dam.

> Cumulatively, the results of these and other studies suggest that at the very least first-calf heifers should be fed at dusk to increase the chance they will calve during daylight hours so that assistance can be provided if needed. Time of feeding will also influence the calving time of cows as well, but as a rule, cows should require less assistance than heifers. The changes in feeding time need to occur about two weeks prior to calving time for the changes to take effect.

> —Source: Kansas State University Extension

FEBRUARY 2015 www.joplinstockyards.com

Less Corn, More Beans

Farmers need to watch markets carefully in 2015

Story From Our Staff

Prices for all commodities are lower than they have been the last few years, and that will put some economic stress on many farmers.

"I think farmers need to have a good idea of their financial needs for this year," says University of Missouri agricultural economist David Reinbott. "Both short- and long-term ranges and cash flow needs. Any time we get rallies back into the price levels where it can meet those cash flow and financial goals, farmers really need to start locking those in."

There is an ample supply of old crop corn because of the record harvest in 2014. Reinbott says USDA has trimmed back the demand outlook some, but it's still almost 13.6 billion bushels.

"Right now we are looking at corn prices for old crop around \$3.80," Reinbott says. "That's sort of the initial level of support with possible rebounds to \$4 or \$4.15."

Reinbott says if corn gets into that range, farmers should probably sell old crop they have in storage.

The outlook for new crop corn is that acres will be down 1-2 million. With an increase in demand, ending stocks could drop and with that, Reinbott says, producers could see new crop prices in the \$3.90 to \$4.20 range.

With fewer acres of corn expected to be planted, more acres of soybeans should be planted. Reinbott says we could easily see 87 million acres or more of soybeans.

"This would definitely push up ending stocks for new crop soybeans," Reinbott says. "We're probably seeing prices around \$9 or possibly even slipping back into the upper \$8 range. Right now I think there is going to be a lot of pressure on the new crop soybeans."

Of course, the South American soybean crop will affect the markets. Although South American producers had early planting delays due to weather, Reinbott says their early soybeans are looking pretty good. Weather during the next four weeks will be critical and any problems could see a rally in bean prices. Reinbott says farmers should sell some new crop beans if they get above \$10.

There were some problems with winter wheat planting last fall. Winter wheat will be down at least 2 million acres, which might help support it around the \$5 level, Reinbott says.

"I'd say right now, \$5 for July wheat is probably going to be the support," he says. "Any kind of rallies above \$5.60 for new crop probably needs to be sold."

—Source: University of Missouri Extension



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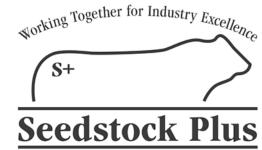
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Back to the Ranch

Conservation programs help rancher realize a dream

Story By Charlie Rahm

When Ann Whitehead acquired 100 acres of agricultural land near Wellsville, Missouri, it gave her the opportunity to fulfill her dream of raising cattle. Since then, she has been taking advantage of technical and financial assistance from the Natural Resources Conservation Service (NRCS) to ensure that the land will be productive for future generations of people who might share her dream.

"I grew up on a farm, but I

was more in charge of the chickens," Whitehead says. "Raising cattle is something I always wanted to do, so I told my kids 'I'm not getting any younger, and I'm going to do it "

Whitehead started with a small cow herd on her Montgomery County farm and has built the cow/calf operation. The cattle are moved regularly within a rotational-grazing system featuring 17 paddocks of warm-season grasses and

legumes. The paddocks are separated by solar-powered, electric fencing. Thirty acres include eastern gamagrass, and 30 acres include a mixture of Indian grass and big bluestem. Another 10 acres are in fescue, and the remaining in woodland. The cattle get water from a limited-access pond and also at six other points where water is piped from the pond to hydrants and tanks.

Whitehead says the rota-

Ann Whitehead's dream of raising cattle came true with the help of technical and financial assistance available through the Natural Resources Conservation Service. With the help of a rotational-grazing system, Whitehead is better able to manage her cow herd. —Photo by Charlie Rahm, Missouri NRCS.

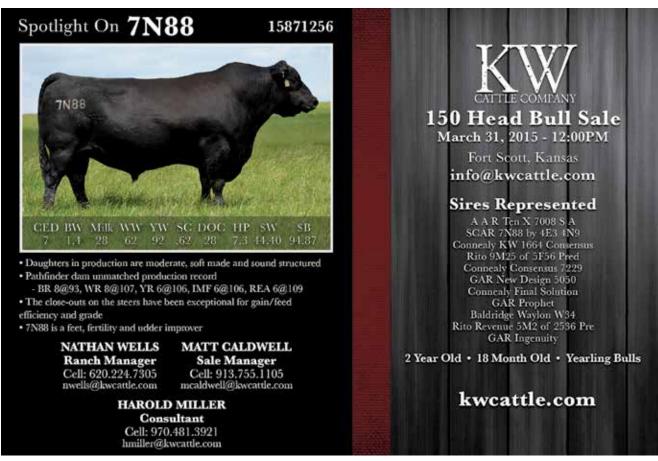
tional-grazing system makes managing the herd easier and also allows her to keep more cattle. Management-intensive rotational-grazing systems like Whitehead's maximize the forage base because cattle are kept in one of the small pastures for a few days before being moved to another one. While they are in a paddock, the cattle are forced to graze the whole area. By not allowing the cattle to overgraze one area of a larger pasture while neglecting others, the plants are healthier, and the nutrition-rich animal waste is more evenly distributed. The plants also receive a beneficial rest period when cattle are in other paddocks.

"I went to some meetings, and all of the people who had switched to rotational grazing said the cattle handled so much better and that they performed better," Whitehead says. "And the grass goes so much farther, which is important because I would like to get away from feeding so much hay."

In addition to farming, Whitehead works as a technician with the Montgomery County Soil and Water Conservation District. In that capacity she works closely with other landowners and with NRCS employees. She says that experience has taught her well that rotational grazing and other management techniques designed to protect natural resources work. And she is grateful for the state and federal programs that provide cost-share assistance and free technical assistance.

"My only regret is that they didn't have these programs 30 years ago," she says.

—Charlie Rahm is public affairs officer, Missouri Natural Resources Conservation Service.



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BBRUARY 2015

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MANAGEMENT MATTERS

Does Your Bull Have Numbers?

EPDs provide objective data for cattlemen

Story By Eldon Cole

Do the bulls you're using or plan to buy have numbers. Hopefully, the breeder you've purchased your bulls from has provided their numbers to you.

The Angus bull (pictured below) has numbers that represent his genetic breeding potential expressed as expected progeny difference (EPD) on the top row. The young bull does not have progeny data yet so he's referred to as a non-parent bull.

EPDs do not predict actual performance such as weaning weights. However, they do a very effective job of comparing two or more bull's progeny difference when bred to a similar set of females and managed under a comparable system. Those familiar with a breed and their EPD system, become comfortable understanding how that bull with a particular set of EPDs should move their herd.

Commercial producers may use two, three or even more breeds in their bull-buying process. For them, remembering the exact EPD for each breed becomes a challenge. Some breeds may have 20 EPDs to consider, others may only have five or so.

EPD understanding may be simplified for some by using

a percentile rank shown on the lower row of the pictured bull. The percentile rank indicates the relative rank within a breed for each EPD value.

The EPDs shown on the bull read from left to right: calving ease direct, weaning weight, yearling weight, milk, marbling and ribeye area. The 7 calving ease EPD puts him in the 40th percentile or near the top of the Angus, non-parent bulls for expected calving ease.

The 54 pounds refers to weaning weight EPD and the 30 below it ranks him in the top 30 percent. Different people understand things in different ways so this may help some of you understand EPD and percentile rank more clearly.

Bull or semen-shopping is made easier if you have objective data such as weights, carcass grades etc. available on your herd. That data should help you determine whether you need to invest in a bull from the top 25 percent of the breed or if one that's around 50 percent (average) will suffice. Not every herd needs the most extreme bull in the barn.

—Eldon Cole is a livestock specialist with University of Missouri Extension.

Expected Progeny Difference (EPD) is the expected difference in the performance of the calves from a bull compared to another bull's calves who also has an EPD.—Photo from University of Missouri Extension.



