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VIEW FROM THE BLOCK

With the way the futures market looks out front for August, September and October fat cattle, I'd say cattle trade looks pretty good right now — especially

the cattle that are sell-

ing to go back to grass. We've seen 600-pound steers up to \$1.50. If you have some of those cattle around, I'd say you probably need to sell them because they'll bring as much as those that weigh 800 pounds. If you have some big steers weighing above 750 pounds, the trade will probably be pretty tough. I expect the market will continue to be that way because plenty of those cattle are available.

Slaughter cows have gained \$10 to \$20 in a lot of instances in the last 30 days. Replacement cows are trading favorable as well, although the market has been a little sideways. The demand for them is sure good. Through spring, I look for the replacement and

slaughter cows to both hold their own.

I'm optimistic as we head into spring. I expect the market to be similar to what we have currently. Trade will be up and down. As we get into summer, if

we have a lot of cattle on feed like I expect we will, then we might see a little pressure on the market, especially if we have ample numbers of slaughter cattle ready June through Sept. I think that will put some pressure on the market that time of year.

The market is somewhat vulnerable with the political stage we have right now, and a lot of things are happening around the world that could have an effect on prices. That presents a great opportunity to do some forward contracting for a time when we know cattle will make some money.

Good luck and God bless.

Jackie



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Spring is on the horizon and so is cattle working time. Learn how the legacy of a stockmanship expert lives on. See page 32. — *Cover photo by Jillian Campbell*.

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BEEF IN BRIEF

BQA Certification Now Free Online

The checkoff's Beef Quality Assurance (BQA) certification is now always free online. It's a new interactive online experience that beef and dairy producers can sign up for and complete at their convenience.

BQA tells consumers that cattlemen have a commitment to delivering a product that is backed by science-based standards. Certification also addresses many questions that consumers have about beef production. BQA ensures consumers that cattle producers are committed to responsibly raising, safe, wholesome, high quality beef.

"It only takes a few hours of watching modules and answering

questions, but serves as a checklist for producers to make sure they are using the latest management practices," says Josh White, executive director of producer education for the beef checkoff. "We have seen time and time again how consumer confidence is positively affected when BQA standards are followed, and producers have shown their commitment to producing quality beef by being BQA-certified."

For more information about your beef checkoff investment, visit MyBeef-Checkoff.com.

—Source: MyBeefCheckoff.com.

NRCS Accepting Regional Conservation Partnership Program Applications

The USDA's Natural Resources Conservation Service (NRCS) is inviting potential conservation partners to submit project applications for federal funding through the Regional Conservation Partnership Program (RCPP). Pre-proposals must be received by April 21.

Through this fourth RCPP funding opportunity, NRCS will award up to \$252 million dollars nationally to locally driven, public-private partnerships that improve the nation's water quality, combat drought, enhance soil health, support wildlife habitat, and protect agricultural viability. Applicants must match or exceed the federal award with private or local funds.

"RCPP is yielding outstanding results for conservation on working lands," said J.R. Flores, Missouri state conservationist. "The work of NRCS along with our partners in these locally led projects is helping Missouri land users address some of the state's most pressing natural resources concerns."

Created by the 2014 Farm Bill, RCPP connects partners with producers and private landowners to design and implement voluntary conservation solutions that benefit natural resources, agriculture and the economy. Potential partners include private industry, non-government orga-

nizations, Indian tribes, state and local governments, local soil and water districts and universities.

Applications from previous years have resulted in eight RCPP projects in Missouri. Information about specific projects, and more general RCPP information, including how to apply, is available on the Missouri NRCS website.

—Source: Missouri Natural Resources Conservation Service release.

Notorious Cattle Rustler Dies in Prison

Howard Lee Perryman passed away Feb. 7 in a prison north of Kansas City. Perryman, 67, from Monett, Missouri, was a notorious cattle rustler who was bound over for trial following several equipment and cattle crimes in Southwest Missouri.

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ON TARGET

Earlier is Better

Reduce stress on bull calves with early castration

Story By Justin Sexten for Cattlemen's News

Everybody knows bull calves sell at least \$5/cwt less than steers at weaning, and the discount grows for any still intact as yearlings. That's because virtually all of them are bound for the feedyard, where steers are the rule. The only question revolves around when the bulls become steers.

Castration at weaning means one more stress at an already stressful time and mandates a backgrounding or pre-conditioning program to allow healing.

It coincides with the stress of weaning, vaccination and diet adaptation, so the calf is more susceptible to illness, both respiratory and digestive. Vaccines do not respond as well when respiratory issues are present, and we know these negatively influence end-product merit as well.

What is often not considered is the digestive upset that delayed castration can cause. Reduced feed intake can contribute to bloat or acidosis due to calves being off feed as they recover from castration. To realize full genetic potential, including beef quality, a calf should never have a bad day. After bull selection and adequately feeding the cow in gestation, castration at or near calving could be the third step in a foundation of quality.

Think about all the reasons to neuter males in the first few days, the least stressful time of life.

- **1**. Lowest risk for bleeding or infection considering weather and pests.
- **2.** Requires handling at birth, and that "allows" ensuring adequate colostrum intake and calf health.
- **3.** Offers opportunity to begin individual animal management by tagging.
- **4.** Opportunity to assess dam temperament and reduce future docility problems.

- **5.** Any other time coincides with a vaccination or other stressor, compounding the challenge of effective vaccination.
- **6.** Steer calves have greater marbling potential and fewer tenderness challenges than calves raised as bulls.

This is a foundation. Certified Humane® requires neutering in the first week or pain mitigation at a later processing date.

As consumers are increasingly interested in how cattle are raised, a delayed castration model is detached from their perception of "normal" male procedures around birth.

It's been said, "The longer the testes are attached to the animal, the more the animal is attached to the testes." Increased mass and blood flow only serve to increase the risks associated with removal. Risk of complications in surgical castration later in life is similar to the challenge of encountering undescended testis when banding a calf in the first few days of life.

Why let the one calf you cannot band due to under development drive the entire management program? Other opportunities are available to tie up these loose ends. Castration at birth allows greater marketing flexibility because weaning age can now be determined by forage availability, body condition score of the dam and the market rather than needing to sort bulls from heifer mates.

As age at puberty has declined, an unintended early breeding season can be problematic for late castration models. As well, rapid market changes might not allow for adequate healing or recovery time before an opportunity passes for such models.

Of course, inadequate labor at calving can make banding

CONTINUED ON NEXT PAGE

TRENDING NOW

Ozark Empire Fairgrounds & **Event Center Wins Top Honors**

Venue takes top prize for agricultural youth camp

The spotlight shined bright In addition, the fairgrounds on the Ozark Empire Fairearned a first-place award for grounds & Event Center (OEF) at the International Association of Fairs and Expositions (IAFE) Convention held recently in Las Vegas, Nevada. The fair won 26 awards, including the prestigious Judges Choice Award. OEF's honors reflect the venue's growing popularity as a hotspot for events and entertainment in the Ozarks.

The fairgrounds' highest honor achieved was the Agricultural Awards Program Judges Choice Award. The fairgrounds won the distinguished designation for its Dig into Ag-Venture Camp, held during the Ozark Empire Fair. The camp stems from a partnership between the fair, Missouri State University's William H. Darr College of Agriculture and University of Missouri Extension. The interactive camp helps children learn about the food they eat and how it gets from a farm to their kitchen table.

The fair also earned a best of division and six first-place awards in the agriculture division for innovative programs aimed at supporting youth in Southwest Missouri. The fair received first place for a program in which junior beef exhibitors can win through a drawing, \$1,000 vouchers to use for buying an animal for their herd. Another winning initiative stems from a program designed to assist youth in acquiring and raising chicks to show at the fair.

The fair's competitive exhibits department earned 13 awards including Best of Division in Competitive Exhibits. OEF won the award with its "Create It on the Spot" contest. The winning contest encouraged fairgoers to create a cabin with pretzels, frosting and other treats in less than 30 minutes.

The communications department of the fair took first place for its book, "Memories in the Making: The History of the Ozark Empire Fair," and for its 80th anniversary T-shirts.

its First Annual Ozark Spring Roundup held in March 2016. The free three-day event showcases the latest in agricultural products, provides educational seminars, and offers a variety of entertainment.

—Source: OEF release.

EARLIER IS BETTER FROM PREVIOUS PAGE

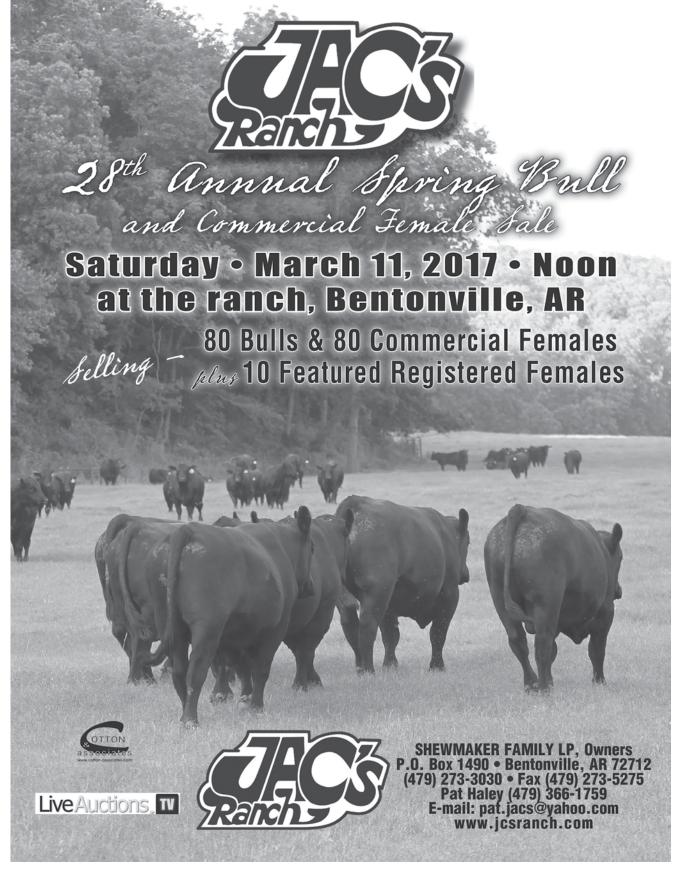
at birth impractical. In such cases, castration at branding or pre-breeding makes the most sense, though it likely requires two people. It's still early in life when milk is the primary nutrient source so disrupted feed intake is less of a challenge. Maternal immunity is fading, but calves are largely still protected while the first vaccine is administered.

You might worry about losing performance when neutering at birth, but data say the early initiative controls when the performance occurs rather than affecting the gain. Think you're still giving up 30 lb. of

gain by neutering early? Value that gain at \$0.75/lb. or \$22.50 per bull. Then take a \$5/cwt discount on the same 625-pound calf and lose \$31.25, not counting any other aspects of performance such as carcass merit or improved health. Then, there's your reputation.

Buyers might discount all other management practices based on the inability to castrate calves and use technology. A set of all-natural bulls might as well announce, "Owner has no facilities and doesn't care who'll start them, \$90 where?"

—Justin Sexten is director of supply development for Certified Angus Beef.



HEALTH WATCH

Maximize the Immunization

Proper vaccine handling and storage plays key role in animal health

Story By David Rethorst

variety of factors determine whether animals are truly im-Amunized or simply vaccinated. Primary consideration is usually given to the nutritional status of the animal, including proper hydration, as well as minimizing handling and transportation stress prior to administration of the vaccine. Of equal importance is ensuring that the vaccine has been shipped, stored

and handled properly, including the vaccine handling that occurs during administration. While this is especially true for modified live viral vaccines, it is important for all vaccines whether modified live, killed virus or bacterin toxoids.

The pharmaceutical industry commonly recommends storing vaccines at 35° F to 45° F. Temperatures lower than 35° F can be more detrimental to vaccine than temperatures greater than 45° F because of sep-

aration of the vaccine components. Temperatures greater than 45° F are particularly detrimental to modified live vaccines.

Two studies funded by state Beef Quality Assurance programs evaluated 367 refrigerators used for vaccine storage. These re-

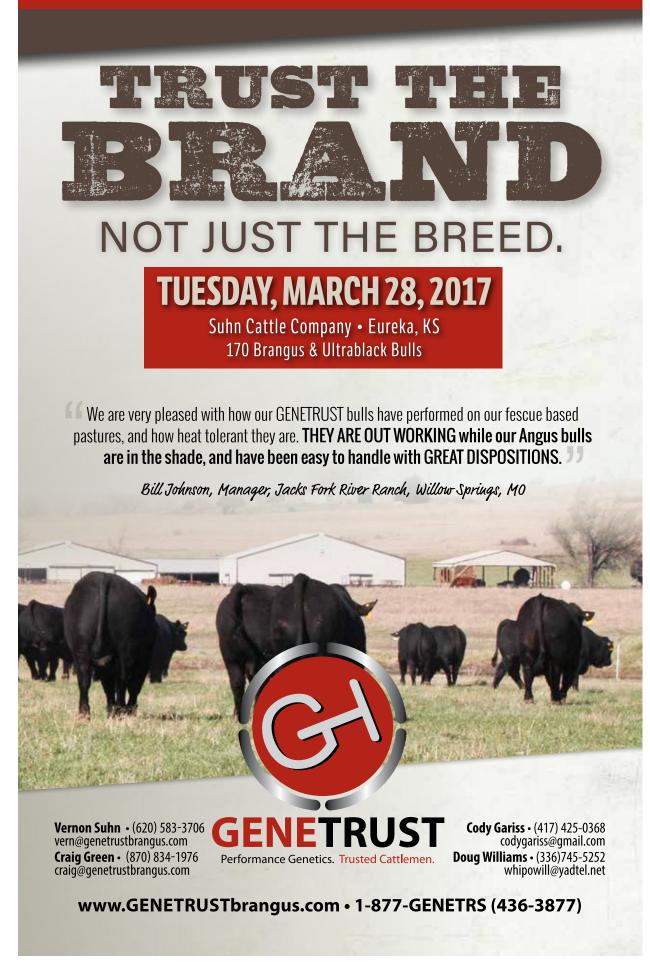
> frigerators were in veterinary clinics, feed stores and on producer premises. Of these refrigerators, only 107 (29 percent) were found to operate in the desired temperature range greater than 95 percent of the time during the 48-hour test period. Interestingly, 96 refrigerators (26 percent) were found to operate in the desired temperature range less than 5 percent of the time.

> A total of 4,060 products were found in these refrigerators. Of these products, 16.6 percent were found to be outdated, and 28.2 percent had been opened.

> A summary of these two studies includes the following recommendations:

- **1.** Keep a thermometer in the refrigerator so that temperature can be monitored.
- **2.** Do not use mini-refrigerators for long-term storage.
- **3.** Keep the refrigerator in a controlled environment.
- **4.** Regular cleaning of the coil and compressor is essential, particularly if the refrigerator is located in a barn or processing shed.
- **5.** Refrigerators that do not maintain temperature between 35° F and 45° F should be replaced.

Chute-side vaccines should be stored in a cooler box with freezer packs. This not only keeps the vaccine cool, but also keeps it out of direct sunlight. This is especially important once the vaccine has been mixed. Use of cooler boxes with syringe storage tubes in the side or top protect the vaccine in the syringe by keeping it cooler and out of the sunlight. No more modified live viral vaccine should be mixed at one time than will be used in one hour. Open vaccine — whether modified live viral, killed viral or bacterin toxoid — should be stored in a cooler box unless syringes



CONTINUED ON NEXT PAGE

8

IMMUNIZATION FROM PREVIOUS PAGE

are being filled. Because of the short life of modified live vaccines once they have been mixed (≤ 1 hour), leftover vaccine should be discarded.

Care should be taken to ensure a used needle does not enter a bottle of vaccine during the refilling process. A used needle potentially contaminates the remainder of the vaccine, reducing the efficacy of the vaccine as well as causing injection site blemishes. A good rule of thumb is to change needles every 15 head or every time the syringe is refilled, whichever comes first. A study several years ago showed that dried nasal secretions from a calf persistently infected with bovine viral diarrhea (BVD) virus, on the rubber stopper of a vaccine bottle were found responsible for transmitting BVD virus to other calves. Cleanliness of the entire process of vaccine administration is essential in order to get the desired response to vaccination: immunization.

Inadequate care and cleaning of syringes used for the routine vaccination of livestock can be associated with localized swelling and infection after vaccination, which diminishes the desired immune response. Syringes should be

thoroughly cleaned after each use, allowed to dry, and then stored in a clean and dry environment. Properly clean syringes with hot water, soap and a brush to clean the external components of the syringe. Take care that soap does not get in the luer tip. Once the external components of the syringe have been cleaned, hot water can be used to rinse the internal components. This is most often accomplished by drawing hot water into the syringe and squirting it back out several times. Avoid the use of soap and disinfectant while cleaning the internal components as they will impact vaccine efficacy the next time the syringes are used.

A production system should include management of proper vaccine storage, handling and administration. Doing this right will help ensure that optimal immunization is occurring rather than just the process of vaccinating. Let's make sure to do it right!