Traits Measured in Pounds

Birth Weight, Weaning, Weight, Yearling Weight, Carcass Weight, Mature Daughter's Weight, Milk, Total Maternal, Residual Average Daily Gain

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Cattle - Multiple-Day Therapy: Baytril® 100 is indicated for the treatment of bovine respiratory disease (BRD) associated with Mannheimia haemolytica, Pasteurella multocida and Histophillus 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 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

Swine: Animals intended for human consumption must not be slaughtered within 5 days of receiving a single injection 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

GHG121814

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NADA 141-068, Approved by FDA

Bayer HealthCare LLC, Animal Health Division Shawnee Mission, Kansas 66201 U.S.A.

Bayer



There's still time for pasture preparation

Story By Samantha Warner for Cattlemen's News

The first glimpses of green pop up through the ground. What a breath of fresh air after months of frozen, brown landscape. As you begin the countdown to spring and days of feeding hay become numbered, how do you make sure pastures are in shape for grazing?

Soil fertility—why it matters.

According to Missouri State University Associate Professor Melissa Remely, the fertility of the soil in a pasture not only determines how much forage can be produced, but also greatly affects the quality and nutrition of the forage itself. "Fertility can also play a large role in establishing and maintaining desired species in a field," she explains. "By just maintaining proper soil fertility, producers can grow more and higher quality forage and can directly improve the health of the grazing herd."

Jason Worthington, staff agronomist with MFA, Inc., says good fertility recommendations should be based on two criteria:

- **1.** Soil pH and fertility levels ing can take several months of nutrients should be in optimum range. "If soil pH levels are acidic, lime should be added to raise the pH to allow for better nutrient availability," Worthington explains. "If nutrient levels are below optimum, we need to work at building nutrient levels to optimum."
- **2.** Know how many nutrients being removed annually. "To maintain optimum fertility, fertilizer must be replaced at the rate it is removed by livestock or a forage crop," Worthington says.

Remely notes that liming not only adds certain nutrients to soil, like calcium and magnesium, but also changes the soil pH to make more nutrients from the soil available to plant

"In some cases, nutrient availability is improved so much by liming that the plants not only grow more but have improved nutrient levels in the leaves," she explains. "This translates into a better balance of nutrients for the grazing animal. Some of these effects of lim-

to years, however we've seen changes in leaf nutrients of tall fescue pastures in as little as a few weeks."

It's not too late!

While fall is the ideal time to start preparing your pastures for grazing, Worthington says it's still not too late.

"The first step is to sample and test your soil for current fertility levels," Remely says. "By knowing what you are starting with, you can be efficient with your fertilizer and lime applications and save time and money. The soil testing company/lab can also provide recommendations on how much fertilizer and lime should be applied to pastures to help you achieve your production goals."

If you're preparing a new pasture, it is especially important to get the soil fertility right, Worthington notes.

"If looking at a new seeding optimum, fertility greatly improves your chances of establishing a stand," he says. "It can be heartbreaking to see

the expense of seed and time spent sowing that seed go for naught because soil pH and fertility was not amended before seeding."

Early spring applications can still benefit spring growth and quality, Remely says. Low rates of nitrogen might also be made to get a jump-start on early spring growth of cool-season pastures.

"But, keep in mind that the plants are growing abundantly in spring and nitrogen applications should be limited to avoid overproduction during this time," Remely says. "If renovating existing pastures or establishing new species, spring is a perfect time to supply needed phosphorus and potassium for newly seeded areas."

Still, soil sampling is where you should begin a pasture management/improvement system, but it isn't all encompassing.

Worthington explains producers also need to, "Come up with a good weed and brush control plan, think about stocking rates, paddock rotations, supplementing your grass with legumes, and the list goes on."



DON'T let BRD become a growing problem.

Whether you need it right off the truck, or to control a whole pen of high-risk cattle breaking with BRD, Baytril® 100 (enrofloxacin) Injectable can help cattle get back to business.

It combines effective treatment with the flexibility your operation needs. So for cattle at high-risk of developing BRD — as well as for treatment of BRD — reach for Baytril 100. **Right from the start.**

Federal law restricts this drug to use by or on the order of a licensed veterinarian. Federal law prohibits the extra-label use of this drug in food-producing animals. Cattle intended for human consumption must not be slaughtered within 28 days from the last treatment.



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BL14288

Where Do You Want to Be?

Plan ahead to determine what to do now

Story By Derrell S. Peel

For some cow/calf producers, the euphoria of high cattle prices in 2014 led to uneasiness and indecision in 2015. The question is how to best take advantage of the current market. The answer to that depends on several factors including:

- 1) The current status of the operation. For example, is the operation at full capacity, or is there room to grow?
- 2) The producer's market expectations for the next several years.
- 3) For older producers, is there a time frame for retiring or exiting the business?

In other words, producers need to ask now where they want to be in 3-5 years. The answer to that question will reveal whether 2015 should be a year of liquidation, holding steady or expanding the cow herd.

For some older producers, for whom retiring or exiting the business in the next few years is inevitable, the current market provides an opportunity to liquidate cattle assets at previously unheard of values. Hopefully, the decision to liquidate cattle is part of a business transition plan that is already developed and may or may not yet be activated.

The decision about when to liquidate will be guided by the business transition plan and also by market expectations. Should the herd be liquidated in 2015 or perhaps 2016? Is it better to wait to get another calf crop on the ground; or perhaps two more calf crops? There may be very good reasons not to liquidate the entire herd at one time. Now is the time to develop a plan that might include, for example, liquidating older cows in 2015 and saving vounger cows and heifers until 2016 or perhaps phasing the final liquidation into 2017. The point is to determine where you want to be and when and start implementing the plan in 2015.

Some producers might be holding steady for a variety of rea-

sons. If the operation is at full capacity and expansion is not feasible or desirable, the focus should be on maximizing productivity. High prices and increased net returns is a signal to tweak management decisions to increase productivity and efficiency. The market is rewarding calf production, and producers should consider any opportunities where spending a bit more on inputs might boost production or reduce the odds of death loss or lost productivity.

Some producers may have the capacity to expand the herd but are holding steady because they either cannot resist the returns from selling heifers now or cannot bear the thought of paying current prices for replacement heifers or cows. Evaluation of how much one can afford to pay or how much a heifer retained for breeding is worth depends critically on one's market expectations for the next several years. Obviously, if current prices are not expected to persist for long, heifer and cow prices are judged to be too high.

Current cattle prices are a signal for herd expansion that will persist until enough expansion occurs to satisfy market needs.

Herd expansion is likely to take several years, and strong cattle prices might be expected over most of that time. Breeding female prices likely have not peaked and will in any event remain strong in 2016 and beyond. The dilemma for these producers is that hesitation to expand now may turn into expansion desires in the next year or two. If that is possible or likely, it may make sense to expand sooner rather than later. Whether or not female prices are too high now is arguable, but there is no doubt that at some point it will be too late to jump on the bandwagon. I expect that point is at least a year away and possibly two. Again, it is a question of how best to take advantage of current markets.

Some producers are holding steady at reduced herd size due to ongoing drought or because time is needed to allow forage resources to recover from drought damage. It is critical to manage forages for longterm productivity, and it takes management patience and discipline to maintain reduced stocking rates and allow forage recovery. Producers in this situation might be able to consider seasonal stocker enterprises to utilize limited available forage and generate some revenue while managing pastures for recovery. A herd rebuilding

plan can be developed that will be triggered by drought and forage recovery thresholds and changing market conditions.

Finally, some producers are already into expansion mode. It appears that heifer retention started in late 2013 and accelerated in 2014. Beef replacement heifers on Jan. 1, 2014 were 18.8 percent of the beef cow herd, slightly higher than the 2013 rate of 18.3 percent and above the 20-year average of 17.4 percent. The 2014 value is higher than the highest rate that occurred during the cyclical expansion of 1990-1995 (18.4 percent in 1994). The cattle report on Jan. 30, provided data on herd expansion in 2014 and replacement heifers for 2015. Beef replacement heifers could be more than 19 percent of the beef cow herd; a replacement inventory percentage not seen since the herd buildup to the all-time cattle inventories of the mid-1970s. While this would indicate a relatively aggressive expansion rate, herd expansion is still a slow process over the next several years because of the low herd size from which expansion is beginning.

—Derrell S. Peel is Oklahoma State University Extension livestock marketing specialist.

The current cattle market is rewarding calf production. Producers should consider opportunities where spending a little more might boost production. —*Photo By Joann Pipkin*



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One BIG Day

Joplin Regional Stockyards 2.21.15
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12 P.M. • GENETIC BLEND BULL SALE JRS Consignments to follow:

Replacement Cows & Bred Heifers Breeding Bulls

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Shelangoski Farm Complete Dispersal

78 Black and Black Whiteface Heifers. Ratcliff
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Bred to registered Angus bulls, sons of Mytty In
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3, 2-Year-Old Reg. Angus Bulls. Sons of Mytty In Focus with CED scores of 10-13.



50 Beefmaster Heifers

Bred to black Angus bulls. Start calving March 1.

30 Black Angus Cow/Calf Pairs

4-7 years old. Fall-born calves. Bred back to Angus bulls.

50 Black Angus Cow/Calf Pairs

4-7 years old. Cows should be calved out by sale date.

40 Black & Red Angus Cows

Bred to Charolais and black Angus bulls. Spring calvers. Due late Feb. and early March.

24 Quality Angus Heifers

Al bred to Select Sires/Gardiner Angus bulls. Due to calve April 2.

417.548.2333 www.joplinstockyards.com

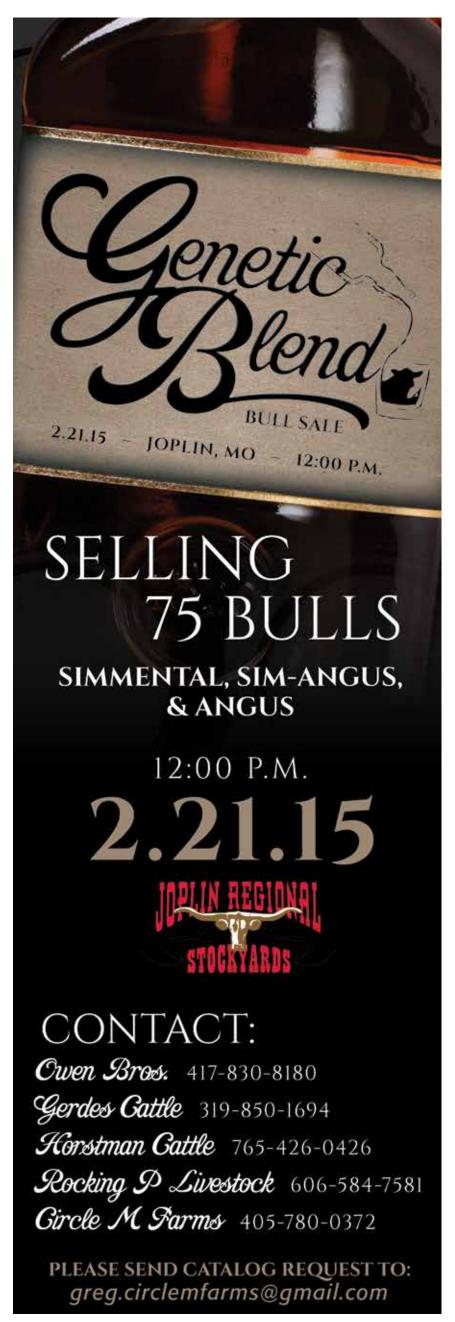






Jackie Moore 417.825.0948

Bailey Moore 417.540.4343 | Skyler Moore 417.737.2615



How Much is it Worth?

Carry capacity influences leased land value

Story By Dan Childs

Profits from grain and live-stock enterprises generally impact the rental rates on lands that are used to grow these commodities. During highly profitable times, rental rates for land usually trend higher. Likewise, when profits are lower, rental rates will trend lower. How quickly rental rates adjust depends to a certain degree on how fast profitability changes for the underlying commodity.

adjusting to profitability can be observed for corn. General profitability of growing corn during the period of 2008 to 2013 trended stronger. In the state of Illinois where corn is commonly grown, the University of Illinois reported rental rates moved from an average of \$152.72 per acre in 2008 to an average of \$196.13 in 2013. This is an increase of about 28 percent.

A good example of rental rates

Current projections are for the

150 mg/mL ANTIMICROBIAL

NADA 141-328, Approved by FDA

For subcutaneous injection in beef and non-lactating dairy cattle only. Not for use in female dairy cattle 20 months of age or older or in calves to be processed for yeal.

Caution: Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian READ ENTIRE BROCHURE CAREFULLY BEFORE USING THIS PRODUCT.

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.

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.

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. At each site, the percentage $of successes in \ cattle \ treated \ with \ ZACTRAN \ on \ Day \ 10 \ was \ statistically \ significantly \ higher \ than \ the \ percentage \ of \ successes \ in$ the 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 Mannheimia 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%).

Marketed by Merial Limited

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profitability of the cow-calf sector to set record highs for 2014. These record profits are also having an impact on rental rates for pastureland where cows are grazed.

Pastureland leased for grazing cows is commonly negotiated by the acre. Some consideration is given to the amount of open ground, type of base grass and condition of the stand. Another factor is the animal unit year (AUY) — the carrying capacity in terms of the number of cows that can be grazed on the property during the growing season or year-round without jeopardizing the integrity of the grass stand. Often, however, AUY capacity is neither estimated nor considered.

An AUY is more specifically defined as the amount of grass needed to sustain a 1,000-pound cow for 12 months and her calf for seven of those months. It is generally accepted that an animal unit will consume an average of 26 pounds of grass per day. Estimating the number of AUYs provides the amount of potential grass or "feed" the property is capable of producing. Knowing the carrying capacity of a property is helpful to the landowner by allowing him or her to know how much grass or feed he or she has for sale and, likewise, for the tenant to know what he or she is buying. Not many livestock owners purchase a sack of feed without knowing what it weighs or having an idea of the quality of feed in the sack.

Rental rates that are based on carrying capacity provide information both to the landowner and the tenant concerning the amount of feed being transacted. This knowledge should allow each party to make a more informed decision, which

could lead to a more equitable and long-standing agreement between the two parties.

A variable in carrying capacity for land with improved forages, such as bermudagrass, love grass or old world bluestems, is fertilizer. Applying nitrogen fertilizer to these forages can increase carrying capacity considerably. The cost and application of the fertilizer is generally the responsibility of the tenant. Therefore, carrying capacity is normally calculated without any fertilizer added. However, because the potential is there for increased forage production, land with an improved forage base will generally rent for a higher amount than land with a native grass base.

Once carrying capacity is determined, a price can then be negotiated for the lease value of the property. As mentioned above, the lease value is often correlated to the general profitability of the cow-calf sector. An index can be used to capture or indicate profitability. An index used in some leases to stay current on profitability is the price per hundredweight of a 500-pound steer calf the first week of August. August is used because it is often the average price for the year. The price per hundredweight becomes the annual grass lease fee for the year per animal unit. For example, if a 500-pound steer calf was bringing \$300 per hundredweight, then the annual lease per cow per year would be \$300. This amount would not include care for the animals, only grass.

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Best Land, Best Value

Missouri land value stable; rent changing

Story From Our Staff

With property taxes a third of the national average, Missouri land prices seem to be in a holding pattern.

University of Missouri Extension Economist Joe Parcell predicts land values might soften briefly as commodity prices drop. However, low interest rates, low taxes and growing consumer confidence will keep prices steady, Parcell says.

Missouri's average property tax rate between 1951 and 2012

was 0.12 percent. During the same period, Missouri average growth rate for land values was 6.6 percent, above the growth rate for adjoining states.

Interest in recreational land also has kept land values high. Rent-to-value has been above 6 percent, a full percentage point above the national average, Parcell says.

"There are a number of positive factors that are likely to support Missouri agricultural land values," he notes. "The economy is picking up steam, which stimulates consumer discretionary spending. Interest rates remain low, and the stock market increase has led to increased consumer confidence. This is the perfect recipe for seeing non-agriculture-related interest for Missouri farmland."

Cash rent for land is changing as well, states MU Extension agricultural business specialist Karisha Devlin. Rising livestock prices pushed pastureland values up faster than cropland in 2014, reversing usual growth rates.

Changes are also due in part to the growing number of landowners who don't live on the land. Absentee landowners might be two generations removed from the farm. They might have fewer emotional ties to the land, little understanding of farm issues and see the land only as an investment.

Changing commodity and livestock prices are driving interest in flex leases and cash agreements, Devlin says.

In the past, landowners might have based cash rents on what others pay. Be leery of "coffee shop talk" as a guide, and use mathematical equations recommended by MU Extension.