—Dr. David Rethorst is veterinary practitioner and consultant, Beef Health Solutions, Wamego, Kansas. Article reference: Rethorst D. Animal Health Equipment Management. In: Veterinary Clinics of North America, Feedlot Processing and Arrival Cattle Management, eds: White BJ, Thomson DU. July 2015, 259-268.

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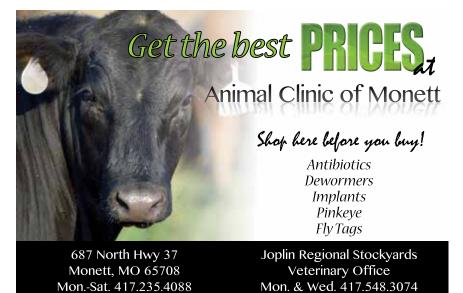


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ON THE CALENDAR

Nuts & Bolts of Farm Leases

Workshop slated for March 13 in Stockton, Missouri

Aworkshop highlighting
The Nuts and Bolts of
Farm Leases is set for 6 p.m.,
Monday, March 13, in Stockton, Missouri.

The program will discuss items in a lease as well as Missouri leasing laws, cash rental trends and options in farm rental agreements.

In today's current agricultural economy, lease agreements have become an important topic.

University of Missouri Extension Regional Agricultural Business Specialists Doug Scotten and Nathanial Cahill will teach the workshop.

"Understanding issues involved in lease agreements

and understanding various lease options can help you avoid potential conflicts," said Scotten. "The goal is to create a lease that works for both the owner and tenant."

The program will be held at the Cedar County Library, 717 East St., in Stockton. The cost to attend the workshop is \$20 per person or \$30 per couples sharing materials. Registration and payment for the course is required before March 8. To register or for questions call the University of Missouri Extension in Cedar County at 417-276-3313 or by email at davismp@missouri.edu.

—Source: Patrick Davis, University of Missouri Extension.

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While you and Glen are managing your cattle businesses, your checkoff is influencing consumers' behavior and confidence in purchasing beef.



NEXT GENERATION

Zoom Out for the Big Picture

Forward thinking helps you plan for future generations

Story By Darren Frye for Cattlemen's News

In the day-to-day work of running a farm efficiently and in a dedicated way, it can be easy to focus on what we're doing on that specific day. Work always has to be done, and naturally, we're focused on it. As farmers, we take pride in accomplishing our work — in doing a good job and having some fun along the way.

But another aspect to running and maintaining a smooth farming operation exists, one that tends to go by the wayside if we aren't paying attention to it. We must take the opportunity to 'zoom out' to look at the bigger picture of our farm operation — where it is now, and where we want it to be in the future. This means thinking about and asking questions like:

- What do we want our farm to become?
- Who will be involved?

• What will that look like?

Make a commitment to set aside some intentional time to consider and decide how you want your farm to proceed. Without that type of intentional direction, your legacy and the legacy of your farm could be at risk. Your farm will continue to move in some direction — but it might not be the one you want. It could even be as drastic as losing the farming life you and your family enjoy.

Back to the core

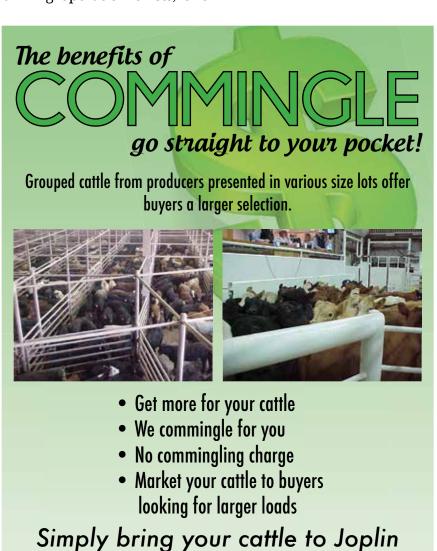
Getting back to what's most important — your values — is a good place to start this forward-looking planning. What are the key values and beliefs that your family and your operation stand for? What are the core convictions you'll use in all of your decision-making? You might meet together with other key stakeholders in your operation to narrow down a list of your farm's core values.

Once you've deterthis list, mined 'zooming start out' to the bigger picture of your operation and where it's headed in the future. You might begin by brainstorming as a group about some of the questions below. Use the values you determined earlier to help guide your discussion.

- Where do we see our operation in 10 years?
- Who is involved now and who will be involved in the future?
- What are our main goals over the next 3-5 years?
- What are some steps we'll need to take in order to move toward those goals?

When you know the direction you want your operation to go, take action on that path. Even if you're still years from retirement, think about the type of

CONTINUED ON NEXT PAGE



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ZOOM OUT FOR THE BIG PICTURE • FROM PREVIOUS PAGE

legacy you want to leave. Taking the future of your operation seriously through asking these types of questions is an enormous, incredible way to commit to the legacy you want to leave future generations.

Toward the future

Making plans for the future is a very responsible action to take — one that communicates to the younger generation on the farm that there will be a future, and that you're continually moving toward it each day through what you're doing here and now.

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TRENDING NOW

Checkoff Support Softens, Remains Strong

An independent survey of producters found 69 percent continue to approve of the Beef Checkoff Program. Importantly, the more producers know about the program, the more supportive they are. The survey also found that producers are generally more optimistic about the cattle industry than they were a year ago.

In late Dec. 2016, the independent firm Aspen Media & Market Reserch conducted the random survey of 1,252 beef and dairy producers nationwide. The survey found that while support of the checkoff is down from a year ago, a substantial majority of beef and dairy producers continue to say the beef checkoff is a good value:

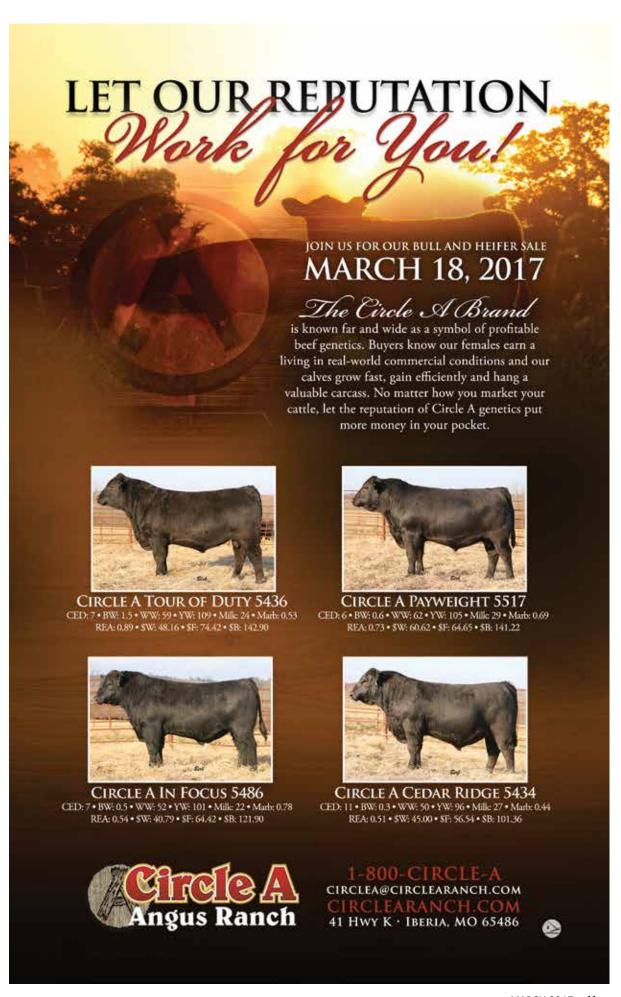
- 76 percent of producers say the beef checkoff has contributed to a positive trend in beef demand,
- 73 percent of producers say the beef checkoff has value even when the economy is weak,
- 66 percent of producers say the beef checkoff contributes to the profitability of their operations,
- 67 percent say the checkoff represents their interests,
- 58 percent believe the checkoff is well-managed.

—Source: MyBeefCheckoff.com.

Take action now. Set aside time to think intentionally about the future. Then, get 'big picture' plans put in place for how you and others on your farm will work to reach those goals. You might want to enlist a team of advisors, including a legacy advisor, for assistance as you carry out these strategies.

Read the current issue of the Smart Series publication, bringing business ideas for today's farm leader. This issue includes perspectives on what to do when a landlord asks for higher rent, how to find the right new employee, a farm business checklist for the spring season, and more. Your free issue is available at: www.waterstreet.org/smartseries.

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



PASTURE PLANNING

Renovate Fescue to Help **Prevent Cow Losses**

Fescue foot losses estimated at \$900 million annually

With reports of fescue foot causing loss of cows this winter, a University of Missouri foregoe and in the control of the contr a University of Missouri forage specialist says producers should work to prevent the disease.

MU's Craig Roberts says in severe cold weather, cows eating toxic fescue, a widely used pasture grass, suffer frozen feet and lost hooves. In one case this winter, a Missouri a producer lost five cows out of a herd of 30. Other less severe cases were reported.

An alkaloid from a fungus growing inside the plants of Kentucky 31 tall fescue causes losses. Once a foot is frozen, leaving a bloody stump, the cow cannot be cured.

"We've known prevention for 15 years," Roberts says. "There are ways to reduce the problem but only one preventive: Replace toxic fescue with a new variety."

The alkaloid in the old endophyte fungus causes blood vessels to contract. In winter, this vasoconstrictor shuts blood flow to body extremities. Feet, tails and ears can freeze.

A cow can survive a lost tail switch, but she can't walk to graze with frozen feet, Roberts says. Crippled cows must be put down.

Low blood flow in summer causes heat stress. This isn't fatal, but it causes unseen economic losses. Cows in heat stress quit grazing and head to shade or to ponds to cool off.

Animals that stop grazing stop gaining weight. That loss cuts farm income when calves are sold.

> "Losing a cow is losing the calf factory," Roberts says. "This is serious."

Fescue foot was first reported 75 years ago. It took until 1977 to discover the cause, an endophyte fungus. That threadlike growth lives between plant cells in the grass.

It's a symbiotic relationship. The endophyte protects fescue from insects, diseases, drought and overgrazing.

Other naturally occurring endophytes give protection but don't have the vasoconstrictor alkaloid.

"Replacing toxic fescue with a novelendophyte variety has huge economic benefit," Roberts says. "It does require a season-long process to kill the old variety and reseed to new fescue."

Fescue foot has an economic loss. But losing a cow has an emotional impact as well. The loss is personal.

Other losses are mostly unseen, Roberts says. Abortions of early pregnancies are almost never seen. That doesn't have the same impact on producers.

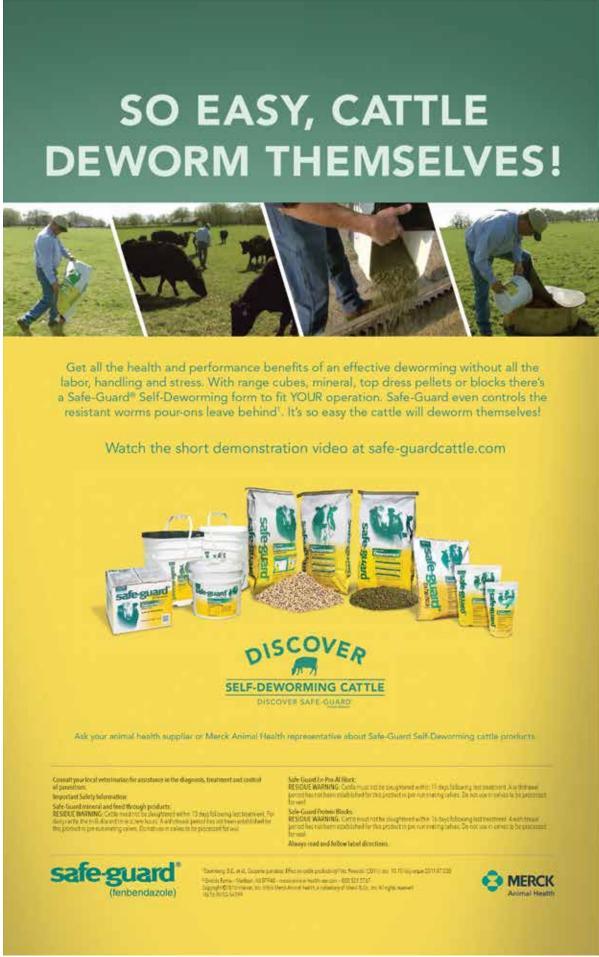
Fescue foot is third or fourth down the list of losses, Roberts says. Loss of unborn calves brings bigger dollar losses. Alkaloid also lowers daily gains. That cuts weaning weights. "It's a big loss on payday," he says.

Fescue foot cases dropped in recent warmer winters. However, other losses continue in all seasons.

"We know how to prevent losses, estimated at \$900 million a year," Roberts says. "Producers solve problems and increase profits by planting novel-endophyte fescue."

Roberts warns that seeding an endophyte-free fescue doesn't work. "We tried that in Missouri," Roberts says. "Fescue needs endophyte protection to survive much past one year."

—Source: University of Missouri Cooperative Media Group. Get details on fescue renovation at http://grasslandrenewal.org/. 🁕



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TRENDING NOW

Collegiate Cattlemen Network

Missouri State University students capitalize on activities

Story By Ella Snelson

Missouri State University Collegiate Cattlemen's Association in Springfield was the first collegiate affiliate of the Missouri Cattlemen's Association (MSUCCA). Started by MSU agriculture students and faculty, the purpose of MSUCCA is to advance the economic, educational, political and social interests of the Missouri cattle industry.

The officer team includes: Samantha Riley, president; Paul Stark, vice-president; Ella Snelson, secretary; Dee Stark, treasurer; Riley Phipps, pub-

lic relations; and Anna Roth ,parliamentarian. MSU Cattlemen's also has board members that help the association make decisions and plan for an exciting and successful future. This year's board members are Ben Bardot, Julie Choate, Makayla Reynolds and Hannah Beachner.

Members attend monthly meetings at MSU, as well as several other events that are held throughout the year. The organization hosted its annual student-run Farm Safety Day, which instructs

high school students on how to prevent farming accidents. An international BBQ was also hosted, where MSU students and Ningxia Chinese exchange students interacted and prepared different types of BBQ together. It is an event that the group plans every year for each incoming group of exchange students.

Already in 2017, MSUCCA members attended the Missouri Cattlemen's Association Convention and Trade Show at Lake of the Ozarks and the National Cattlemen's Beef Association Convention and Trade Show at Nashville, Tennessee. At both conventions, members networked with other cattlemen and cattlewomen to obtain farming advice and learn about different career opportunities for the future.

MSUCCA member Macey

Hurst was selected as the 2017 Missouri Beef Queen at the MCA convention. Serving as the queen gives her the opportunity to advocate for the beef industry and to share her own story with others.

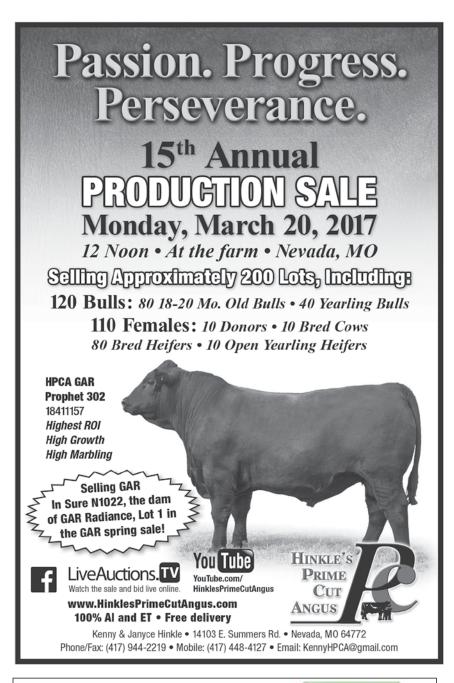
Being a member of the MSUC-CA has allowed students of all majors to have unique opportunities they might not have had. By attending industry events, members are able to communicate with a variety of agriculture leaders and gain leadership skills that will enhance their knowledge and skills of the cattle industry.

Stay up-to-date on MSUCCA activities by following the group on Facebook at https://www.facebook.com/msucattlemensassociation/.—Ella Snelson is an agriculture communications student at Missouri State University.











TRENDING NOW

Market Stability Returns

Step 1: Cattle feeders return to profitability

After a volatile year, stability is returning to global commodity markets, at least for the time being, said Randy Blach, CattleFax CEO, during the CattleFax Outlook Session at the 2017 Cattle Industry Convention and NCBA Trade Show held last month in Nashville, Tennessee.

"After the ag market shocks of the past year and an approximate correction of 50 percent in all commodity markets, prices are beginning to stabilize," said Blach. "That doesn't mean that we're past this, or that prices have bottomed, but on a global basis, we're not likely to see as much volatility during the year ahead."

He said the industry is continuing to become more current in its marketings, and cattle feeders are seeing a return to profitability, the first step in helping to stabilize prices for cowcalf and stocker operations.

Blach said that in the nearterm, capacity is going to continue to be a significant issue for packing companies in both the beef and pork sectors. A shortage of available labor and an increase in protein production in beef, pork and poultry will continue to keep the packing sector in the driver's seat during the year ahead.

"With limited processing capacity, the leverage shift in the marketplace will continue toward the packing, retail and foodservice segments for the time being," said Blach.