Devlin explains good cropland averaged an estimated \$4.717 per acre in 2014. Pastureland values ranged from \$1,751 to \$2,672, up 7.2 percent from 2013 due to demand caused by higher beef prices. Timberland was worth \$1,820 per acre, and hunting and recreation land was valued at \$1,710.

The simplest rule is, "The best land is still the best value," she says.

For more information, go to http://fapri.missouri.edu/farmers_ corner and http://agebb.missouri.edu/mgt/budget.

—Source: University of Missouri Cooperative Media Group





Stress putting your calves – and profits – at risk? Get 10-day BRD control with a single treatment of ZACTRAN.¹

In field trials, clinically ill cattle given ZACTRAN showed a significant improvement within 24 hours.² And most cattle treated with ZACTRAN stayed healthy for the full 10-day study. That can mean fewer retreatments and healthier margins. Talk to your veterinarian about prescription ZACTRAN. It's exZACTly right to control BRD risk with one treatment.



Give subcutaneously at 2 mL/110 lbs.

IMPORTANT SAFETY INFORMATION: For use in cattle only. 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, or in calves to be processed for veal. The effects of ZACTRAN on bovine reproductive performance, pregnancy and lactation have not been determined.

¹Lechtenberg K, Daniels CS, Royer GC, et al. Field efficacy study of gamithromycin for the control of bovine respiratory disease in cattle at high risk of developing the disease. Intern J Appl Res Vet Med. 2011;9(2):189-197.

² Sifferman RL, Wolff WA, Holste JE, et al. Field efficacy evaluation of gamithromycin for treatment of bovine respiratory disease in cattle at feedlots.

Internal Appl Res Vet Med. 2011;9(2):171-180.

3 Van Donkersgoed J, Merrill JK. A comparison of tilmicosin to gamithromycin for on-arrival treatment of bovine respiratory disease in feeder steers.

Rovine Practitioner 2012:46(1):46-51



HELPING HANDS

Starting from Scratch

Beginning ranchers find benefits of rotational grazing

Story By Charlie Rahm

To see Jennifer and Alex ▲ Menzel working their 200-acre cattle ranch in Cass County, it's difficult to picture them in the suburbs of Atlanta, Georgia.

Their Georgia home had enough room for Jennifer to raise rabbits and for Alex to raise a few chickens, but they had farming on a much larger scale in mind. They got their chance after moving to the Kansas City area seven years ago.

"I've always been interested in horses and animals, so when we moved to Kansas City from Georgia, we thought, 'let's buy some land and have horses and chickens," Jennifer says.

That 10-acre homestead near Raymore, where Jennifer and Alex live with their three young daughters – Emma, Ella and Eva – wasn't enough to calm the farming urges of this couple, though. So in 2009, Alex and Jennifer purchased the first 160 acres of their



Jennifer and Alex Menzel were able to get started in farming with the help of the Natural Resources Conservation Service. —Photo by Charlie Rahm

farm northwest of Archie.

Thus began their lives as tagteam, beginning farmers. Jennifer teaches biology three days a week at Johnson County Community College, and Alex works fulltime in Kansas City. So, Jennifer works at the farm two days each week, plus weekends. And Alex gets to the farm when he can. Sometimes they are actually there together.

"Time management is critical with us both working and with caring for the kids," Jennifer says. "The fact that either of us can do things down at the farm has been beneficial."

Generally speaking, Jennifer runs the business side of the operation and handles the veterinary care. Both Jennifer and Alex have undergraduate degrees in wildlife biology and doctorate degrees in agricultural and consumer science. But Jennifer says she honed her veterinary skills through books, videos and trial and error. Jennifer jokes that Alex is her "farm hand" but both share the physical work on the farm.

Jennifer says that has been a good lesson for the couple's daughters.

"It's good for the girls to see that their mom can do the work, too, not just dad," she says. "And it gets them away from the TV and cell phones."

Alex and Jennifer agree that communication is key to making sure all of the necessary farm work gets done.

"We talk daily about what

needs to be done, and whichever one of us will be at the farm next takes care of that," Jennifer says.

There has been plenty of work for each of them. When they purchased the farm, it was being used as a continuously grazed pasture that was overgrazed, had very little plant diversity, no adequate interior cross fences, few watering sources and poor fertility. The cattle had access to the ponds and streams and were also grazing and degrading timber areas on the farm.

"We knew that there had to be a better way," Alex says. "The first place we called was NRCS."

Alex attended two grazing schools sponsored by the US-DA's Natural Resources Conservation Service (NRCS) and immediately made the switch to a rotational-grazing system that features 14 paddocks for 65 head of cattle. He and Jennifer have utilized federal funding through NRCS as well as state cost-share funding through the Cass County Soil and Water Conservation District.

The federal and state programs have helped pay for part of the costs to spread lime and other nutrients as indicated by soil tests; to install electric tencing to create the paddocks and to keep cattle out of the ponds, streams and timber; and to install a watering system featuring tire tanks, ponds and both above-ground and below-ground pipelines.

CONTINUED ON NEXT PAGE



Extended-Release Injectable Parasiticide 5% Sterile Solution NADA 141-327, Approved by FDA for subcutaneous injection For the Treatment and Control of Internal and External Parasites of Cattle on Pasture with Persistent Effectiveness CAUTION: Federal law restricts this drug to use by or on the order of a

licensed veterinarian. INDICATIONS FOR USE

LONGRANGE, when administered at the recommended dose volume of 1 mL per 110 lb (50 kg) body weight, is effective in the treatment and control of 20 species and stages of internal and external parasites of cattle:

Gastrointestinal Roundworms	Lungworms			
Bunostomum phlebotomum — Adults and L ₄	Dictyocaulus viviparus — Adults			
Cooperia oncophora — Adults and L ₄				
Cooperia punctata — Adults and L ₄				
Cooperia surnabada — Adults and L ₄				
Haemonchus placei — Adults	Grubs			
Oesophagostomum radiatum — Adults	Hypoderma bovis			
Ostertagia lyrata — Adults	1			
<i>Ostertagia ostertagi</i> — Adults, L ₄ , and inhibited L ₄				
Trichostrongylus axei — Adults and L ₄	Mites			
Trichostrongylus colubriformis — Adults	Sarcoptes scabiei var. bovis			

Parasites	Durations of Persistent Effectiveness							
Gastrointestinal Roundworms								
Bunostomum phlebotomum	150 days							
Cooperia oncophora	100 days							
Cooperia punctata	100 days							
Haemonchus placei	120 days							
Oesophagostomum radiatum	120 days							
Ostertagia lyrata	120 days							
Ostertagia ostertagi	120 days							
Trichostrongylus axei	100 days							
Lungworms								
Dictyocaulus vivinarus	150 days							

DOSAGE AND ADMINISTRATION

 ${\it LONGRANGE}^{\circ} \ (eprinomectin) \ should \ be \ given \ only \ by \ subcutaneous$ injection in front of the shoulder at the recommended dosage level of 1 n per kg body weight (1 mL per 110 lb body weight).

WARNINGS AND PRECAUTIONS

Withdrawal Periods and Residue Warnings

Animals intended for human consumption must not be slaughtered within 48 days of the last treatment. This drug product is not approved for use in 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

A withdrawal period has not been established for pre-ruminating calves. Do not use in calves to be processed for veal

Animal Safety Warnings and Precautions

The product is likely to cause tissue damage at the site of injection, including possible granulomas and necrosis. These reactions have disappeared without treatment, Local tissue reaction may result in trim loss of edible tissue at slaughter.

Observe cattle for injection site reactions. If injection site reactions are suspected, consult your veterinarian. This product is not for intravenous or intramuscular use. Protect product from light. LONGRANGE (eprinomectin) has been developed specifically for use in cattle only. This product should not be used in other animal 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

Environmental Hazards

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

Other Warnings: Underdosing and/or subtherapeutic concentrations of extended-release anthelmintic products may encourage the development of parasite resistance. It is recommended that parasite resistance be monitored following the use of any anthelmintic with the use of a fecal egg count reduction test program

TARGET ANIMAL SAFETY

Clinical studies have demonstrated the wide margin of safety of LONGRANGE® (eprinomectin). Overdosing at 3 to 5 times the recommended dose resulted in a statistically significant reduction in average weight gain when compared to the group tested at label dose. Treatment-related lesions observed in most cattle administered the product included swelling, hyperemia, or necrosis in the subcutaneous tissue of the skin. The administration of LONGRANGE at 3 times the recommended therapeutic dose had no adverse reproductive effects on beef cows at all stages of breeding or pregnancy or on their calves. Not for use in bulls, as reproductive safety testing has not been 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.