During 2017 and beyond, margins are likely to tighten for cow-calf producers with more stability but also an expectation for lower highs and lower lows. CattleFax analysts noted that the cow-calf sector will shift focus to finding efficiencies, reducing cow costs and improving productivity to remain profitable. Analysts estimated 2017 price expectations for 550-pound steers at \$150 per hundredweight (cwt.) with a range of \$130 to \$170/cwt. while 750-pound steers will average \$130/cwt.

with a range from \$120 to \$140 during the year ahead.

Blach reported that the historical cattle cycle remains intact, although the price break experienced in 2016 was the fastest and deepest of any in recent history.

"Even with the rapid growth in the U.S. cow herd, numbers are expected to continue higher for the next two-to-three years," said Kevin Good, CattleFax senior analyst. "Absolute price lows likely will not be realized until that period of increasing cow herd numbers is behind us."

Good echoed the expectation for prices to stabilize during 2017, making price and production risk management an easier task for producers. He said fed steer prices will average \$110/cwt. with a range of \$98 to \$124/cwt. and the composite Choice cutout will trade from \$168 to \$204/cwt. with a 2017 average price of \$185/ cwt. for the year. Grain prices have also stabilized, and corn is projected to trade from \$2.90 to \$3.95 per bushel with an average of \$3.45 per bushel.

Meteorologist Art Douglas, professor emeritus at Creighton University, said the signs of a return to El Nino conditions are already becoming apparent in the Pacific Ocean, which bodes well for portions of the country.

"The upcoming spring forecast calls for improved moisture from Texas to Minnesota, and this will be an ideal setup for spring wheat," said Douglas. "The drought in the Southeast will be retracting in the spring while a drier spring weather pattern is forecast for the northern Rockies. Persistent high pressure ridging will keep the western third of the country warmer than normal in the spring, and the dry areas of the far Southeast will also be warmer than normal. Temperatures will be cooler than normal through the Corn Belt in the spring, and

CONTINUED ON NEXT PAGE

STABILITY RETURNS FROM PREVIOUS PAGE

with wet weather forecast for the western Corn Belt, there could be problems with field work and spring planting."

He said the upcoming summer is expected to follow the typical pattern observed with developing El Nino events.

"Midwest summer temperatures will be near to slightly below normal," Douglas said. "A persistent trough of low pressure is forecast to persist through the Mississippi Valley through the summer and this will favor cooler than normal temperatures in the plains and above normal precipitation from the Gulf Coast to the mid-Mississippi Valley and Ohio Valley as well as the Southeast. The summer monsoon in the Southwest is likely to be weak as the monsoon high pressure struggles to become established in the Plains. The Northwest is expected to have a warmer- and drier-than-normal summer due to persistent high pressure ridging."

—Source: NCBA release.

MANAGEMENT MATTERS

Know Your Farm Lease

Is right of entry in your farm lease?

Story By Nathanial Cahill

 $F_{\text{new.}}^{\text{arm leases}}$ are nothing new. The arrangements are great way for agricultural producers to do what they love without the cost of actually owning the land. Of course, every farmer would love to own more land, but that cost has risen so significantly over the last few years that it can be cost-prohibitive for them to do so. So most farmers will try to set up equitable leases for both themselves and the landowner. It is thought that more than 50 percent of farm leases in Missouri are to be verbal agreements. Although this form is acceptable, written leases would be more ideal. This allows both parties to have a clear understanding of expectations, as well as what is included or excluded in the leasing agreement.

Here are five essential parts to a successful written lease:

- **1.** Names of all parties involved.
- **2.** Length of time the lease will be in effect.
- **3.** Description of the property that is included or excluded from the lease.
- 4. Rental rate.
- **5.** Signatures of all parties.

These five items are not only very important when developing a lease, but will also help detour some issues that might arise. Still, another major part of the lease that should be considered is the "Right of Entry" clause.

The "Right of Entry" clause allows the landowner to enter the property. If this clause were to be excluded from the

leasing agreement, then the tenant legally would have the right to treat any entrant to the property as a trespasser, including the landowner. Now, this clause can be limited to certain times of the year, such as when the landowner would want to see tillage operations, planting or harvesting. It might even be necessary to state in the lease that the landowner has right of entry to make repairs if that has been negotiated. This clause isn't created to cause hard feelings, but it protects both parties in the circumstance that confusion exists or something happens during the length of the lease, and it creates good business practice.

Remember the five essential elements to a successful lease, and consider the vital right of entry clause when developing the agreement.

—Source: Nathanial Cahill, University of Missouri Extension agricultural business specialist.



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ECONOMIC INDICATORS

Farm Income, Land Values Down

St. Louis Fed Ag Survey reports on fourth quarter 2016

Midsouth farm income and expenditures fell during the fourth quarter of 2016, according to the latest Agricultural Finance Monitor published by the Federal Reserve Bank of St. Louis. Meanwhile, quality farmland values and ranchland or pastureland values also declined.

The survey was conducted from Dec. 15 to Dec. 31, 2016. The results were based on the responses of 34 agricultural banks located within the boundaries of the Eighth Federal Reserve District. The Eighth District comprises all or parts of the following

seven Midwest and Midsouth states: Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri and Tennessee. The survey also included three special questions that focused on farmland sales.

Farm Income, Expenditures Slump

Agricultural lenders continued to report lower farm income levels compared with a year earlier. Based on a diffusion index methodology with a base of 100 (results above 100 indicate higher income compared with the same quarter a year earlier; results lower than 100 indicate lower income), the diffusion index for farm income during the fourth quarter of 2016 fell to 39. This represents the 12th consecutive quarter of the income index being below 100. Looking ahead to the first quarter of 2017, lenders' farm income expectations remained low, with a diffusion index value of 41.

"Cattle prices have negatively affected overall income for 2016. One large land-owning estate has liquated some real estate in

2016, but I expect this to slow down in 2017," an Arkansas lender reported.

In conjunction with lower income levels and in line with the recent downward trend, fourth quarter household spending and capital expenditures were lower than a year earlier. The household spending index came in at 77, while the capital spending index value was 45. Lenders said they also expect this trend to continue in the first quarter of 2017.

Quality Farmland Values Fall, Along with Cash Rents

After stabilizing in the third quarter, quality farmland values during the fourth quarter of 2016 were 8 percent lower than they were during the fourth quarter of 2015. Ranchland or pastureland values were 3.5 percent lower than a year ago.

"We are experiencing the same effects of the lower corn prices that other financial institutions are experiencing," according to an Illinois lender. "Farmland values have decreased slightly; however, they are still very high compared to what any farm can cash flow from straight commodity crop production."

Meanwhile, lenders reported an 11.6 percent year-over-year decline in ranchland or pastureland cash rents, and a 1.8 percent decline in quality farmland cash rents.

"Most bankers expect further declines in the first quarter of 2017, as the diffusion indexes of land values and cash rents are below 100 for each type of agricultural land," the report said.

Special Questions on Farmland Sales

Due to reports of possible increases in farmland sales, the survey asked bankers three special questions to help characterize the farmland market in their respective areas.

The first question asked lenders to choose, from four ranges of interest rates on fixed-rate farm real estate

CONTINUED ON NEXT PAGE

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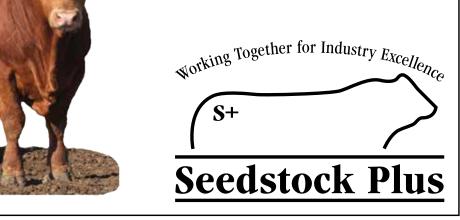
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Too Excited to Grow?

A look at chute score and exit velocity with growth performance of receiving cattle

Story From Our Staff

Animals with excitable temperaments often have decreased gains, directly correlating with decreased intake and efficiency.

University of Kentucky researchers evaluated two related but different measures associated with temperament, including a new objective measurement based on the common chute score.

Industry experts believe ruminally degradable protein (RDP) requirements of animals might vary with temperament. To examine the relationships between temperament measures and nutrient use, 192 crossbred steers were used in a 58-day randomized complete block design experiment.

Temperament treatments assigned prior to day 1 were chute exit velocity (EV; slow versus fast) and objective chute score (WSD; low versus high), a novel temperament measure that was standard deviation of weights collected at 5 Hz for 10 seconds while an animal was restrained in a chute with its head caught. Both were measured 8 days before the trial as well as on days 1, 2, 16, 30, 56 and 58. Day 1 was the day the animals were allotted to treatment groups and began receiving experimental diets. Steers were fed a diet with one of three RDP levels: 75 percent, 105 percent and 120 percent of RDP requirements.

The study showed no main effects or interactions with ruminally degradable protein. Slow-EV animals had greater average daily gain and dry matter intake than fast-EV animals, but no effect was proven of EV on gain:feed ratio. For day 0 to 58, high-WSD animals had greater dry matter intake than low-WSD animals but no difference in average daily gain, whereas low WSD animals tended to have increased gain: feed ratio.

Results of the study lend additional confirmation that EV is associated with dry matter intake and growth and provide evidence that a novel measure of behavior, WSD, is also related

to growth, independently of EV. Because WSD and EV appear to measure different underlying behavioral traits, using both measures might improve the ability to discriminate among temperament categories for growing cattle.

—Source: University of Kentucky.

LAND VALUES DOWN FROM PREVIOUS PAGE

loans, the rate range that would trigger a slowdown in farmland sales. Close to 25 percent of lenders said they thought rates would need to reach 5.5 percent to 6 percent; 22 percent said 6 percent to 6.5 percent; and 25 percent said 6.5 percent to 7 percent. However, 28 percent said rates would need to rise above 7 percent before impacting farmland sales.

The second question asked lenders their views on how farmland sales will fare in 2017. Only 13 percent reported they believed farmland sales volume will increase in 2017.

Meanwhile, 63 percent of respondents expected no change, and 25 percent reported they believed farmland sales will decrease.

The third question asked bankers whether farmers remained the largest buyers of farmland in their respective areas in 2016. In response, 69 percent of the bankers reported that farmers bought more than 50 percent of the farmland, while 31 percent reported that farmers purchased less than 50 percent. "Hence, farmers remain the largest buyer group of District farmland," the report said.

—Source: Federal Reserve Bank of St. Louis release.



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Deanna Schlereth, KS - "We should have invested in a calf catcher years ago. My husband wouldn't have been knocked down all those times, he would have been protected from that. It was the best thing we ever did. My son uses it now and he likes it too. Thank you!"

David Wood, MS - "We are a seedstock producer of registered Brangus cattle which requires that each calf must be tagged, perhaps medicated, checked for color and weighed within 24 hours of birth to develop accuracy for the birth EPD that is so important to our customers. Brangus are noted for their strong mothering instinct and it can be a challenge carrying out this task. The Safety Zone Calf Catcher has vastly improved the safety and ease with which this process is performed. It can be safely done with one ranch hand, whereas previously it usually took more than one person to provide protection for the one who was handling the calf — and that just wasn't safe enough. This product has brought added peace of mind during calving season and is sturdily built for this purpose. We highly recommend it."

Pat Realing, WY - "From a 67 year old guy in Wyoming the calf catcher is a life saver. Catch all calves by myself. Doctor and band. Now my wife is much safer. Works great. Calves and cows are much calmer."

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Rev Up the Engine

Prime calf's immune system to maximize performance

Story By Austin Black for Cattlemen's News

calf has 60 days to reach Aits full genetic potential. After that, no improvements occur. Dr. Victor Cortese, director of cattle and equine immunology for Zoetis, said what happens in these 60 days is the biggest variable in feedyard performance. Three areas can help maximize the genetic potential of calves during this time.

Colostrum transfer

Perinatal programming determines calf growth and development after birth. Nutrition, environment and management practices influence the genetic potential of a calf.

Colostrum has a huge impact on calf performance, both immediate and long-term. Cortese said even yearlings and "Anything that can impact weight gain in the first 60 days has long-term consequences."

-Dr. Victor Cortese Director, Cattle and Equine Immunology **Zoetis Animal Health**

two-year-olds experience the Cortese said. "The minimum impacts of colostrum transfer. Hormones in colostrum contribute to gut health, weight gain and reproductive performance. One of the lesserknown contributors is Leptin.

Cortese said leptin affects the hypothalamic pituitary axis. "That axis controls how animals respond to appetite and stress," he said. If calves don't get enough colostrum at birth, they don't handle stress as well.

Researchers estimate more than 25 hormones are in colostrum. But, data is only available on about five. "We have a lot more to figure out," Cortese said. "We're learning when the hormones are concentrated, there's a reason."

Colostrum transfer is timesensitive. "Colostrum absorption in the calf is front-end loaded," he explained. "If a calf doesn't nurse within two hours of birth, there will be some failure of transfer."

And, for every hour a cow isn't nursed, she loses 3 to 5 percent of her colostrum. Research shows 14 hours after birth, a cow has lost 33 percent of her colostrum. By 24 hours, it's gone.

Quality is also important. Cortese said genetics can play a role, but nutrition is often the cause. "Make sure that the last six weeks of pregnancy, cows maintain good BCS," he said. "They need enough energy to maintain their temperature. Adequate protein, energy, calcium and trace minerals all improve colostrum quality."

Early growth

Once calves receive good colostrum transfer, it's time to grow. Maximizing growth in the first 60 days is key to long-term success. Producers should ensure calves gain at least two pounds per day.

"The more (the calf) grows in the first 60 days, the more genetic potential it will turn on," goal with perinatal programming is to get the calf to onehalf of its weaning weight. Anything beyond that will improve the perinatal results."

Growth depends on feed intake. And, because most of that growth will come from the mother, cow nutrition is crucial after calving. Cortese said the cow needs enough nutrients to prepare for breeding while providing adequate milk. If cows experience environmental stress, their requirements are even higher. But even with plenty of milk available, intake isn't guaranteed. Calves need to stay healthy to maintain an appetite and gain weight.

Proper vaccination

It's important to treat sickness immediately. "Early disease has a tremendous long-term impact on performance," Cortese said.

Still, producers should be cautious that vaccinations don't reduce feed intake. "Anything that can impact weight gain in the first 60 days has long-term consequences," he said. "Be as gentle with vaccinations as possible while still getting the level of protection needed."

Producers should avoid systemic vaccinations with calves less than three months of age. Thus, internasal shots are the ideal method. "Internasal works better with maternal antibodies. If the calf has good colostrum in it, it handles the internasal more efficiently," Cortese said. Systemic vaccinations, like a 5-way respiratory shot, reduce feed intake and cause weight loss in young calves. It also reduces the calf's immune response to pasteurella vaccinations

Caution should be taken when using antibiotics to treat scours. "If you use antibiotics that change the local gut population in the digestive tract, it

CONTINUED PAGE 20

Brief Summary for use in Cattle: See Package Insert for full Prescribing Information



Antibiotic 100 mg of tulathromycin/mL

For use in beef cattle (including suckling calves), non-lactating dairy cattle (including dairy calves), veal calves, and swine. Not for use in female dairy cattle 20 months of age or older. **CAUTION:** Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

DESCRIPTION

DRAXXIN Injectable Solution is a ready-to-use sterile parenteral preparation containing tulathromycin, a semi-synthetic macrolide antibiotic of the subclass triamilide. Each mL of DRAXXIN contains 100 mg of tulathromycin as the free base in a 50% propylene glycol vehicle, monothioglycerol (5 mg/mL), with citric and hydrochloric acids added to adjust pH.

DRAXXIN consists of an equilibrated mixture of two isomeric forms of tulathromycin in a 9:1 ratio.

The chemical names of the isomers are (2R,3S,4R,5R,8R,10R,11R,12,13S,14R)-13-[[2,6-dideoxy-3-C-methyl-3-O-methyl-4-C-[[propylamino]methyl]--c-L-ribo-hexopyrano-syl]oxy]-2-ethyl-3-4,10-trihydroxy 3,5,8,10,12,14-hexamethyl-11- [[3,4,6-trideoxy-3-(dimethylamino]-p-D-xylo-hexopyranosyl]-oxy]-1-oxa-6-azacyclopentadecan-15-one and (2R,3R,6R, 8R,9R,10S,11S,12R)-11- [[2,6-dideoxy-3-C-methyl-3-C-methyl-4-C-[[propylamino]methyl]--c-L-ribo-hexopyrano-syl]oxy]-2-[(1R,2R)-1,2-dihydroxy-1-methylbulyl]-8-hydroxy-3,6,8,10,12-pentamethyl-9-[[3,4,6-trideoxy-3-(dimethylamino)-β-D-xylo-hexopyranosyl]oxy]-1-oxa-4-azacyclotridecan-13-one, respectively.

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.

Suckling Calves, Dairy Calves, and Veal Calves

BRD - DRAXXIN Injectable Solution is indicated for the treatment of BRD associated with M. haemolytica, P. multocida, H. somni, and M. bovis.

DOSAGE AND ADMINISTRATION

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

Table 1. DRAXXIN Cattle Dosing Guide

Animal Weight (Pounds)	Dose Volume (mL)
100	1.1
200	2.3
300	3.4
400	4.5
500	5.7
600	6.8
700	8.0
800	9.1
900	10.2
1000	11.4

CONTRAINDICATIONS

The use of DRAXXIN Injectable Solution is contraindicated in animals previously found to be 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.