STORAGE

Store at 77° F (25° C) with excursions between 59° and 86° F (15° and 30° C). Protect from light.

Made in Canada

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STARTING FROM SCRATCH FROM PREVIOUS PAGE

One of the ponds features a solar-powered pump. The Menzels also plans to incorporate native, warm-season grasses into two of their least-productive paddocks.

"They've been very interested in learning about the latest techniques," says Katrina O'Farrell, NRCS soil conservationist.

Alex says their neighbors have been good mentors. However, he says it became clear to him and Jennifer that it can be difficult for veteran farmers to adopt new ways of doing things, including rotational grazing and paddocks with diverse forages.

"Most of our neighbors had heard of rotational grazing, but their thoughts were that it was hard to move cows from place to place," Alex says. "But moving cows is not a problem; they are ready to go to the new grass when you open the gate."

He adds that being a beginning farmer was probably a benefit in terms of adopting the newer tech-

niques.

"We started out knowing nothing, so we didn't have any habits to break," he says. "It's probably harder to talk people into rotational grazing who have been doing it the other way for a long time."

The Menzels credit O'Farrell and Jamie Bokern, a technician with the Cass County Soil and Water Conservation District, for helping them plan and develop a good grazing system.

"There are a bunch of ways that we could have divided this place into paddocks, but it's not easy to do it in a way that provides water in each paddock," Alex says.

Alex says the rotational grazing system was invaluable during the summer drought of 2012.

"If we hadn't done the water improvements, we wouldn't have had any water," he says. "We would have been in big trouble."

O'Farrell says Alex and Jennifer have been eager cooperators.

"We've only had the contract with them for a year, and they have most of the work done already," O'Farrell says. "It usually takes people several years."

Alex says the NRCS and SWCD financial and technical assistance has allowed Jennifer and him to do the work to improve the farm.

"We wouldn't have been able to do this at all without their help," he says.

However, O'Farrell and Bokern point out that the Menzels have done a lot of work that isn't part of their contract with NRCS or the SWCD.

"They've cleared a lot of brush and built a pond all on their own," Bokern says. She adds that their efforts to improve the farm's forage base, grazing system, wildlife habitat and to protect the natural resources on the farm led the Cass County SWCD to select them for its grassland farmer of the year award. They also were later selected as Missouri's regional award winners.

The farm's condition has improved so much already, O'Farrell says, that NRCS is looking forward to using it as a future grazing-school location.

Jennifer and Alex aren't finished making improvements just yet, however.

"Our goal is to feed hay less and less, to the point that we feed very little," Alex says.

That fits well with their broader goal of being farmers.

"We would retire from our other jobs and do this full-time right now if we could," Alex says.

—Charlie Rahm is public information officer for Missouri Natural Resources Conservation Service.



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www.joplinstockyards.com FEBRUARY 2015 **47**

Available in 500 mL, 250 mL and 50 mL bottles.

Administer subcutaneously at 1 mL/110 lbs.

BUSINESS BEAT

Cultivating the Future

American Angus Association launches a new initiative to engage future cattle producers

Story From American Angus Association

Cattle farming and ranching is a risky business. Whether the operation is inherited or pieced together over time, much is at stake for cattlemen to produce more pounds of quality beef for consumers. Today's beef producer will require a different skill set than those of previous generations.

To meet the needs of future cattle producers, the American Angus Association has launched a new program called Future Angus Stockmen—an effort to impact the next generation through learning opportunities, while building a bond with the Angus breed and its member-driven organization.

"Our goal with the Future Angus Stockmen initiative is to give young producers, who want to play a role in beef production, the jumpstart they need to be successful in the business," says Ginette Kurtz, Association director of commercial programs. "Strong skills in communications, marketing, data analysis and business planning are critical in our industry's challenge to produce quality beef."

Future Angus Stockmen is aimed toward college-age or recent graduates who want to raise high quality Angus-based commercial cattle. The program will offer educational opportunities that teach participants how to thrive in the cattle industry, social networking to connect them with fellow producers, and leader-ship development to instill an entrepreneurial spirit and drive to improve their businesses.

Participants will learn how to use proven information such as expected progeny differences (EPDs) and dollar-value indexes (\$Values), while incorporating DNA technology to make data-driven decisions. In partnership with Zoetis, the American Angus Association will offer those enrolled in the program a special, reduced rate for GeneMax® AdvantageTM and GeneMax FocusTM tests.

"The connections, confidence and communication skills that can be gained from this program will be priceless to any young enthusiastic producer," Kurtz says.

Additional program benefits include complimentary enrollment in either Angus-Source® or AngusSource Genetic — the Association's marketing program for Angus-sired feeder calves and replacement females. Future Angus Stockmen participants will also learn the importance of recordkeeping as a precursor to any successful operation by using either the Beef Record Service (BRS) or MaternalPlus® at a reduced cost for submitting data.

Young people who enroll in the program will also have the chance to apply for scholarships if they are or will be enrolled in a two- or four-year college while majoring in agriculture. Scholarship winners will be announced at the 2015 National Angus Convention & Trade Show, Nov. 3-5, 2015, in Overland Park, Kansas.

The Future Angus Stockmen program officially launches March 1, and more information will be posted online at www.ANGUS.org as it develops.

Upcoming plans include an application-based gathering of young cattle producers hosted in the summer of 2016 at the American Angus Association headquarters in Saint Joseph, Missouri. The event will be a culmination of learning and leadership experiences to solidify their agriculture commitment.

"This program is a must for any young producer who dreams of raising high-percentage Angus based cattle in the future and seeks to further their education to fulfill that dream," Kurtz says.

Zoetis Forms Partnership to Help Boost Value of Feeder Cattle

Industry leaders offer a new calf-management program

Zoetis Inc. has partnered with Verified Beef, LLC, to support Reputation Feeder Cattle,™ a program for ranchers and cattle feeders that helps define feeder calf value by verifying industry-leading genetics and best practices.

Age- and source-verified cattle have been attractive to the export market at extra premiums. Reputation Feeder Cattle will continue adding value for niche and export markets in years to come.

"This raises the bar for how feeder cattle are represented in terms of genetics, health, handling and verification," said Jon Lowe, senior director and global head of genetics for Zoetis. "Producers need to be looking out for the best interest of the industry by verifying their best practices."

This progressive calf marketing and management program differentiates calves based on three fundamental principles:

- Genetic merit for feedlot performance and carcass traits
- Herd health, nutrition and management practices
- Age and source verification

"Reputation Feeder Cattle describes historic health management and the genetic potential for feedlot and carcass performance that could impact break-evens and closeouts," Lowe said. "Zoetis is excited to serve as a valuable link to help determine genetic potential for these cattle."

Expected progeny differences (EPDs) have been used with great success in the cattle industry to identify the genetic differences for economically important traits of individual animals. Reputation Feeder Cattle will expand the breadth of data now available for the feeder cattle trade.

"By putting relevant genetic and management information at the buyer's fingertips, the program has potential to revolutionize the value of feeder cattle as well as enhance performance and profitability over time," Lowe said. "The historic success of EPDs allows the program to be a consistent and simple information conduit between cow-calf and feeder segments, ultimately meaning a better managed price, health and genetic risk across the industry."

The Genetic Merit Scorecard®, the core of the program, helps determine genetic merit on a group basis. It accurately defines calves' gain and grade profit potential based on their genetics. The scorecard displays the information in a format that is easy to interpret and understand for feeder cattle buyers and sellers.

Beyond genetics, Reputation Feeder Cattle emphasizes the value of well-planned nutrition and parasite control, as well as weaning and vaccination programs. Experts agree that some of the largest revenue-enhancing practices focus on early management for calves.

Reputation Feeder Cattle builds on the 30 years of demonstrated success of the Select-VAC® program from Zoetis. As the largest and longest-standing branded preconditioning program of its kind, SelectVAC has enrolled more than 5 million calves. Calves with solid health history records, a strong nutritional background and the genetics to perform both in the feedlot and on the rail will be highly valued and wellrecognized in the market. The program informs cattle feeders when certified cattle are selling, whether at a livestock auction market or by video or private treaty.