Cattle
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.



PRECAUTIONS

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 edible tissue at slaughter.

ADVERSE REACTIONS

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 pneu

To report a suspected adverse reaction or to request a safety data sheet call 1-888-963-8471. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at http://www.fda.gov/AnimalVeterinary/SafetyHealth.

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



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032908Z0 Revised: February 2014



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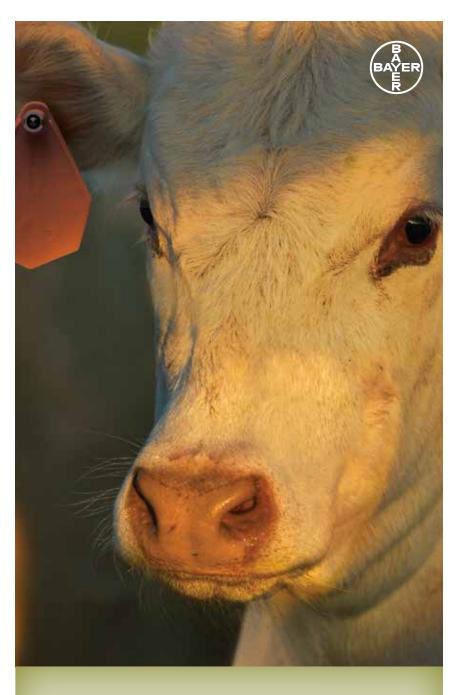


Treat bovine respiratory disease (BRD) the right way with DRAXXIN® (*tulathromycin*) Injectable Solution. DRAXXIN demonstrated 50% fewer re-treats and 50% fewer dead or chronic animals¹ versus competitive products in several large pen studies.² Which means your cattle stay healthier, and that helps keep your bottom line healthier, too.

BRD SOLUTIONS

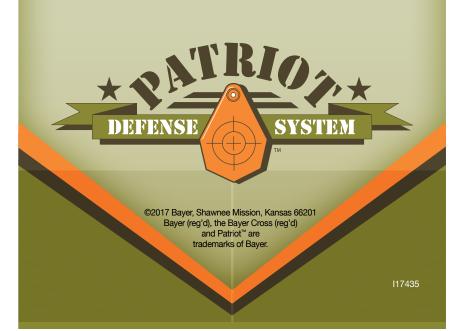
Get the numbers on DRAXXIN at draxxin.com.

IMPORTANT SAFETY INFORMATION: DRAXXIN has a pre-slaughter withdrawal time of 18 days in cattle. Do not use in female dairy cattle 20 months of age or older. Do not use in animals known to be hypersensitive to the product. See Brief Summary of Prescribing Information on adjacent page and full Prescribing Information at draxxin.com/pi.



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Systemic vaccinations, such as a 5-way respiratory shot, reduce feed intake and cause weight loss in young calves. It also reduces the calf's immune response to pasteurella vaccinations. Photo Caption. —Photo by Joann Pipkin

REV UP THE ENGINE FROM PAGE 18

can impact feed efficiency and weight gain," Cortese said.

As calves get older, two steps ensure optimum health and continued feed intake. The first is to avoid working cattle when it's hot. This becomes more important as cattle get bigger. Heat and stress result in decreased feed intake and reduced vaccine efficacy.

"Avoid vaccinating when the temperature is above 85 degrees with 30 percent or greater humidity," Cortese said. Working cattle early in the morning helps reduce stress. Wind speeds greater than 10 mph can also provide relief.

The second step is to use a practice called prime boost. Cortese defines this approach as "Priming the immune system to a target antigen delivered by one vector, route or mechanism and then selectively boosting this immunity by re-administration of the antigen in the context of a second and distinct method."

It's a complex definition for a simple practice. Give two shots at different times with different injection techniques. This approach provides broader protection by targeting different areas of the immune system.

It's difficult for a calf to fight both a virus and bacteria at the same time. Using prime boost helps avoid competition and gives calves better immunity.

"Internasal vaccinations stimulate the local immune system," Cortese said. "Subcutaneous shots stimulate the systemic immune system. Bacterial is often systemic."

This approach also helps reduce haptoglobin. Cattle produce this protein when they experience stress. Vaccinations often create stress in cattle. Studies show repeated systemic vaccinations could reduce feed intake for several days.

"The study showed the more the viral vaccines were administered systemically, the more stress cattle showed," Cortese said, "And it was worse when viruses in the vaccines were double administered. When working cattle that are under high stress, we need to vaccinate them a little more gently to keep them eating. We've got to do a better job with these calves. It all goes back to keeping the calf healthy and growing good for the first 60 days and then combining it with good colostrum transfer."

Lime With Caution

No harm to K-31 fescue, but nitrogen adds to toxicosis

Anitrogen to toxic fescue pastures grows more grass, but also boosts toxins in the grass.

A three-year study at the University of Missouri shows liming helps grass but doesn't increase ergovaline. That toxin harms grazing cattle many ways, mostly in lost production. In recent frigid cold, farmers reported cases of fescue foot caused by the toxin. Cattle losing their hooves must be put down.

"Before the study, we didn't know the impact of lime on toxin in infected fescue," said Sarah Kenyon, MU Extension agronomist, West Plains.

She completed her graduate degree with a study on a farmer's pasture in her area. The site was a 20-year-old stand of pure fescue with 98 percent infection rate. It was "hot" with toxin. Kenyon replicated her tests on 22 plots over three years.

No one had studied lime impact on fescue toxicosis, a major problem for grazing herds. The toxin is estimated to cause \$900 million losses annually in U.S. cowherds.

"A major finding of her work is that liming causes no harm," said Craig Roberts, MU Extension forage specialist. "We didn't know that. We did know that nitrogen fertilizer fed the fungus living in the grass."

It was long known that adding lime is the first step to improve pasture fertility. Calcium boosts pH, which cuts soil acidity. This allows fertility to be released for grass roots.

"Nitrogen fertilizer boosts forage yields, as farmers have long known," said Rob Kallenbach, MU extension agronomist. But there is a flip side, he says. "Nitrogen fer-tilizer also feeds the fungus, which in turn creates more toxins."

A common control of fescue toxicosis is to withhold nitro-

dding poultry litter or gen. That drops yields, which cuts gains on grazing livestock. That loss is on top of loss from fescue toxicosis.

> Killing the old fescue and reseeding a new variety of novel-endophyte fescue can solve problems with toxic fescue.

> An endophyte must be present in fescue for it to survive insects, diseases, drought and overgrazing. The most widely grown grass across the south

eastern United States is Kentucky 31 fescue. It happens to contain the toxic endophyte. Other endophytes found in nature do not make toxin.

Seed producers now use nontoxic novel endophytes. Many of these new fescues are sold by several companies.

The Alliance for Grassland Renewal, a cooperative group started in Missouri, promotes use of novel endophytes. One lesson for farmers is that endophyte-free fescue fails after a year.

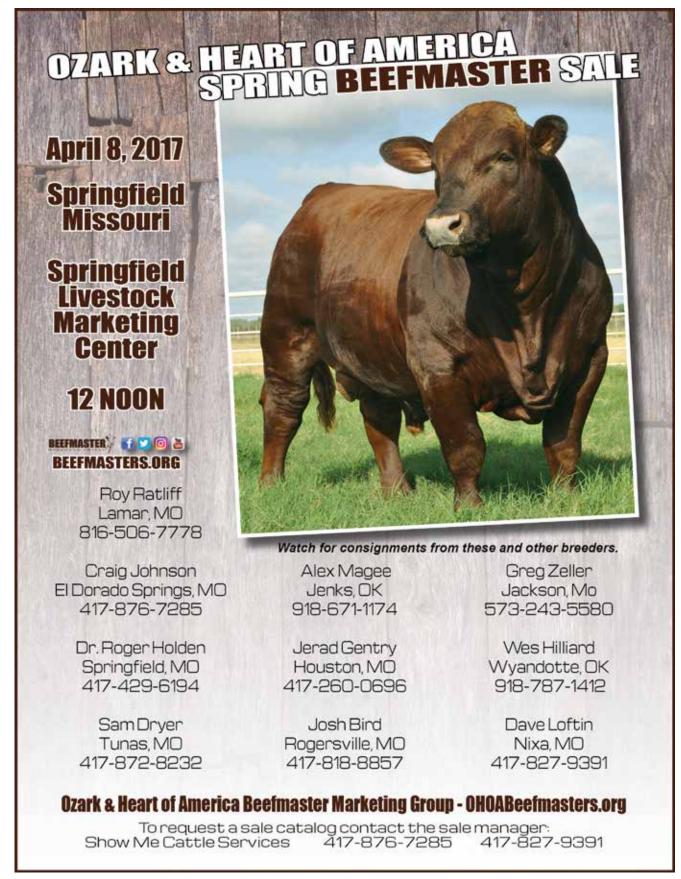
Missouri plant breeders introduced an endophyte-free variety. Those varieties are nontoxic but cannot survive.

Grazing novel-endophyte fescue takes extra care. Cattle graze it to death, left untended. That is different from the toxic fescue. The endophyte causes both heat and cold stress. In summer heat, herds stop grazing. Animals go stand in ponds to cool their feet.

With novel endophyte, daytime grazing isn't lost. Cattle gain faster.

The heat stress also lowers conception rates with smaller calf crops for herds on toxic fescue.

—Source: University of Missouri Cooperative Media Group.



ECONOMIC INDICATORS

Beef Trade: Who, What, Why?

Working to get the most bang for our buck

Story By Julie Walker

Beef producers and consumers often ask about beef trade and why we import and export. The simple answer is we are trying to receive the highest value for the product produced. The following facts might be helpful to understand the beef industry: the U.S. is the largest producer, largest consumer, fourth-largest exporter and

the largest importer of beef in the world according to USDA/ Foreign Agricultural Service (FAS).

U.S. Beef Exports

A large majority of beef exports would include high-quality cuts hence high-value beef cuts as well as variety meats that have limited demand in the U.S. Figure 1 provides

the volume of beef exported and imported reported in the Outlook for U.S. Agricultural Trade. The combined variety meats for beef and pork are a high portion of the volume of export products; however, the value of variety meat products does not match the value for beef and veal (Figure 2).

Variety cuts would include items such as tongue, heart, tripe, oxtail and sweetbreads. When was the last time you purchased one of these variety meats? A couple of examples of the value of exporting variety meats: 1) the price spread from exporting tongue has ranged between \$3 to \$12 per head (average tongue weigh 4 pounds); 2) beef liver exported has received \$0.50 to \$0.80 per

pound or \$10 to \$16 per head (average beef liver weigh 20 pounds); and 3) omasum and abomasum (compartments of the ruminant animal's stomach) exported has received \$1 per pound. Many variety meats have limited or no value in the U.S., so the export market provides additional revenue for each carcass.

Beef is exported from the U.S. to numerous countries though the actual quantity, products and value fluctuates from year to year. The major countries the U.S. exports to according to the USDA FAS are Japan, Mexico, South Korea, Canada and Hong Kong.

Why import beef?

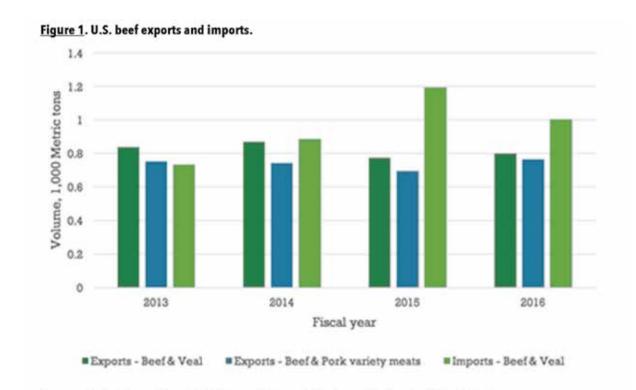
According to the USDA FAS, the U.S. is the largest producer of beef, so why import beef? The U.S. has a competitive fast food service industry with a high demand for hamburger. Ground beef production requires the addition of lean to mix with the trim from heifers and steers harvested in order to produce the ground beef product. Cull cows and bulls are a good source of lean product to incorporate with the trim; however, not enough of this lean meat produced in the U.S. is available. Manufacturers could — and do — use some of the chuck and rounds, both lean cuts, to grind into hamburger. However, this is relatively expensive since roasts, value-added cuts such as the flat iron steak, Denver steak and chuck eye steak — sell at a higher price than hamburger.

This demand for lean meat at a cost-efficient price leads to imports of the given product. A majority of the imported beef is lean beef that comes from Australian beef, New Zealand dairy beef and cull cows from Canada.

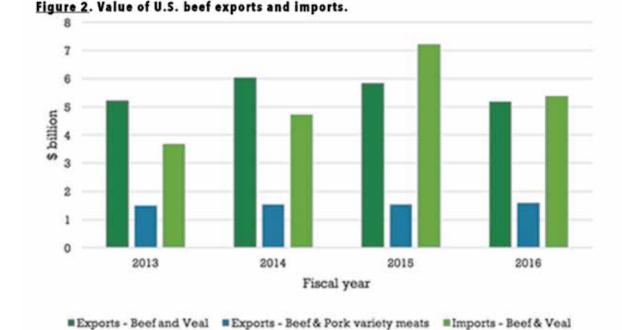
The Bottom Line

Global marketing is a complex system that includes many agricultural products as well as non-agricultural products. Beef is only one of the many agricultural commodities traded, and trade is an important tool as we strive for higher value U.S. beef.

—Source: South Dakota State University Extension release.



Source: Outlook Report from USDA's Economic Research Service and Foreign Agricultural Service



Source: Outlook Report from USDA's Economic Research Service and Foreign Agricultural Service

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AUTO Ace Venturo 557

LF. 62% - HOMO PId/HOMO Blk - 10/30/15 MAGS Robin Hood 276Y x AUTO Mighty Girl 670W BW: 0.7 WW: 70 YW: 103 MK: 35 SC: 1.3 DC: 17 YG: .11 CW: 32 RE: .26 MB: .41 SMI: 65 BW: 64 - Adj. WW: 794 - Adj. YW: 1,230 - REA: 15.99 - IMF: 4.17



AUTO High Time 1770

LF 56% - HOMO Pld/HOMO Blk - 10/28/15 MAGS Anchor x SBLX Unknown 104U BW: 0.9 WW: 61 YW: 95 MK: 20 SC: 1.4 DC: 23 Y6: .12 CW: 32 RE: -.02 MB: .43 SMI: 63 BW: 70 - Adj. WW: 587 - Adj. YW: 933 - REA: 11.46 - IMF: 4.31



PB - HOMO Pld/HOMO Blk - 3/2/16 WLR Direct Hit x AUTO Rebeca 292S BW: 1.1 WW: 68 YW: 101 MK: 31 SC: 1.0 DC: 4 YG: -.22 CW: 32 RE: .44 MB: -.30 SMI: 41 BW: 64 - Adj. WW: 826



AUTO Cash & Carry 101D LF 62% - HOMO PId/HOMO BIk - 1/10/16 AUTO King James 162Z x PBRS Dutches 790X BW: 1.5 WW: 63 YW: 103 MK: 31 SC: 1.2 DC: 12 YG: -08 CW: 32 RE: 25 MB: -11 SMI: 46 BW: 70 - Adj. WW: 836 - Adj. YW: 1,316 - REA: 17.74 - IMF: 3.20



PB - Het Pld/Het Blk - 10/29/15 AUTO Black Coffee 512A x AUTO Evie BW: 1.9 WW: 67 YW: 99 MK: 28 SC: 0.9 DC: 14 YG: -11 CW: 32 RE: .31 MB: .01 SMI: 52 BW: 68 - Adj. WW: 854 - Adj. YW: 1,172- REA: 13.63 - IMF: 3.40



AUTO High Cotton 143C

LF 50% - HOMO Pld/HOMO 8lk - 9/27/15 EXAR Counsel 1016B x AUTO Luckie 246W BW: 1.8 WW: 57 YW: 101 MK: 28 SC: 1.6 YG: .07 CW: 30 RE: .26 MB: .37 SMI: 60 BW: 76 - Adj. WW: 795 - Adj. YW: 1,176 - REA: 12.16 - IMF: 2.88



AUTO Roadster 104D

LF 42% - HOMO PId/HOMO BIk - 2/1/16 TMCK Hydraulic 17Y x SBLX Maria 662Y BW: 3.7 WW: 82 YW: 128 MK: 24 SC: 1.2 DC: 17 YG: .02 CW: 50 RE: .62 MB: .33 SMI: 67 BW: 74 - Adj. WW: 912 - Adj. YW: 1,298 - REA: 14.69 - IMF: 3.99



AUTO High Tide 179C 81% - HOMO PId/HOMO BIk - 11/12/15 MAGS Anchor x LVLS 9066U BW: 2.5 WW: 72 YW: 103 MK: 25 SC: 1.2 DC: 15 YG: .01 CW: 34 RE: .31 MB: .19 SMI: 58 BW: 76 - Adj. WW: 686 - Adj. YW: 1,084 - REA: 14.53 - IMF: 3.18



AUTO Sharper Image 546C

PB - Het Pld/HOMO 8lk - 10/29/15 AUTO Black Coffee 512A x AUTO Shana 417A 8W: 1.9 WW: 63 YW: 99 MK: 27 SC: 0.9 DC: 25 YG: -16 CW: 32 RE: 42 MB: -05 SMI: 49 8W: 65 - Adi. WW: 814 - Adi. YW: 1,170- REA: 12,86 - IMF: 2,94



AUTO High Life 137C

PB - Het Pld/HOMO Blk - 9/26/15 AUTO Cruze 132X x AUTO Luckie Too 423Y BW: 1.0 WW: 70 YW: 104 MK: 28 SC: 0.9 DC: 13 Y6: -.08 CW: 31 RE: .42 MB: -.03 SMI: 51 BW: 68 - Adi, WW: 861 - Adi, YW: 1,194 - REA: 14.82 - IMF: 3.19

10 Ways to Make Cow Herds More Profitable

How to put more pennies in your pocket, year in and year out

Story By Robert Wells

It has been well-documented in popular press and repeatedly confirmed at sale barns and coffee shops that the current calf market is about one-half of what it was just 2 ½ years ago. The short-term projections for both the cattle market and weather are not favorable for ranchers. For ranchers to economically

survive the market downturn, they need to get back to the basics, fine-tune their operations and plan for the long-term.