"Combining the industry-leading experience from Verified Beef and Zoetis, Reputation Feeder Cattle will help cow/calf producers tighten vaccination, deworming and other pre- and post-weaning management strategies," Lowe said.

—Release from Zoetis Inc.

BUSINESS BEAT

First Transdermal, Non-steroidal, Anti-inflammatory Drug Launched

FINADYNE® Transdermal Pour-on solution offers novel application

MSD Animal Health introduced FINADYNE® Transdermal (flunixin meglumine) Pour-on solution, which delivers consistent efficacy proven to reduce pyrexia (fever) associated with bovine respiratory disease (BRD). FINADYNE Transdermal Pouron combines convenience with a novel delivery method that simplifies administration for veterinarians and farmers alike.

"The launch of FINADYNE Transdermal Pour-on allows for a more convenient way to relieve animals from fever, improve respiratory and depression scores associated with BRD," states Siddartha Torres, MSD Animal Health. Transdermal "FINADYNE Pour-on is the world's first non-parasiticide cattle product available with a transdermal route of administration and builds on the legacy of FINADYNE as the pioneer injectable non-steroidal antiinflammatory drug."

FINADYNE Transdermal Pouron goes to work quickly and has been demonstrated to reduce fever as early as four hours after administration. The innovative technology of FINADYNE Transdermal Pour-

on allows for rapid absorption of flunixin through the skin and into the bloodstream. The efficient administration means there is no need for additional labor, head gates or restraint that is commonly associated with injectable administration, which translates to reduced cost per treatment.

Available in pre-calibrated packaging, FINADYNE Transdermal Pour-on makes it easy to ensure the correct dose is given every time. The unique bottle is designed for proper application along the animal's back and the red-colored solution makes it simple to accurately and quickly measure the dose volume for each animal.

"FINADYNE Transdermal Pour-on will become an important part of health programmes where the reduction of fever associated with BRD is indicated as it makes quick work of treating animals, and supports improved animal well-being," states Martyn Phillips, MSD Animal Health.

"The novel application of FI-NADYNE Transdermal Pouron simplifies a usually timeconsuming and strenuous process, making it easier for both the animals and the people that care for them".

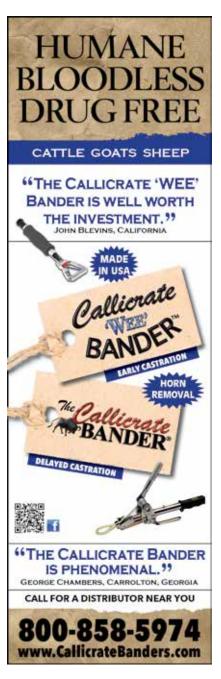
This new approach to reducing fever in cattle is in alignment with industry efforts to continuously improve animal care. Transdermal application requires less handling, resulting in less stress on animals and leading to inherent health and wellness advantages. It also offers the added benefit of needle-free administration, with no injection site lesions and a higher-value end product.

NOTE: MSD Animal Health, known as Merck Animal Health in the United States and Canada, recently announced the introduction of FINADYNE® Transdermal (flunixin meglumine) Pour-on solution, which has created some confusion among customers in the United States. To clarify, FINADYNE Transdermal is not approved or available for sale in the United States. We apologize for any inconvenience and confusion this has caused.

In the United States, flunixin meglumine is marketed as BANAMINE® Injectable Solution and in combination with florfenicol, as RESFLOR Gold®. For more information visit resflorgold.com.

—Source: Release from MSD Animal Health





Bull Breeding Soundness Exams Scheduled Next Month

March 4 | Cassville, Missouri

Barry County Veterinary Service | Phone: 417-847-2677

March 11 | Miller, Missouri

Dake Veterinary Clinic | Phone: 417-452-3301

March 20 | Aurora, Missouri

Countryside Animal Clinic | Phone: 417-678-4011

March 24 | Diamond, Missouri

Animal Clinic of Diamond | Phone: 417-325-4136

For additional information on Bull Breeding Soundness Exams, contact Eldon Cole, University of Missouri Extension livestock specialist, at 417-466-3102.



BUSINESS BEAT

AgriLabs® Announces Next Generation Colostrx®

USDA dual-claim to aid in treatment of failure of passive transfer

Successful beef and dairy producers know that a big threat to newborn calves is failure of passive transfer (FPT) of immunity. Basically, it's when calves don't get enough natural disease protection passed to them from the dam. That's why AgriLabs is introducing the newly reformulated, USDA-licensed Colostrx®, a colostrum replacer and supplement designed to ensure calves receive valuable immunity and antibodies needed to survive.

The next generation of Colostrx® CS and Colostrx® CR has a USDA dual-claim to aid in the treatment of FPT of immunity and to aid in the prevention of death associated with Escherichia coli K99 in colostrum-deprived neonatal calves. These two risk factors

greatly impact the survival and performance of newborn calves.

"Producers generally get one chance at getting calves off to a strong, healthy start," says Adam Yankowsky, Business Unit Manager. "USDA-licensed Colostrx products are specially formulated with true maternal bovine colostrum from U.S. Grade A dairies. They're complete with essential first-day bioactive components, proteins and antibodies, which newborn calves must receive."

High-Quality Colostrum Key to Calf Health

It is well documented that colostrum provides calves with the nutrients and essential antibodies (predominantly immunoglobulin IgG1), needed

for survival. A sobering reality is seen in the findings of a recent nationwide evaluation on the quality of colostrum. It found almost 60 percent of maternal colostrum on farms is inadequate. This deficiency leaves large numbers of calves at risk of FPT and/or bacterial infections. In fact, this same study reported nearly 45 percent of all colostrum fed to calves contained enough pathogenic threats to endanger calf health.

The risks associated with poor quality colostrum can hit hard. Calves experiencing FPT or receiving inadequate concentrations of IgG antibodies are more likely to lack vigor, have diminished performance, be unable to compensate adequately for stress, as well as being at risk for increased mortality or morbidity.

"The calf's immune system is the number one priority," said Dr. John Lounsbury, Technical Services Veterinarian for AgriLabs. "When maternal colostrum is of insufficient quality or volume, producers should implement a colostrum supplement or replacer to their newborn calf-processing regiment. This helps ensure calves receive an adequate amount of quality antibodies."

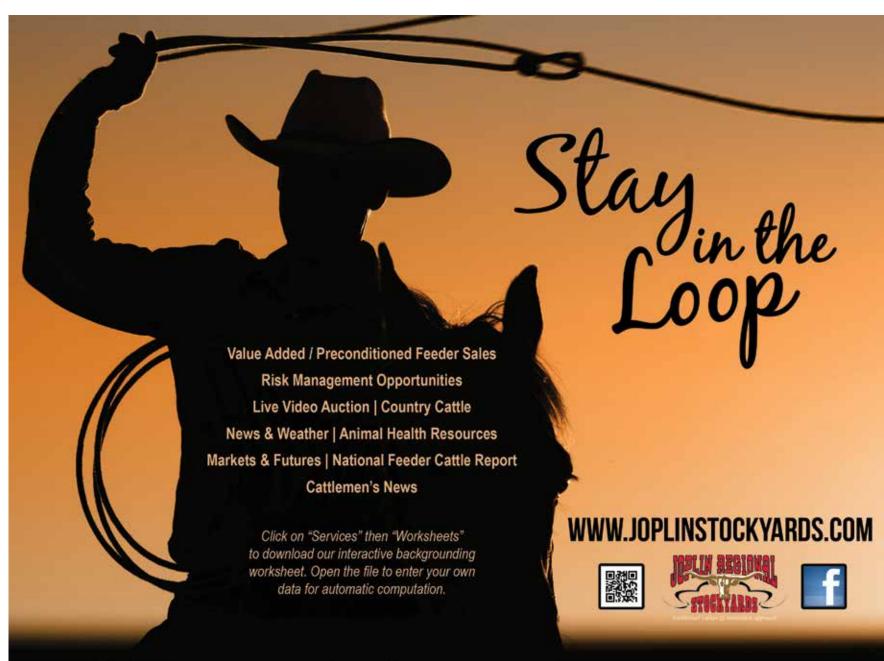
Colostrx; USDA-licensed

Products licensed as Veterinary Biologics by the USDA have production methods assured to be free of infectious agent transmission. This involves regular inspections and approvals of manufacturing processes and facilities.

Colostrx® CS and Colostrx® CR are tested to be antibiotic-free, synthetic hormone-free and pathogen-free. These products deliver 50 and 100 grams of bovine origin IgG and a full natural dose of E. coli K99 antibody with each feeding — that's extra protection for your calves and peace of mind for you.

"AgriLabs is committed to helping producers improve animal health and productivity," Yankowsky said. "That's why we will continue to expand and enhance our calf-care line of products to meet producer needs."

—Source: Release from AgriLabs



ON THE CALENDAR

Spring Forage Conference Set for March 3 in Springfield

Focus on forages, livestock management strategies

Story From Our Staff

The 31st annual Southwest Missouri Spring Forage Conference will be held Tuesday, March 3, 2015, at the University Plaza Hotel in Springfield, Missouri. Each year this conference attracts an increasing number of people interested in learning more about management strategies for forages and livestock.

This year's keynote speaker will be Dr. Kim Stackhouse-Lawson, director of sustainability project for the National Cattlemen's Beef Association. She received her Ph.D. in animal science from the University of California-Davis and was postdoctoral fellow with the Beef Cattle Institute at Kansas State University. Stackhouse-Lawson leads the Beef Checkoff sustainability research program.

She also serves as an industry spokesperson, executive board member for the Global Roundtable on Sustainable Beef, chair of the Five Nations Beef Alliance Sustainability sub-committee and a member of the International Meat Secretariat Sustainability sub-committee. She was recently recognized in the 2013 UC Davis alumni spotlight in Agriculture and Environmental Science Outlook Magazine for her leadership and career accomplishments in the area of sustainability. Stackhouse-Lawson's topic will be "Beef Industry Sustainability."

The conference will also feature several breakout sessions throughout the day. Topics will include: livestock predator control, alfalfa management, advanced graz-

ing tips, cattle health, johnsongrass, grazing and quail management, beneficial pasture bugs, brush and weed management with small ruminants, cow-share agreements, managing stocking rates to forage growth, and advice on handing down the farm to heirs when only one wants to farm.

A large trade show will be held in conjunction with the conference. Agricultural businesses and organizations will have exhibits and representatives available to discuss their products and services. If interested in becoming a

sponsor, contact Nathan Witt at 417-451-1366 ext.3.

Conference registration begins at 8 a.m., with sessions running from 8:45 a.m. to 3:30 p.m. A banguet luncheon is included with the registration. The cost is \$35 per person in advance or \$45 at the door. To pre-register (by Feb. 18th) or to get more information, contact the Greene County USDA Office at (417) 831-5246, ext. 3. Additional conference information, lodging information, maps and registration forms can be found at www.springforageconference.com.

Beef Conference Slated for Feb. 19 in Monett, Missouri

WHAT: Monett Beef Cattlemen's Conference

WHEN: 3:30 p.m., Feb. 19

WHERE: Monett National Guard Armory, Monett, Missouri

WHY: New antibiotic rules and how they affect you; 2015 beef market outlook; technology panel and how you can stay connected; water concerns for landowners; and lease options for land and cattle.

WHO: For more details, contact Eldon Cole at 417-466-3102



EVENT ROUNDUP

February

- 10 Barton County Soils and Crops Conference Thiebaud Auditorium, Lamar, Missouri FMI: 417-682-3579
- 17 Stone County Livestock and Forage Conference First Baptist Church, Crane, Missouri FMI: 417-357-6812
- 19 Monett Beef Cattlemen's Conference National Guard Armory, Monett, Missouri FMI: 417-466-3102
- 19 Jasper County Livestock and Forage Conference Water and Electric Community Room, Carthage, Missouri PH: 417-358-2158
- 23 Taney County Livestock & Forage Conference High School Cafeteria, Forsyth, Missouri FMI: 417-546-4431
- 27 Cow Camp Ranch Annual Spring Bull Sale at the ranch, Lost Springs, Kansas FMI: 785-466-1129

March

- 3 Southwest Missouri Spring Forage Conference University Plaza Conference Center, Springfield, Missouri PH: 417-831-5246, ext. 3
- 4 Bull Breeding Soundness Exams Barry County Veterinary Service, Cassville, Missouri FMI: 417-847-2677
- 6 Private Pesticide Applicator Training Greene County Extension office, Springfield, Missouri FMI: 417-357-6812

SAVE THE DATE BEST OF THE BEST CALF ROPING 2015 Top 15 Calf Ropers in the World & 15 Invited Guests rope for \$200,000 RISEN RANCH COWBOY CHURCH ARENA Carthage, Missouri (just west of Joplin Regional Stockyards) Watch for More Details in the March issue of Cattlements News and follow us on FRISEN RANCH COWBOY CHURCH STOCKYARDS.COM RISEN RANCH COWBOY CHURCH ARENA CATTLEMENTS NEWS and follow us on FRISEN RANCH COWBOY CHURCH STOCKYARDS.COM

March

- 7 Buford Ranches Angus Bull Sale near Welch, Oklahoma FMI: 918-929-3275
- 7 Heartland Highland Annual Meeting & Conference Branson, Missouri FMI: 417-345-0575
- 11 Bull Breeding Soundness Exams Dake Veterinary Service, Miller, Missouri FMI: 417-452-3301
- Jacs Ranch Angus Bull Sale Bentonville, Arkansas FMI: 479-273-3030
- 14 Heart of the Ozarks Angus Sale Ozark Regional Stockyards, West Plains, Missouri FMI: 417-995-3000
- 14 Wright Charolais Bull Sale Kearney, Missouri FMI: 816-776-3512
- 16 Greene County Soils and Crops Conference Spfd Livestock Marketing Center, Springfield, Missouri FMI: 417-881-8909, ext. 311
- 20 Bull Breeding Soundness Exams Countryside Veterinary Clinic, Aurora, Missouri FMI: 417-678-4011
- 20 Sunflower Genetics Production Sale Maple Hill, Kansas FMI: 785-256-6461
- 21 Aschermann Charolais Bull Sale at the farm, Carthage, Missouri FMI: 417-793-2855
- 21 Circle A Angus Bull Sale Iberia, Missouri FMI: 1-800-CIRCLEA
- 21 Flying H Genetics Bull Sale Lowry City, Missouri FMI: 417-300-0062
- Genetic Blend Bull Sale
 Joplin Regional Stockyards, Carthage, Missouri
 FMI: 417-830-8180
- 21 Replacement Cow and Bull Sale Joplin Regional Stockyards, Carthage, Missouri FMI: 417-548-2333
- 23 Heartland Highland Cattle Auction Norwood Producers Auction Yards, Norwood, Missouri FMI: 417-345-0575
- 24 Bull Breeding Soundness Exams Animal Clinic of Diamond, Diamond, Missouri FMI: 417-325-4136
- 28 Seedstock Plus South Missouri Bull Sale Joplin Regional Stockyards, Carthage, Missouri FMI: 1-877-486-1160
- 31 KW Cattle Bull Sale Fort Scott, Kansas PH: 620-224-7305

April

10-12 Spring Ag & Urban Fest Ozark Empire Fairgrounds, Springfield, Missouri FMI: 417-833-2660

May

25 Best of the Best Calf Roping Risen Ranch Cowboy Church Arena, Carthage, Missouri FMI: 417-548-2333

Joplin Regional Stockyards | Market Recap | January 2015

Feeder Cattle & Calf Auction | January Receipts 34,016 • Last Month 20,742 • Last Year 44,095 Video Markets from 1/5/15 & 1/8/15 • January Total Video Receipts 3,267

Date:	South Central States	s Texas,	Okla., New Mex	New Mexico, Kansas, Mo.							
1/5/15											
	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
120	850	850	213.25-215.50	\$214.38	Current	70	735	735	\$216.75	\$216.75	Current

Date:	South Central State	es Texas,	Okla., New Mex	ico, Kansas, Mo.	Offering: 1855						
1/8/15											
	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
67	750	750	\$222.00	\$222.00	Current	128	775	208.00	\$208.00	\$208.00	Current
410	850	850	\$2,217.10	\$217.10	Current	67	750	207.50	\$207.50	\$207.50	Feb-Mar
	FEEDER STEERS		MED & LG 1-2			70	740	209.50	\$209.50	\$209.50	March
HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY	74	675	229.50	\$229.50	\$229.50	June
190	800-825	808	\$211.25-\$214.00	\$213.05	Current	190	775	214.00	\$214.00	\$214.00	July
232	850-880	864	\$202.50-\$212.50	\$207.59	Current		FEEDER HEIFERS		MED & LG 1-2		
56	900	900	\$206.50	\$206.50	February	HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY
57	875	875	\$209.75	\$209.75	May	130	775	775	\$206.75	\$206.75	Current
56	915	915	\$206.50	\$206.50	May	68	725	725	\$211.00	\$211.00	April
							Eastern States	All States	East of the Miss.,	La., & Ark.	
							FEEDER HEIFERS		MED & LG 1		
						HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY
						60	825	825	\$212.25	\$212.25	Current

JRS Sale Day Market Phone: (417) 548-2012

Mondays (Rick Huffman) | Wednesdays (Don Kleiboeker)

Market Information Provided By Tony Hancock | Missouri Department of Agriculture Market News Service

Market News Hotline (573) 522-9244

Tune in to the JRS Market Report





Monday 12:15 p.m. Wednesday 12:15 p.m. Monday 12:40 p.m. Wednesday 12:40 p.m.