The following is a top 10 list of best management practices and concepts to consider that can help keep you from paying to be in the ranching business and losing money for the next few years.

Don't buy average or inferior bulls.

Spending as little as \$750 more on a known, better bull could net you an additional \$1,475 more per bull, annually. This is accomplished by purchasing a bull that will excel in growth traits that allow the rancher to sell the maximum pounds of weaned calves off the ranch.

Join a cattle-marketing alliance.

Alliances lend verification to cattle and help producers im-

plement best management practices, improve health status of cattle by following established health protocols, reduce shrink by requiring the calves to be preconditioned, and assists producers in selling cattle in larger lots through commingling.

Moderate cow size.

Larger cows require more forage to sustain themselves on a daily basis. This can affect pasture-stocking rates. A cow that is 200 pounds, or 17 percent, larger than another increases forage intake by 11 percent. Thus, stocking rate must be accounted for when moving from a 1,200-pound to a 1,400-pound cow. If you cannot increase the forage production accordingly, you will have to decrease stocking rate by 11 percent fewer cows to still have enough forage for the number of cows in the pasture. The heavier cow should wean a heavier calf, but this increase will not be enough to offset the reduced cow numbers.

Treat your cows as an employee.

Your cows should be expected to work daily for you. A productive cow will efficiently deliver a calf to the weaning pen each year, with little cost or problems along the way. In order to do this, you must select the right female and then develop her so she will be successful in the environment you expect her to work.

Cull cows.

First, cull what I call the three O's: old, open and ornery cows. Then, consider additional culls as the situation warrants. Older cows have a difficult time maintaining weight while weaning an even smaller calf. Carrying an open cow through the winter is analogous to hiring an employee, paying them monthly but not expecting them to show up to work for the next year. Ornery cows damage equipment, injure people and reduce efficiency when they are difficult to work in the

CONTINUED ON NEXT PAGE



MORE PROFITABLE • FROM PREVIOUS PAGE

pen or take part of the herd to the trees when you come into the pasture.

Develop a short and defined breeding season.

Increasing the number of earlier-calving cows will increase the average weaning weight in the fall. Consider if a calf is born 30 days earlier in the calving season and gains 2 pounds per day while on the cow, the calf will weigh 60 pounds more at the same weaning date in the fall. That is roughly a 10 to 12 percent increase in weaning weight by simply making sure more calves are born in the first third of the calving season.

Control feed expenses.

Manure scoring is a great way to monitor if a cow is getting enough proper nutrition in almost real-time. It gives the

producer an estimation of the digestibility of the diet the cow has been eating for the past 36 to 72 hours. This method allows you to identify nutritional deficiencies before they manifest into lower body condition scores. If you have to feed hay, provide highenough quality hay that additional feed supplementation is not necessary. At the cow's highest nutritional requirement, it takes a free-choice diet — 28.4 pounds dry matter — of either pasture or hay that is at least 9.9 percent crude protein and 57.6 percent total digestible nutrients to meet a 1,200-pound cow's nutritional requirements during peak lactation at three months post calving. If hay or forage quality is limiting but quantity is not, feed the right supplemental feed at the right time to meet the cow's requirements most economically.

OUtilize heterosis.

Heterosis is an often-overlooked tool to increase the commercial cattleman's overall efficiency. Heterosis is an easy tool to implement for most cattlemen and can increase weaning weights and longevity of the cow, improve feedlot performance and produce a more desirable feeder calf.

OIf feeding hay, don't waste it.

Hay feeding is probably the most expensive form of delivering forage to the cow. If the type of forage you have available locks you into this system, then make sure you don't waste hay by using antiquated-style hay rings. A modified cone hay feeder can save from 8 to 15 percent more hay than the older style feeders.

1 ∩Keep records.

The old saying is true: you can't manage what you don't measure. The more records you keep, from how much feed or mineral and hay is fed to weaning weights and percent weaned calves, the more powerful your management decisions can become. Develop key performance indicators (KPI) to benchmark how your

operation compares to itself over time and to others of similar size and in the same area annually.

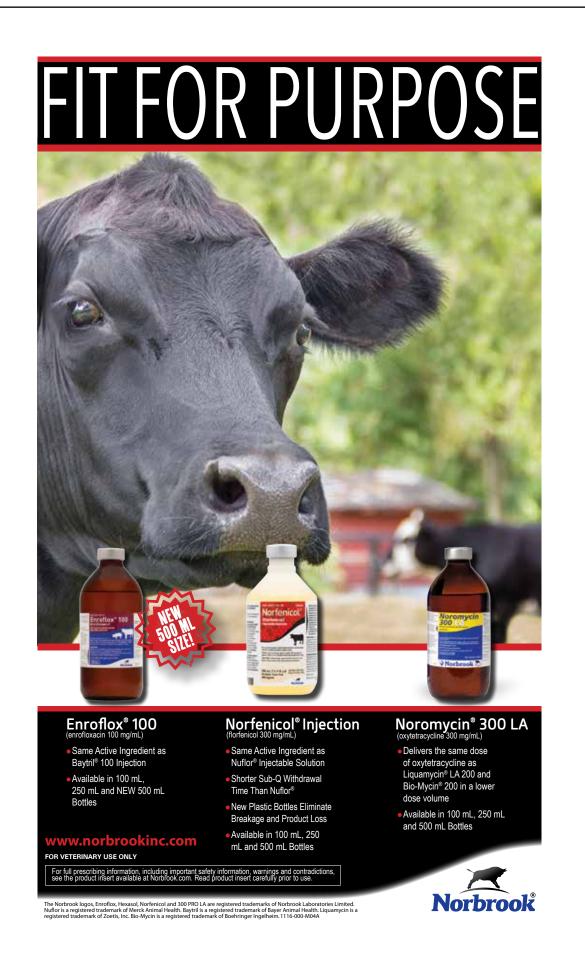
Keep in mind the above referenced best management practices will help most producers survive market- and weather-related disruptions and will allow for more profit year-in and year-out.

—Source: Robert Wells is livestock consultant with The Samuel L. Roberts Noble Foundation for Agriculture. Visit the Noble Foundation on the web at www.noble.org.

Get the JRS Mobile App Download it today from







Getting Used to New Rules

VFD brings change to veterinary-client responsibilities

Story By Lisa Henderson for Cattlemen's News

The Food and Drug Admin-Listration's long anticipated Veterinary Feed Directive (VFD) became reality Jan. 1. The new rules mean label indications for performance uses of medically important antibiotics have disappeared, and most feed uses of antibiotics for prevention, control and treatment of disease now require the oversight of a veterinarian.

While some in the livestock sector balk at additional government control, many veterinarians believe the VFD will bring change for the better.

"Contrary to the worst-case fears of some producers, feed-grade antibiotics remain available to cattle producers,

as do injectables and other formulations," says John Maday, editor of Bovine Veterinarian, a national publication for beef and dairy veterinarians. "Producers do, however, need to work more closely with their veterinarians to obtain medicated feeds by filing veterinary feed directive (VFD) forms."

Maday says that extra-label use of medicated feeds was illegal prior to the new VFD, but over-the-counter availability of those products created opportunities for misuse.

"Today, veterinarians are more accountable, as the VFD forms they sign specify how the product will be used and on which animals, and the in-

Kansas State University veterinarian Mike Apley, believes, "antibiotics in the feed of our animals can be used to responsibly control diseases at cer-

comply with label specifica-

tions," he says.

"Some pathogens that cause disease in food animals are starting to display more antibiotic resistance.

> - Dr. Mike Apley Kansas State University

tain times. If we feel that the antibiotics must be in the feed all the time, then we should be asking what alternatives we have to control or treat the disease other than using antibiotics. Antibiotic resistance is a real issue, and my opinion is that since we have not gotten a new antibiotic class for food animal since 1978, we need to be sure to preserve the efficacy of the ones we have for the future."

Apley, named last year to the Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria, knows some

formation on the form must producers will wonder if they can still keep animals healthy without antibiotics in their

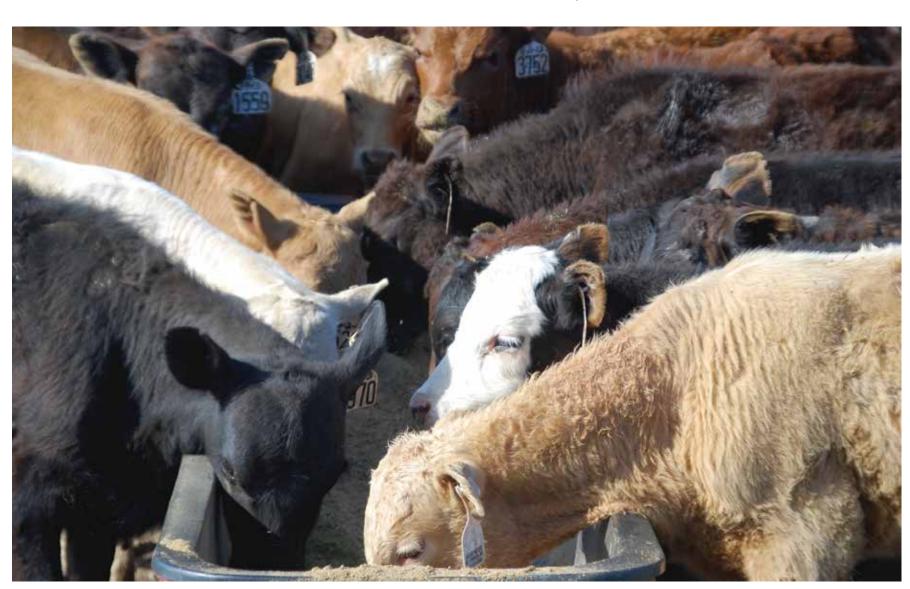
> "It depends," he says. "For diseases such as anaplasmosis, right now, we don't have a vaccine that is proven to be consistently effective or that is federally licensed. We do know that field experience says the use of chlortetracycline in a medicated feed can help to control active cases during the vector season."

> Apley adds that a lot of literature backs up that thinking. "Clinical experience of some veterinarians I have spoken with would suggest that the approved dosing regimen may be a little low in some herds," he says. "This effect may vary by the isolate of the anaplasmosis (there are multiple isolates, each with different ability to cause disease). So right now, using chlortetracycline during the vector season in certain areas of the country can greatly assist us in maintaining the health of our cattle."

> For other diseases such as bovine respiratory disease (BRD), Apley says limited data is available to tell us the effectiveness of chlortetracycline.

CONTINUED ON PAGE 28

Kansas State University veterinarian Dr. Mike Apley believes antibiotics in animal feed can be used to responsibly control diseases at certain times. He says alternatives should be considered instead of feeding them constantly. —Photo by Joann Pipkin





Extended-Release Injectable Parasiticid 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

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 states 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		
Cooperia surnabada – Adults and L]	
Haemonchus placei – Adults	Grubs	
Oesophagostomum radiatum – Adults	Hypoderma bovis	
Ostertagia lyrata — Adults		
Ostertagia ostertagi – Adults, L., and inhibited L.		
Trichostrongylus axei — Adults and L.	Mites	
Trichostrongylus colubriformis - Adults	Sarcoptes scabiei var. bovis	

alchospengytes codenireralis — Addits	Surcopies scholes val. boats		
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		
Ostertogia lyrata	120 days		
Ostertagia ostertagi	120 days		
Trichostrongylus axei	100 days		
Lungworms			
Dictyocaulus viviparus	150 days		

DOSAGE AND ADMINISTRATION

LONGRANGE* (eprinomentin) should be given only by subcutaneous injection in front of the shoulder at the recommended dosage level of 1 mg eprinomectin per kg bodyweight (1 mL per 110 lb bodyweight).

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

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 slaught 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

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

Environmental Hazards

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

STORAGE

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

Manufactured for Merial, Inc., Duluth, GA, USA.

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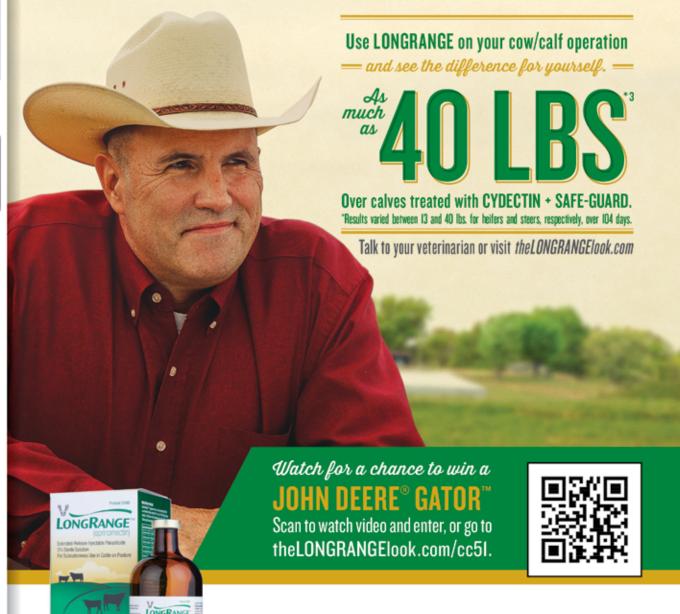
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product label. ² LONGRANGE product label

3 Data on file at Merial.

NEW RULES • FROM PAGE 26

"There are probably some cases where it helps, and some where we don't need to use it," he says. "Some of this use may have become habit, and we are afraid to discontinue it because it might be doing something for us. What we're being asked to do with the VFD is to make sure that when we use it we have a real reason for doing so."

The first responsibility for producers and veterinarians in antibiotic stewardship, according to Apley, is to evaluate every option available to avoid the need to use antibiotics. This includes biosecurity, vaccines, taking advantage of the epidemiology of diseases

(how they move around the environment and between animals), genetics, nutrition, managing the environment, in general animal husbandry. For example, he says calving a group of heifers in a muddy, confined environment is not fixed by using antibiotics to treat the calves with the scours that will surely happen.

"Even vaccines are a poor substitute for correcting this environmental catastrophe," Apley says.

Or, when producers must use repeated mass medications to control respiratory disease in a group of highly-stressed, comingled calves, Apley questions, "Are we really satisfied with this production system for these calves? What we are being asked today is how we can improve the system so that antibiotics are not needed to protect the health of these animals.

Veterinarians say it is important to recognize the new VFD regulations do not mark the final endpoint for FDA's antimicrobial stewardship policies, and further restrictions are likely.

"Already, FDA has announced an evaluation of antimicrobials for which the labels allow continuous use of do not define duration of use," Maday says. "More changes or restrictions are likely in the near future." "Hopefully, restrictions on antibiotic use will help drive innovation on adoption of alternatives that protect animal health and consumer confidence."

> -John Maday, Editor Bovine Veterinarian

Such changes, veterinarians believe, provide opportunities for veterinarians to become more involved in the clients' overall health-management programs. They believe part of that effort should be to help reduce the need for antibiotic use through management, vaccination and other non-drug options for reducing disease exposure and boosting immunity.

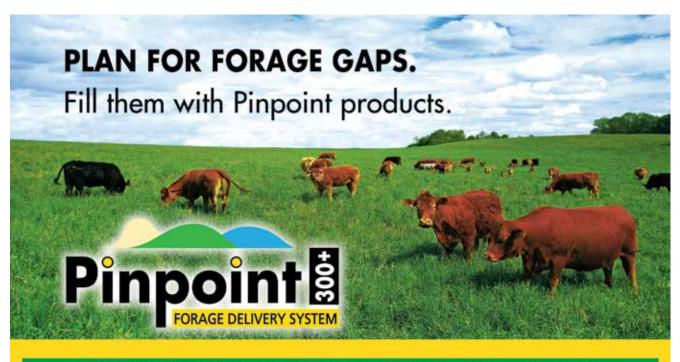
"We all have to be in this together," Apley says. "Some pathogens that cause disease in food animals are starting to display more antibiotic resistance. Some of these pathogens are capable of being passed through the food chain to people."