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.



REAL ESTATE

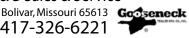


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Brief Summary of Full Prescribing Information



Antibiotic

100 mg of tulathromycin/mL

For subcutaneous injection in beef and non-lactating dairy cattle and intramuscular injection in swine only. Not for use in female dairy cattle 20 months of age or older or in calves to be processed for veal.

CAUTIONFederal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

INDICATIONS

RIDICATIONS
Beef and Non-lactating Dairy Cattle
BRD – DRAXXIN Injectable Solution is indicated for the treatment of bovine respiratory disease (BRD) associated with Mannheimia haemolytica, Pasteurella multocida, Histophilus somni, and Mycoplasma bovis; and for the control of respiratory disease in cattle at high risk of developing BRD associated with Mannheimia haemolytica, Pasteurella multocida, Histophilus somni, and Mycoplasma bovis.

IBK - DRAXXIN Injectable Solution is indicated for the treatment of infectious bovine keratoconjunctivitis (IBK) associated with *Moraxella bovis*.

Foot Rot - DRAXXIN Injectable Solution is indicated for the treatment of bovine foot rot (interdigital necrobacillosis) associated with Fusobacterium necrophorum and Porphyromonas levii.

Swine
DRAXXIN Injectable Solution is indicated for the treatment of swine respiratory disease (SRD) associated with Actinobacillus pleuropneumoniae, Pasteurella multocida, Bordetella bronchiseptica, Haemophilus parasuis, and Mycoplasma hyopneumoniae; and for the control of SRD associated with Actinobacillus pleuropneumoniae, Pasteurella multocida, and Mycoplasma hyopneumoniae in groups of pigs where SRD has been diagnosed.

DOSAGE AND ADMINISTRATION

Cattle Inject subcutaneously as a single dose in the neck at a dosage of 2.5 mg/kg (1.1 mL/100 lb) body weight (BW). Do not inject more than 10 mL per injection site.

Inject intramuscularly as a single dose in the neck at a dosage of 2.5 mg/kg (0.25 mL/22 lb) BW. Do not inject more than 2.5 mL per injection site.

CONTRAINDICATIONS
The use of DRAXXIN Injectable Solution is contraindicated in animals previously found to be The use of DRAXXIN In hypersensitive to the drug

WARNINGS FOR USE IN ANIMALS ONLY. NOT FOR HUMAN USE. KEEP OUT OF REACH OF CHILDREN. NOT FOR USE IN CHICKENS OR TURKEYS.

RESIDUE WARNINGS

Cattle intended for human consumption must not be slaughtered within 18 days from the last treatment. 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.

Swine intended for human consumption must not be slaughtered within 5 days from the last treatment **PRECAUTIONS**

Cattle
The effects of DRAXXIN on bovine reproductive performance, pregnancy, and lactation have not been determined. Subcutaneous injection can cause a transient local tissue reaction that may result in trim loss of a dilbit fixing at character. of edible tissue at slaughter.

The effects of DRAXXIN on porcine reproductive performance, pregnancy, and lactation have not been determined. Intramuscular injection can cause a transient local tissue reaction that may result in trim loss of edible tissue at slaughter.

ADVERSE REACTIONS
Cattle
In one BRD field study, two calves treated with DRAXXIN at 2.5 mg/kg BW exhibited transient hypersalivation.
One of these calves also exhibited transient dyspnea, which may have been related to pneumonia.

In one field study, one out of 40 pigs treated with DRAXXIN at 2.5 mg/kg BW exhibited mild salivation that

STORAGE CONDITIONS

HOW SUPPLIED
DRAXXIN Injectable Solution is available in the following package sizes: 50 mL vial, 100 mL vial, 250 mL vial, 500

NADA 141-244, Approved by FDA



Pfizer Animal Health
Division of Pfizer Inc, NY, NY 10017

To report a suspected adverse reaction call **1-800-366-5288** To request a material safety data sheet call **1-800-733-5500.**

For additional DRAXXIN product information call 1-888-DRAXXIN or go to www.DRAXXIN.com



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DRX12019 Revised: May 2011

CATTLE

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BB



I GOT BACK 30 BUCKS A HEAD. I ALSO GOT BACK MY FAMILY.

Using DRAXXIN® (*tulathromycin*) Injectable Solution has helped Jarret's operation deliver fewer re-pulls, re-treats, chronics and mortalities. That's because DRAXXIN provides long-lasting treatment and control of all four major bovine respiratory disease (BRD) pathogens. Plus, using DRAXXIN helped accelerate Jarret's shipment days. "Having cattle here 15 days less reduces feed costs. The \$2-per-head savings per day over 15 days returns \$30 back in our pocket," Jarret says. "And with the time I've saved doctoring and pulling, I've been able to reconnect with my family." Talk with your veterinarian or visit **draxxin.com/jarret.**(tulathromycin)



Important Safety Information: DRAXXIN has a pre-slaughter withdrawal time of 18 days. Do not use in dairy cattle 20 months of age or older. Effects on reproductive performance, pregnancy and lactation have not been determined.

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Injectable Solution

New products, new technologies, new ideas in Kansas City



With extensive displays of new farm equipment, the latest ag technologies, livestock demonstrations and a high-horsepower tractor pull, it's no wonder the Western Farm Show ranks as one of the Midwest's most popular indoor farm shows. Now in its 54th year, the

2015 Western Farm Show will kick off Feb. 20-22 at the American Royal Complex in Kansas City, Mo.

MFA, a major sponsor of the Western Farm Show, will have booths featuring precision agriculture equipment and services with plenty of expert staff on hand to answer questions.

MFA will again host Ronald Gill's livestock handling demonstrations. The Texas AgriLife Extension specialists knowledge of cattle and safe handling practices is a favorite and can help cattle operations of any size. MFA sponsors the NCBA's Stockmanship and Stewardship Low-Stress Livestock Handling demonstrations at 10:30 a.m. and 2 p.m. Saturday, Feb. 21, in the Scott Pavilion adjacent to the American Royal Complex. Admission is free to all Western Farm Show attendees

MFA's cattle handling systems and other MFA farm supply products will be featured at the show. MFA's Feed Division will have a display representing its full line of feed products with staff on hand explaining how the range of feeds can fit on various farming operations.

Stop by participating MFA Agri Services locations and receive a **\$3 off coupon** for admission.

2015 Western Farm Show, Kansas City, Feb. 20-22

- MFA experts on hand to discuss agronomic and livestock products and trends.
- Low-Stress Livestock Handling Demonstration, sponsored by MFA Incorporated: 10:30 a.m. and 2 p.m. Saturday, Feb. 21
- More than 500 exhibits viewed in the heated comfort of the American Royal Complex.
- Championship tractor pull with Doug Roberts and the Outlaw Truck and Tractor Pulling Association begins Feb. 20.
- FFA day is Feb. 20; food is being collected for the annual Food Drive "Border War."

Show hours:

9 a.m. to 5 p.m. on both Friday and Saturday

9 a.m. to 4 p.m. Sunday

Admission:

\$8 for adults and free for children 12 and under.

For more information, visit WesternFarmShow.com.





Scan to search booths and view a map of the 2015 Western Farm Show on your mobile device.