Take the recent Salmonella outbreak in Heidelberg in small calves that had come through sale barns, for example. That particular salmonella isolate was resistant to a number of important drugs used in human medicine, including fluoroquinolones and third-generation cephalosporins.

"This doesn't happen often, but when it does it brings to the forefront our responsibility for antibiotic stewardship in food animals," Apley says. "Cattle producers need to understand this is a real issue and not completely made up by those who would like to see (livestock producers) out of business. We need to continue to have access to antibiotics to ensure the health of the animals in our care, but we also have the responsibility to use them as good stewards."

Maday says the VFD could provide unexpected benefits.

"Hopefully, restrictions on antibiotic use will help drive innovation an adoption of alternatives that protect animal health and consumer confidence."



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Safe and Secure

Cattle handling facilities don't have to break the bank; safety is key

Story By Justin Rhinehart

While much talk in cattle circles this year has focused on ways to cut costs on the farm and ranch, not skimping on cattle handling facilities is one area where money is well spent.

Even low-input operations need at least basic handling facilities to load cattle for transport to market or to treat health issues.

Handling facilities can be as basic as a rope or as complex as a remote-controlled hydraulic system. The bottom line for small-scale and average size cattlemen is selecting facilities that do the job safely and efficiently at a cost that is appropriate for the scale of the operation.

Most cattle handling facilities consist of a standard layout of catch pen(s), crowding pen (or tub), alley and chute. A number of additional features can enhance the efficiency of the system, but for producers operating small to average-size herds, a basic setup is sufficient. The overall objective when deciding where to place the working facility and how to design it should be that it will be safe, efficient and easy to use.

An area where the cattle can easily be gathered and sorted is called the catch pen. For example, calves can be sorted before a group is moved through the rest of the facility to reduce the possibility of small calves being injured or unduly stressed. The catch pen can also be used as a temporary holding area provided ample shade and water supply is available. Two pens in this area might be sufficient for a smallscale operator. However, consider putting them in a place where additional pens can be added for future expansion. Each catch pen should be large enough to provide approximately 18 square feet per animal.

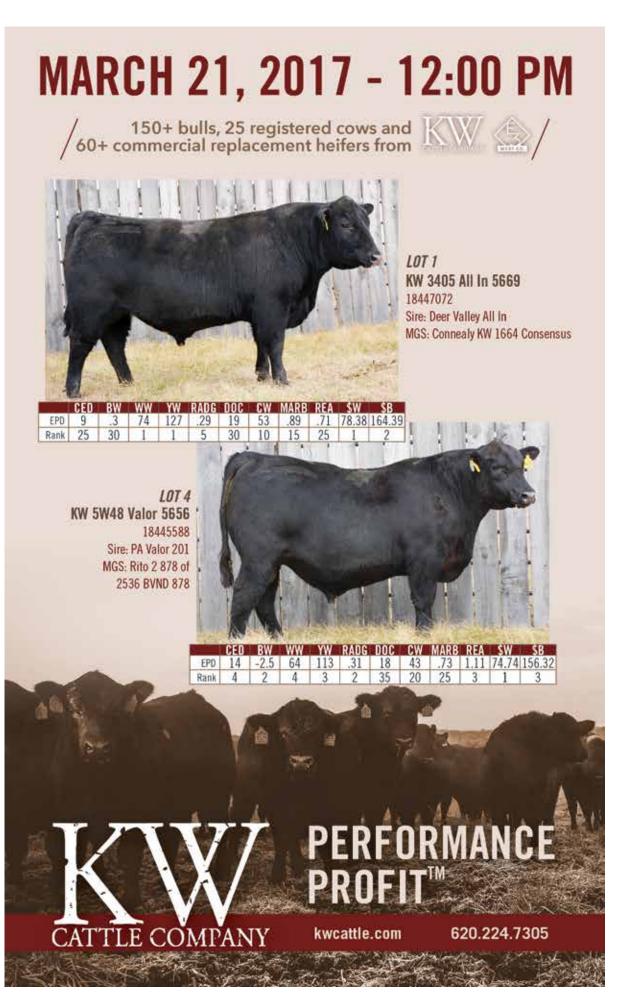
The crowding pen, or tub, directs cattle from the catch pen and funnels them into the alley. The most common design for many years has been the sweep tub. A sweep is a semicircular tub with a solid-walled gate that pivots on the axis to direct cattle through a funnel into the alley. More recently, a design called the Bud Box, named for the late cattle-handling consultant Bud Williams, has become more popular for directing cattle into the alley. The Bud Box design is relatively simple, often less expensive and when used correctly, is extremely effective and efficient.

The alley is designed to move cattle in single file to a desired location, such

as a holding pen, loading chute or squeeze chute and headgate. Like the crowding pen, the working chute and its gates should be constructed of durable material at least 5 feet high. Making the alley solid-sided and curved has been a trend for many years. But, more recently, producers have been opting for a partially or fully open-sided design to allow them to use the cattle's line of sight and point of balance to move them down the alley. If an open-sided design is chosen, pay special attention to obstructions or visual distractions outside of the facility. A curved or "S" shaped alley is often not practical for a smaller operation, but the alley should be long enough to hold four or five head to make the work flow more efficiently.

The width of the alley varies depending on the size of the cattle being processed. It should be wide enough for cattle to move forward without much resistance but not wide enough for them to turn around. A good width for calves is 18 inches,

CONTINUED ON NEXT PAGE





Even low-input beef cattle operations need at least basic cattle working and handling facilities. Design should focus on safety of the operator and animals while also being costeffective for the size of the operation. — Photo by Jillian Campbell.



SAFE AND SECURE FROM PREVIOUS PAGE

but this will not accommodate larger cattle. Some commercially available working alleys are adjustable. However, for smaller scale producers, it might be more cost-effective to build a 22- to 26-inch wide alley and hang spacers over the sides when working smaller calves.

The chute — squeeze and headgate — are where most of the work on cattle is performed. These devices safely restrain cattle so management practices can be administered without difficulty. Commercially available squeeze chutes and headgates come in different designs with a wide range of prices. Some homemade squeeze chutes are af-

The Bud Box design is simple, often less expensive and, when used correctly, is extremely effective and efficient.

fordable for a small producer and work as well as purchased ones. Whatever the situation, the function should be to provide restraint that is safe to both cattle and workers.

Other items to consider when building or purchasing a chute and headgate are being able to reach the neck to deliver injections according to beef quality assurance recommendations; having access to the sides, legs and hooves of the cattle and calves; and adding a palpation cage to the back. A palpation cage is a door that swings in and across the alley, latching to stop the next animal from coming into the chute and allowing access to the rear of the animal already in the chute. This makes is much easier to palpate for pregnancy diagnosis or accomplish other reproductive management techniques.

For additional information on how to best construct a safe, cost-effective cattle handling and working facility, visit with your area livestock specialist.

—Dr. Justin Rhinehart is beef cattle specialist with University of Tennessee.

Tackling Tetany Trouble

Watch for signs when grass grows quickly in spring

Story By Austin Black for Cattlemen's News

As spring pastures start growing this year, grass tetany might be a concern. Also known as hypomagnesemia, grass tetany often occurs when cattle graze rapidly growing pastures.

"It's very common in the spring on cool-season grasses, particularly those stressed with lower growing temperatures and cloudy weather," said Dr. Jim White, director, ruminant nutrition, MFA Incorporated. He said the stress causes grass to

have a nutrient imbalance, particularly high in potassium, but too low in magnesium.

The imbalance affects the animal's bloodstream. Low magnesium levels cause problems with muscles and nerves.

"When the forage is low in magnesium, the high potassium inhibits the intake of magnesium," he said. "The cows don't have enough in the blood and it's compromised to absorb the magnesium. If I don't keep grease in my equipment, it rubs too much. It's similar on an animal. If they don't have enough magnesium, they have problems with muscle contraction and nerve pulse transmission."

Animals with grass tetany will experience involuntary twitching and inability to stand. "The first thing you'll see is a bugged-out eye and wobbly legs," White said. "They can die from it."

Spring-calving cows and young stocker cattle are often the most susceptible. Cows with nursing calves have the biggest nutrient requirement in the spring.

"Her needs are the most, and she is under a fair amount of stress," he said.

Treatment isn't possible, so prevention is key. The first step producers can take is supplementing their cowherd during the spring. Giving each animal a couple pounds of feed provides enough nutrients to regulate the mineral imbalance.

"When we supplement feed, it's not a problem," White said. "Fermentable carbs reduce the incidence. Breeder cubes or salt mixed with magnesium is the easiest."

Since spring pastures provide adequate protein, energy supplements receive the best response. White said this complements the forage base in tetany-infected pastures.

The best practice, though, is to feed high magnesium mineral. But it has a bitter taste and resembles chalk, so cattle don't eat it well. White said the trick is to feed it in a grain or mix it with salt. The latter is often the better option because magnesium is the main problem. Feeding salt reduces the incidence, he said.

Producers should start feeding high magnesium mineral about one month ahead of grass. This also allows time to make sure consumption is adequate. White said if animals show signs of twitching, they need grain supplemented with magnesium. Feeding a couple pounds ensures they consume the mineral.

"If you get 25 to 30 grams of magnesium intake per cow per day, you're not going to have tetany problems," White said. "That's one ounce."



Legacy of a Cattle Whisperer

Bud Williams' stockmanship methods live on

Story By Jillian Campbell



Some say immortality is made possible through the transfer of knowledge and passion. Bud Williams, stockmanship educator and creator of the Bud Box has proved this theory by leaving a legacy in the livestock industry even after his passing in 2012. Through the operation of Bud Williams Schools, his legacy continues to educate the public on proper livestock handling and unique stockmanship methods.

Bud is kept alive through the works of his wife, Eunice Williams; his daughter, Tina Williams; and Tina's husband, Richard McConnell. Eunice, Tina and Richard have traveled many miles to spread Bud's message. They have held stockmanship classes across the United States, Canada and even Mexico. Eunice and Bud's marriage allowed them to grow their passion of working with livestock together. After spending time working on a ranch in northern California, the couple began sharing their discoveries with others in the industry.

"We always felt it was our calling," said Eunice.

Richard met Tina through business in 2002. He refers to his first experience at Bud's school as a turning point in his life. Much like Bud and Eunice, Richard and Tina share a deep passion for the livestock industry that would lead to a lifetime

of studies and family practice.

"It was divine intervention," Richard said. "That's what it was. There is no other way to put it."

Often called the cattle whisperer, Bud dedicated most of his life to studying cattle and their responses to movement. Bud believed that three major points of working cattle were found in proper pressure, proper communication and proper

attitude. His theories have also centered on scientific factors such as predatory instincts. Bud's studies prove that simply walking in straight lines around cattle will eliminate a

"You can set up a Bud Box in a few minutes using almost anything – even cattle panels."

-Richard McConnell HandNHand Livestock

human's predatory essence, allowing cattle to trust more easily.

"Bud's teachings use all the instincts of an animal and that is why they are so effective," Richard explained.

Richard and Tina put on their first Bud Williams School in 2005 and have since held 118 educational events. Today's technology has allowed the couple to expand Bud's works in the form of video, which they use widely during their presentations. Their footage demonstrates Bud's teachings being utilized in real-life situations.

A variety of video resources, including a Go-Pro, help Richard and Tina capture working clips from the handler's point of view. They enjoy capturing working footage to use during educational seminars and also find the videos useful in revealing mistakes in movement in order to improve their own practice.

The couple likens their tactics to sports practice footage. They emphasize finding pressure points on cattle and moving toward them in straight-line motions to get the job done.

"Taking out too much movement always seems to be our biggest mistake," Tina said.

Richard, Tina and Eunice all believe that expensive equipment is unnecessary for practicing good stockmanship.

"The best facility is the one where the animals have been trained and gathered properly with the right people who know how to use these techniques," says Eunice.

Tina emphasizes the low-cost and high efficiency of installing a Bud Box operation into a facility.

"You can set up a Bud Box in a few minutes using almost anything — even cattle panels," Richard added. He said that while tub systems often emphasize unnatural movement for cattle, the design of the Bud Box allows cattle to use natural instinct to find an alley without risk.

"Sometimes people say a Bud Box is dangerous because you have to be in it," Tina said. "You do not have to be in the box. It works really well when you work from outside the box in the alley entrance."

Richard and Tina both take pride in never owning a cattle prod. With the use of Bud's tactics they have found them ineffective for sorting.

"Before using a hot-shot, you should mentally rewire it so it shocks on both ends," Tina said jokingly.

In addition to cattle prods, Richard and Tina do not use noise-making sorting tools or any working facilities they consider unnatural. Richard prefers square or rectangular, opensided systems that allow cattle to see workers.



"You've got them going back the way they came, going around you, and they get to follow other animals," he said. "Any time you get all those instincts on your side, then it works really well."

Richard and Tina put their knowledge to the test on a regular basis. In addition to their Bud Schools and seminars, they also spend time traveling to instruct and assist one-on-one at ranches and feedlots across the nation. After working with many different breeds of cattle, Richard and Tina do not feel that docility is something that can be attributed to a breed.

"If you are reading your animals and doing what they're telling you to do, you will find that a wilder animal will tell you 'that's close enough' when you are far away," Eunice explained. "A gentle animal won't say 'that's close enough' until you are much closer. There is no difference. You just have to read your animals."

Tina agreed, and avoids the term "flight-zone," which is a unit of space that should be kept between a person and livestock. Instead of flight-zone, she refers to this measurement of space as the "zone of influence," a term she believes is unique to each individual animal.

During his 15-year journey with the Williams family, Richard has adopted the nickname "marriage counselor." By speaking at Bud Schools and teaching hands-on stockmanship, he has often been told he helps make the cattle-working experience easier on family relationships, and this puts a smile on his face.

"I want to continue Bud's efforts of improving the lives of the cattle and the people that handle them," he said.

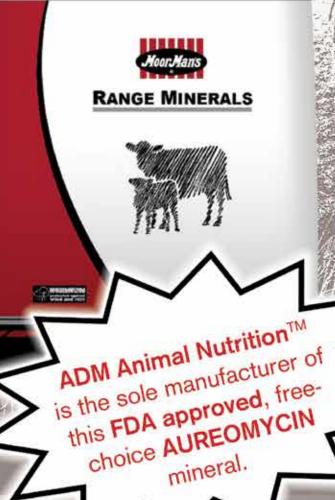
Editor's Note: To learn more on Bud Williams and Bud Williams Schools, visit handnhandlivestocksolutions.com and Eunice Williams' website stockmanship. com.



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Time Is Money

Know what's in a supplement tub before you buy

Story By Joann Pipkin, Editor

Whether you work a fullfarm on the side or operate a ranch full-time, having enough hours in the day to get all your chores done never seems to be easy. For producers looking for an extra hand on the farm, finding it might be as simple as buying a supplement.

"It's feeding when you aren't there," explains Kelly Smith, account manager, Hubbard Feeds, Inc./Crystalyx Supplements. "Most people are stretched so thin that they might feed but don't have time to do it right. It's 24/7."

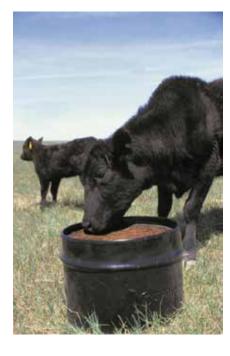
Smith says while a number of supplement tubs are available on the market today, the key to remember is that products are a supplement to roughage. "It's a very low-input product. It's a supplement to forage and grass."

Different management styles mean different forage qualities and different types and kinds of supplement tubs. Smith says tubs might be all natural or high-energy. Others are designed to help with conception rates like the Crystalyx Breed Up® tub.

When it comes to cost-effectiveness, supplement tubs can be a good option for cattlemen. "The labor cost to feed these (supplement tubs) is almost nothing," Smith explains. "If you've got 50 or 60 head of cows, you are going to roll out a couple of tubs, and you really aren't going to put them out again for a couple of weeks."

It will still be necessary to feed the cows hay or another form of roughage, Smith says.

Supplement tubs can also help encourage cattle to graze rough or undesirable pastures. "You can force rotational grazing with these tubs," Smith says. "The cattle will lick the tub and graze the (undesirable) area. You can get that grazed, and then you can move the tub somewhere else."



All tubs are not created equal. Smith says three types of supplement tubs are available on the market today. A cooked tub usually contains between 2 percent and 4 percent moisture. It does not contain water or added salt.

A chemical or poured tub is another type of supplement. Smith says those tubs are typically around 35 percent moisture. "It's soft," he says. "A cow might eat maybe 1.5 to 3 lbs. per day."

While chemical tubs typically cost less to buy, they don't cost a lot less to use, Smith says.

A third type of supplement tub is a pressed product. This option falls in between the cooked and chemical tubs. Smith says intake on this type of tub is about 1 to 2 lbs. per head per day.

Regardless of brand, the bottom line is cooked tubs will cost more, Smith notes. But, he adds, "I can supplement a cow somewhere in that 35 cents per day supplement to grass or hay. You can't do that on anything else. You can't do it anywhere else if you take labor and all the equipment into consideration."

When shopping across brands, Smith says big differences can exist between all three types of tubs. The poured tubs are made from chemicals, while

pressed tubs are comprised mostly of distillers and other commodity products. Cooked tubs are more of a molasses base and are designed for low intake with very low moisture content. He says those are the least expensive daily cost because of the intake level and concentration of the product.

"You are not paying for any fillers," Smith explains. "No water, no salt is basically what it amounts to. It's a very high-quality processed protein source."

"The hardness of the tubs is what really drives the intake," Smith explains. "Even on high-mag fescue, cows will eat more like ½ to ¾ of a pound. In this area, they actually eat a little less."

Knowing what are your needs are will help you determine what supplement tub is right for you, Smith says. "You also need to know who you are doing business with," he adds. "What kind of reputation do they have?"

Just as you shouldn't judge a book by its cover, Smith says it's important not to buy a supplement based on cost alone.

He explains it like this: A 250-pound tub that costs \$100 figures out to 30 cents head per day if intake is at 34 of a pound per head per day.

"You tell me how you can supplement a cow for 30 cents per day any other way," he says.

Knowing cost per head per day is key when it comes to purchasing supplement tubs. "If you don't figure that, you're going to thing supplement tubs are too expensive."

Smith adds producers should factor in their time when considering which product to buy, and they should remember that roughage is key to making supplements work in your operation.

"You can't feed these without roughage," he says. "It is a supplement to roughage."

Whether you're looking to save on labor, equipment or time, Smith says supplement tubs can be a cost-effective way to help your cattle get the nutrition they need.

"Time is money," he concludes.

Plan Now to Attend Drovers Cowboy College

rovers Cowboy College for cow-calf producers will be held June 20-21, 2017, in Springfield, Missouri. It's a concise, two-day seminar presented by four of America's beef industry leaders. The host for the event is Dan Thomson, D.V.M., Kansas State University, and an expert on animal health and welfare. Mike Apley, D.V.M., Kansas State University will review animal health and treatment programs. Tom Noffsinger, DVM, will give an intense session on lowstress animal handling, useful for anyone with cattle. A presentation on using selection and genetics tools will come from Mark Gardiner, Gardiner Angus Ranch.

Register using the Code: JRS and register for \$190. That's 20 percent off the regular registration fee of \$239. Registered producers may also register their spouse for an additional \$100.

Location of the event has not been finalized at press time, but will be at a Springfield hotel or conference center.

The event will begin at 10 a.m. on June 20 and end by 3 p.m. on June 21. Lunch provided both days, along with a reception on Tuesday after the sessions. Speakers will also be available for brief interaction with attendees following sessions. This is a great opportunity to learn from four of the beef industry's best.

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For registration and more information, visit www.DroversCowboyCollege.com

Enter Code: JRS





Speak Out

You, too, can be an advocate for agriculture

Story By Lisa Henderson for Cattlemen's News

Have you heard that live-stock production is the largest contributor to climate change? Or, that eating beef is bad for your health? Those are just two myths about farming and ranching that get repeated every day on the internet and other media platforms by activists. Compounding the problem is the fact most of the anti-agriculture myths are generated on social media by millennials those people born in the 1980s or 1990s.

Fortunately, a growing chorus exists of pro-agriculture millennials who are taking their message into the heart of the fight — social media. These young farm-raised and chore-savvy messengers proudly call themselves "#AgVocates," and they

One of the most popular AgVocates is Amanda Zaluckyj, better known to her followers as The Farmer's Daughter. Her family farms corn and soybeans in southwest Michigan, and she's passionate about agriculture. She's also an attorney.

Zaluckyj uses social media to connect with both farmers and consumers on a regular basis. Each week she writes a new blog post and notifies followers through email. She also has nearly 3,500 followers on Twitter @farmdaughterusa.

In one recent post, Zaluckyj said combating misinformation about agriculture "is precisely why I started writing, have snake oil salesmen trying to promote alternative therapies. We have activist groups promoting certain production labels over other supposedly dangerous methods. As if we didn't have enough confusion, the food-consuming public is being inundated with these conflicting messages daily."

Zaluckyj tells consumers to make sure they are getting good, reliable information about agriculture, farming and food production, they should go right to the source.

"If you want to learn about food production, then talk to a farmer," she says. "Over the past couple years, there has been an explosion of farmers popping up online to tell their story and talk to the public."

Why, you wonder, do AgVocates such as Zaluckyj continue to push back against the wave of anti-agriculture voices?

"Livestock producers are being challenged from all kinds of critics — from animal rights activists to health specialists, to rural citizens who don't understand livestock production," says JoAnn Alumbaugh, editor of PORKNetwork, a magazine and website dedicated to pork producers. "While our pork and beef organizations do a good job of distributing information, they're considered about 'big ag.' Consumers want to hear from authentic farmers — those are the messages that really resonate. That's why communication is more effective when it's done on a personal basis." You can follow Alumbaugh on Twitter @Farmgirljo.

Zaluckyj believes all farmers need to be proactive in telling their stories because, "it is important that consumers hear an honest account about what

Join the **Conversation**

manda Zaluckyj believes Afarmers and ranchers should speak up about how they raise food for America's consumers.

"The most important thing is that farmers and producers tell their stories in a forum that they feel comfortable and confident," Zaluckyj says. "For someone like me, I enjoy writing, creating graphics and being active on social media. That is the best forum for me and one of the reasons I started blogging. But there are opportunities everywhere to tell our agriculture story — around the dinner table, at church, in our local newspaper and even at the grocery store. Find what works for you!"

When it comes to talking to people about food, agriculture and animal care, your target audience should be anyone that eats, she says.

Zaluckyj also offers a few words of caution as you begin AgVocating.

"It can be really tempting to act like you know everything about everything, especially if you're having a serious conversation with someone that is skeptical of the work you do," she says. "But there is absolutely no shame in admitting that you don't know something or you're not familiar with a certain aspect of production. Offer to find some resources on it and get back to the person. It is so much better to be honest than be caught making stuff up — that will only serve to ruin your credibility on all the things you really do know a lot about.

—By Lisa Henderson

is actually happening on our farms."

Animal care is a particularly sensitive topic and people want to know more about it, Zaluckyj says. "They are getting bombarded with all sorts of negative messaging from activist groups about animal abuse and poor

CONTINUED ON PAGE 38

10 AgVocates You Should Know

Amanda Zaluckyj www.thefarmersdaughterusa.com/

Anne Burkholder www.feedyardfoodie.com

Christen Clark www.foodandswine.com

Andrew Campbell www.agriculturemorethanever.ca

Carrie Mess www.dairycarrie.com

Sarah Shultz www.NurseLovesFarmer.com

Chuck & Cindy Zimmerman zimmcomm.biz/

Debbie Lyons-Blyth www.kidscowsandgrass.com/

Dusty Craig morganriver.blogspot.com/

Michelle Payn causematters.com/ag-resources/farm-ranchblogs/



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SPEAK OUT FROM PAGE 36

treatment on farms. Unfortunately, a lot of people are starting to actually believe it. Farmers need to tell their story because, if they don't, someone else definitely will — and we probably won't like the message."

One of the beef industry's leading AgVocates is Anne Burkholder, Cozad, Nebraska, better known to her followers as "Feed Yard Foodie." For the past 20 years, Burkholder has managed a 20,000-head feedyard called Will Feed, but she was not born into the cattle business.

Raised in urban Palm Beach County, Florida, Burkholder attended Princeton and was on the swim team. While there, she met her future husband, Matt, a Nebraska cowboy playing on the Princeton football team.

Burkholder, now a mother of three girls, says her efforts in social

media originally began in 2011 as a way to tell the real story of beef, "written by someone who actually gets their hands dirty."

More to the point, she says AgVocating is important because, "less than 2 percent of Americans work as farmers, and most of our urban counterparts are more than two generations removed from the farm. Understanding where your food comes from is no easy task, and finding good information on it resembles the old adage of finding a needle in a hay stack."

Alumbaugh says social media is the most effective way for farmers to communicate with consumers and tell their story, "because that's where the consumer audience is located. They're not likely to go to a website — they're going to see what their friends are saying on Facebook and Twitter. And we can't 'preach' – we have to find the common threads that connect consumers and farmers. It might be food, or family, or shared experiences. In other words, they won't trust what we say unless they trust us as individuals."

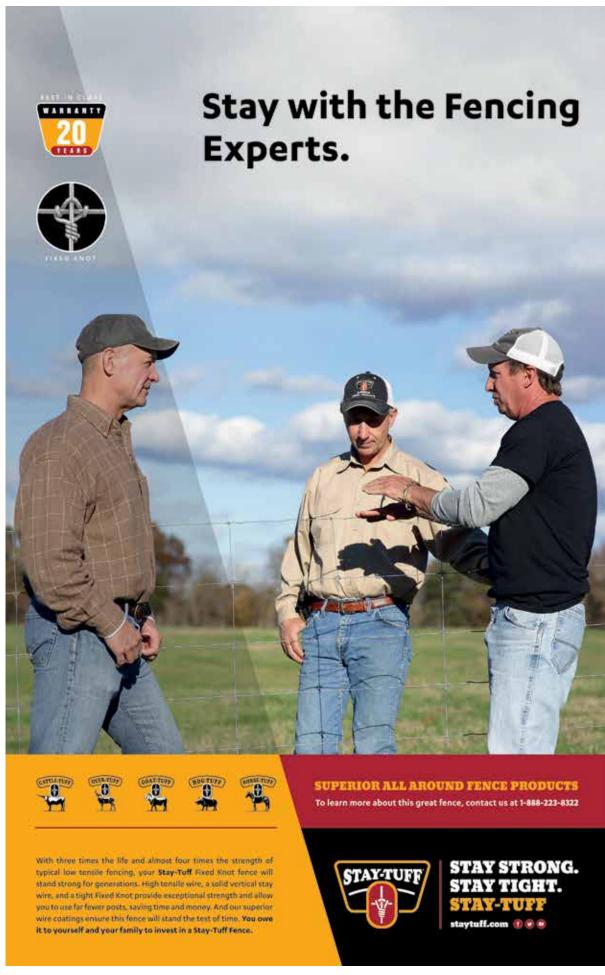
Building that trust is a goal of Jenny Schweigert, who serves at the executive director of the AgChat Foundation (@ agchatfound), an organization dedicated to encouraging and supporting agriculture enthusiasts who want to share their knowledge with those outside of the agriculture world. Each week, she (@AMagicMama) is involved with #AgChat and #FoodChat conversations, led by a group of volunteer moderators.

The virtual events allow Twitter users to discuss their thoughts and opinions on the week's topic. Topics involving agriculture advocacy are Schweigert's passion as she encourages farmers and ranchers to reach outside the agriculture bubble to reach consumers. She lives on a small Illinois farm with her family and shares those experiences and challenges through her AgVocacy. #AgChat is held every Tuesday, 7-9 p.m. CT, except for the third Tuesday when #FoodChat occurs.

If you are interested in joining the conversation on Twitter or starting your own blog, Alumbaugh says to target your message at the "moveable middle," those individuals who "don't have an agenda about the food they eat they just want to make sure it's safe for their families. We're never going to change the viewpoint of an animal rights activist, or a vegan, so finding the common ground with everyday consumers makes the most sense. I believe we need to do more to inform and educate generations Y (Millennials) and Z (I-Gen) in a fun, interesting, engaging way. They're future consumers who are establishing their likes and dislikes now."

Additionally, Alumbaugh says it's important not to be argumentative with consumers.

"We need to really listen to what consumers tell us, and respond with statements like, 'I can see why you'd feel that way,' or 'I understand what you're saying.' Farmers have to take the high road and earn consumers' trust if we hope to have a chance of engaging them in meaningful conversations that influence their purchasing decisions," Alumbaugh says.



MANAGEMENT MATTERS

Don't Buy Trouble

Apply common sense when commingling new animals

Story By Glenn Selk

Couth Dakota State Univer-**S**ity researchers examined the cause of a scours epidemic in one spring calving herd in 2000. Results of investigation suggested introducing foster calves was associated with the calf scours outbreak. Prior to April 5, no scours cases had been observed, despite 39 calves being born. The calf scours epidemic was clearly in swing by day 45 of the spring calving season and first cases of the epidemic were observed between days 31 and 40. Following April 5, records indicated the introduction of at least 2 foster calves. The outbreak commenced shortly after the introduction of foster calves. Foster calves can introduce pathogens to a herd, and can shed calf scours pathogens in their feces even when feces appear normal. Because of this risk, introducing foster calves is not usually recommended. If intro-

duced into a herd, foster calves (with their foster dam) should be isolated from the remainder of the herd until all calves are at least 4 weeks old. At that time, it is generally safe to commingle foster calf pairs with the remainder of the herd.

Any time new cattle are purchased and brought onto the ranch, biosecurity guidelines or common sense needs to apply. Isolate the new animals for a period of about one month before turning them into pastures with other cattle. Visit with your local large animal veterinarian about recommended tests as well as vaccinations or parasite controls that can be implemented on the new arrivals before exposing them to the remainder of the herd.

— Glenn Selk is Oklahoma State University emeritus extension animal scientist.

ON THE CALENDAR

Missouri's Complex Fence Laws to be Explained March 7

Know the law if you own livestock

A program to discuss Missouri's complicated fence law is scheduled for 6:30-9 p.m., Tues., March 7, at the Courthouse, 700 Main Street in Cassville, Missouri.

A \$10 charge for this meeting covers the program and materials. Pre-registration is required to ensure adequate materials are prepared.

"Missouri continues to have a very complicated fence law, in large part because two separate laws cover the state depending on the county that your land is in," says Joe Koenen, agricultural business specialist with University of Missouri Extension who will present the program. "If you own land, you need to know the law and how it impacts

you whether you own livestock or not."

Another problem, Koenan says, is that both laws are subject to interpretation and can be a little different, depending on the county where the land is located. A comparison of both laws will be given at this program.

Landowners need to be aware of what the law is in their county, and this meeting will help them better understand their rights and responsibilities.

To register, call the Barry County Extension office at 417-847-3161.

—Source: University of Missouri Cooperative Media.



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MANAGEMENT MATTERS

The Great Vaccination Debate

Cattle health counts – especially when times are tough

Story By Elizabeth Walker for Cattlemen's News

Iparticipate in a cattle discus- I always explain our sion group, and we often have decision. Actually, members discuss the merits of vaccinating their cattle. Some on the group have decided to skip vaccinating their livestock. Are they crazy? I have a confession: the husband and I haven't vaccinated our sheep herd in about 10 years, and our sheep numbers have grown. I bring this fact up in my sheep and goat production class at Missouri State University, but

I forgot one year and since the animals did not die, well, that was just one less thing we had to do. Our sheep herd is basically closed herd, and we rarely ever bring in new animals. Dadeville is also not the

"sheep capital of Missouri," and there are no other sheep around for miles. In addition, what we would vaccinate for would be related to overeating disease, also known as enterotoxemia caused by Clostridia bacteria. Animals who are at the greatest risk are those fed a concentrated diet. Our sheep never receive grain, so we

haven't worried about them getting enterotoxemia. I am not saying they couldn't, but rather just saving under our management, we feel the risk is so slight that vaccinating isn't something we need to do.

Unlike the sheep, all of our

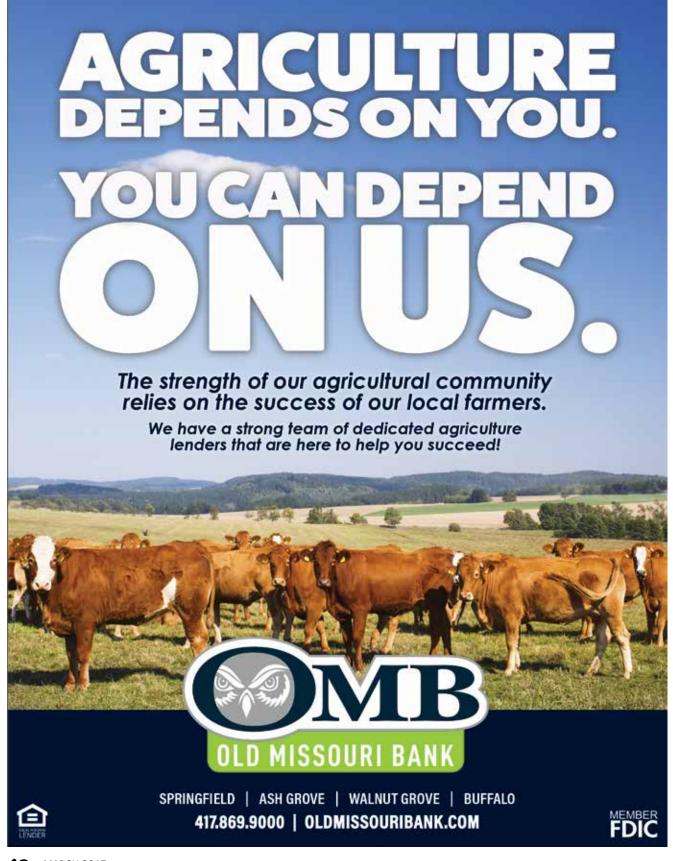
neighbors have cattle. Some have mostly closed herds while others trade cattle, and new cattle are brought in on a routine basis, increasing the risk of bringing in a disease agent. Having a disease outbreak or losing valuable animals is just too great. So, we vaccinate. To vaccinate or not, and what to vaccinate for, if you decide to vaccinate, should be a decision between you and your veterinarian. Considering the new Veterinary Feed Directive (VFD), vaccination is probably a much less expensive route to pursue than treatment with antibiotics. Obtaining antibiotics is going to be more of a challenge, so an ounce of prevention is probably worth it.

Some people who don't vaccinate often feel that vaccinations are artificially "propping up" their animals. They want to see which animals truly can survive in their production setting. Bison were not vaccinated, so why vaccinate cattle? While I can understand that line of thinking, I have to challenge them with the facts that bison traveled many miles per day and were constantly grazing on fresh pasture. Cattle in Missouri will travel over the same ground on a more routine basis than bison did hundreds of years ago. Watering areas, handing facilities, bedding and shaded areas, which our cattle commonly inhabit, are breeding grounds for bacteria and viruses. Under certain conditions, these pathogens can be devastating to unvaccinated cattle.

For example, we will have outbreaks of anthrax in our ruminant and non-ruminant livestock where I was raised in Texas. Many of the ranchers commonly vaccinate their horses, cattle and sheep against the disease because when an anthrax outbreak hits, the losses can be severe. Again, the risks are too great at times not to vaccinate.

About 20 to 30 infectious diseases are common in cattle, but the most common vaccines are often for bovine viral diarrhea. Leptospirosis and infectious bovine rhinotracheitis (IBR). All are extremely contagious. Recently weaned calves are most susceptible, especially to IBR, and especially if born to unvaccinated dams. Vaccination is recommended 2 to 3 weeks before weaning. Granted, it might

CONTINUED ON NEXT PAGE



VACCINATION DEBATE FROM PREVIOUS PAGE

be more convenient for you to wean and vaccinate at the same time, but that is not in the best interest of the calves. If you go in for a flu shot, I suspect the nurse will ask if you have been sick and if you have been, you probably won't be getting the flu shot that day. Cattle are no different and should not be unduly stressed when vaccinated.

Some cattle producers have mentioned that even when they vaccinated, their animals still became ill. I have a friend who is a respected cattle veterinarian. He has mentioned several times that vaccinations are about "80 percent" of the solution. The other 20 percent has to do with livestock management. Human error in administering the vaccine might be the reason a vaccination doesn't work. Proper handling of the vaccine, administering the vaccine where it was intended and mixing are all part of the vaccination process. Washing your syringes in soapy water can negatively affect your vaccines. Soap or other cleaning residue left in the syringe can kill or damage live or modified live vaccines.

Giving booster shots, as directed by your veterinarian, is another way to ensure your animals have the protection they need. Recent research suggests that endophyte-infected fescue can have a negative effect on the immune systems of cattle. Calves born to dams with challenged immune systems might also be at a disadvantage. Thus, it is important to monitor herd health and make sure that your animals are vaccinated per recommendations from your veterinarian.

In times when cattle prices are down, and perhaps so is your paycheck, the importance of vaccinations should not be discounted. Money spent on vaccinations has more advantages than money spent on treatment. Selecting animals that are adapted to your environment, handling your vaccinations correctly, vaccinating when you should — not when it is convenient — and having a good conversation with your veterinarian, are more, not less, important when times are tough.

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

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ECONOMIC INDICATORS

Risk Management Key to Price Protection

Breaking down the cattle inventory report

Story By Rebecca Mettler for Cattlemen's News

The USDA released the January 1, 2017, Cattle Inventory Report on January 31, and boy, did it hold plenty of surprises. All cattle and calves were up 2 percent with beef cows up 3.5 percent, which is right at a 1 million head increase from a year ago.

"Compared to pre-report estimates, we are on the upper side of everything," said Scott Brown, assistant extension professor with the University of Missouri department of agricultural and applied economics. "More cows and cattle tells me that we have more supplies down the road in 2018 and 2019."

Brown said to him the news suggests lower prices ahead, and he's concerned about the growth of beef supplies not in the weeks or months ahead but down the road.

One number from the report that jumped out to Brown was the statistic that pegged heifers 500 pounds and over at a 1.2 percent increase above last year's numbers.

"We might not be done growing the cowherd," Brown said.
"Provided we don't have a severe drought somewhere, there will be growing supplies, which could be a major issue to face because this would suggest prices would go down."

"If producers aren't already, they need to be using some sort of risk management strategy to protect them from the potential downside risk in the current market and into the future," said Scott Brown, University of Missouri livestock economist. —Photo by Joann Pipkin.

Unlike some of the other commodities, beef is slow to change pace to keep with lower prices, which can partially be blamed on the biological lag time associated with raising cattle. And even though prices are down, input prices have been slower to drop.

"The cattle industry is very different," Brown said. "We don't get adjusted very quickly to low prices yet with high prices, what happened? We grew very quickly."

The Cattle on Feed Report was also released one week before the cowherd inventory report and had an immediate impact on feeder cattle prices. The report completely up-ended the pre-report estimates with a December 2016 placement increase of 17.6 percent. The on feed report sent the feeder calf markets down \$5 to \$10

CONTINUED ON PAGE 44

Aggressive Herd Expansion Underway in Missouri

Second largest calf crop in country reported in 2016

The Jan. 31 cattle inventory report released from the the United States Department of Agriculture's National Agricultural Statistics Service (NASS) reveals a 2 percent jump in the total number of cows and calves in the United States at 93.6 million head. Like most of the country, Missouri witnessed "aggressive herd expansion," said Butch Meier, president, Missouri Cattlemen's Association.

Year-end inventories were reported up 250,000 head from year-ago numbers for all cattle and calves. The total expansion equates to 650,000 head over a four year period with the total inventory at 4.35 million head. Beef cows moved up 150,000 head to total slightly more than 2 million head, which is the largest inventory since 2008. The 2016 calf crop at came in at 1.9 million head, an increase of 140,000 head and the most since 2009.

Robert Garino, NASS statistician for Missouri, said the state is witnessing a large overall herd expansion.

"Missouri has seen the biggest cattle expansion in four decades," said Garino. "The 2016 calf crop was the second largest in the country. Missouri surpassed Oklahoma and is second only to Texas."

Garino said Missouri remains third behind Texas and Oklahoma, respectively, in total beef cows.

MCA President Butch Meier said the latest USDA report brought no surprises.

"This report confirmed what we already knew," he said. "Missouri cattle producers are the very best in the business. The devastating drought from 2010-2012 pushed us down, but we are rebounding in a big way, evident by the aggressive herd expansion we are seeing. We must continue to push for good trade deals in order to ensure we have access to consumers worldwide. Demand is strong, and we want to fulfill it."

—Source: MCA Prime Cuts. T



BUILDING A HEALTHY HERD THIS SPRING

The basics of developing healthy calves

Spring is an essential time to get cattle health started off right. Ensuring cattle are healthy and protected against disease can be the foundation for the animals' lifetime productivity and performance. Evaluating your herd with your veterinarian — from nutrition to vaccination — may uncover opportunities early on that can help improve overall herd health and performance, while also benefiting your bottom line.

"One of the most important factors in calf development is nutrition," said W. Mark Hilton, D.V.M., DABVP and Elanco technical consultant. "The ideal situation is to work with a nutritionist that you know and trust so you can ensure you're improving your bottom line. When it comes to nutrition, if we start with a cow or heifer that is underconditioned, vaccines could be ineffective."

During calving, Hilton notes that calves should be born and stand up quickly; nursing until they have a belly full of colostrum. The general rule is that crossbred calves should be standing approximately 30 minutes after birth and nursing 30 minutes later. Ingesting adequate colostrum is imperative to getting the calf off to the healthy start it needs.

Beginning with productive, healthy cows

When considering the profitability of a cow/calf herd, reproductive efficiency is one of the most important factors influencing success. Ensuring you have the optimum number of cows calving early in the season is key.

"Research from South Dakota State University indicates that vaccine choice can have a larger impact on reproductive efficiency than was previously known," said Hilton. "Compared to those given Bovi-Shield®, the study shows that cows receiving Vira Shield® had a 5 to 8 percent higher conception rate and had a higher percentage of cows calving in the first 21 days.² Administering Vira Shield to cows during prebreeding is an excellent way to help ensure reproductive performance."*

Healthy cows also lead to healthy calves, and minimizing scours in cows is one practice to help manage herd health. To minimize the impact of scours, it's ideal to feed cows and heifers separately throughout the winter. Vaccinating cows with Scour Bos® 9 at preg-check and giving heifers their vaccine at preg-check and a booster four weeks prior to calving can also successfully help reduce the occurrence of scours. During calving season, Hilton recommends that you allow heifers to calve in an environment separate from cows, as research shows the incidence of scours will be 1.7x higher when they calve within the same environment.

Best health management practices for the calf

Approximately two to three months after birth, Hilton recommends a number of health management practices to work on with your herd health veterinarian in determining the best fit for your operation.

"Many research studies show that we can and should give cattle a modified-live vaccine (MLV) at this time for respiratory disease management. Calves develop a cell-mediated immune response to the viruses, and when we give the second dose at or near weaning, this vaccination does not add significantly to the stress of weaning because the calf has been primed earlier," said Hilton. "Titanium® 5 is an example of a MLV that does not impact feed intake and results in little to no post-treatment side effects."3**

Additionally, spring is the time to consider:

- · Castration, if not done soon after birth
- A pour-on insecticide to decrease flies
- Additional vaccines relating to your specific needs, such as blackleg and pinkeye
- · A suckling calf implant for additional gain

"Implants are one of the most underutilized technologies in calves," said Hilton. "Component® E-C with Tylan® can provide an additional 17 to 20 pounds of gain in calves, 4 so it's another opportunity to help improve your profitability."

For more information on any of these practices or Elanco products that meet your health management needs, reach out to your veterinarian or Elanco sales representative or technical consultant.

The label contains complete use information, including cautions and warnings. Always read, understand and follow label and use directions.

*As defined by early conception rate and calves born alive.

"As measured by body temperature, feed intake, injection-site reaction or white blood cell count.

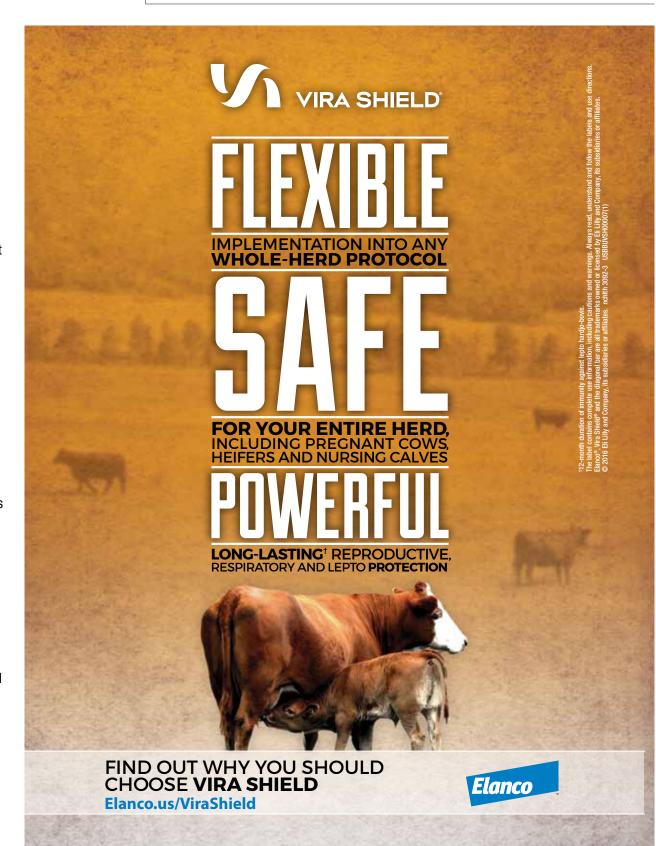
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CATTLE INVENTORY REPORT FROM PAGE 42

lower the week before the cowherd inventory report was released.

Since then, prices have rebounded, and Brown has a hard time explaining the positive prices that followed the week after the Cattle Inventory Report was released. He notes that exports were stronger for meat in general during the last part of 2016 and that maybe the trend is propelling prices upward into 2017. Domestic demand has been good in the short-term and could be pulling demand and overriding supply increases, but he doesn't expect that to last long-term.

Long-term market forecast

Ten billion more pounds of U.S. meat is expected from 2014 to 2018. Brown explained that the increase is already halfway accomplished, and he expects another 3 percent increase in meat production in 2017 across beef, poultry and pork.

"It's been a big push since 2014 when we had no growth," Brown said. "And when you look at expectations for net trade, you and I get to eat that 10 billion pounds of U.S. meat production. The one way to get Americans to eat more beef is with lower prices."

Global trading could help alleviate some of the pressure of

increased supplies, but with a few factors to consider. When looking at trade, the value of the U.S. dollar matters. The dollar has gotten stronger, which affects the ability of the US to export products. However, income growth and population growth also play a factor in trade.

"I'm still relatively optimistic that we are going to get growth in front of us because there's a lot of folks outside of the U.S. that have growing incomes, and with that, they will want to buy more meat protein," Brown said.

Looking Back

Remembering back to 2014 and 2015 is bittersweet to most producers. The record-setting prices seen during those years were monumental. It's likely that those prices won't be seen for a long time.

"I will say that it's been a heck of a run over the last few years regarding agriculture in general," Brown said. "We need to put that behind us. It happened for a very specific reason, and we need to look ahead, not behind."

The takeaway from the spectacular rise and dramatic fall of prices is that risk protection is paramount.

Brown knew prices would not sustain themselves at such high levels found in 2015, but he, along with the rest of the beef industry, admittedly did not foresee the extreme drop in prices that happened in fall 2016.

"If producers aren't already, they need to be using some sort of risk management strategy to protect them from the potential downside risk in the current market and into the future," he said.

Brown understands that price risk management tools are more heavily used in the crops industry, but he has made it his mission to keep talking about futures market options — 50,000-pound feeder calf contract — and livestock risk protection for smaller-scale producers to utilize.



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TRENDING NOW

Herd Rebuilding Takes Charge

Oklahoma leads U.S. as cow numbers grow

Story By Derrell S. Peel

The U.S. beef cow herd expanded 3.5 percent in 2016 to a Jan. 1, 2017, level of 31.2 million head, up 1.04 million from one year ago. This follows USDA National Agricultural Statistics Service revisions that showed the Jan. 1, 2016, beef cow herd inventory at 30.2 million head, up 2.9 percent from 2014. Total three-year herd expansion, since the recent low of 29.1 million head in 2014, is 2.1 million head, slightly higher than the pre-drought 2011 total and just under the 2010 inven-

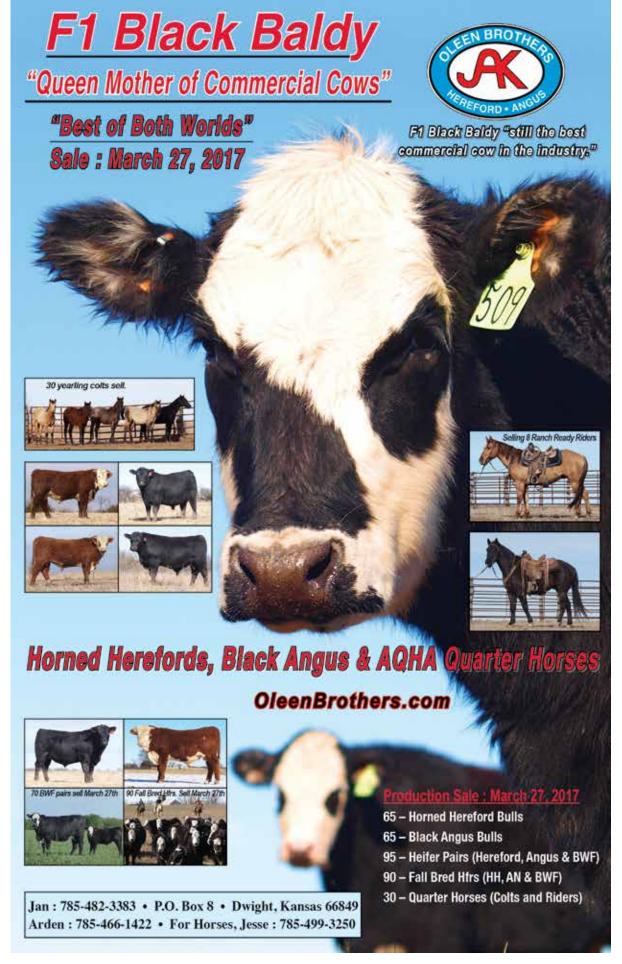
tory level of 31.4 million head. The 2017 inventory of beef replacement heifers was 6.4 million head, up 1.2 percent year over year. This level of beef replacement heifers is 20.6 percent of the cowherd inventory, down just slightly from last year, and a level that suggests significant herd expansion will continue in 2017. An estimated 4.0 million head of beef heifers is expected to calve in 2017, up 1.6 percent from the 2016 leve

Among top 10 beef cow states, Oklahoma added the most cows with an 8.9 percent increase in 2016, leading to a 2017 herd inventory of 2.095 million head, second to Texas, which had 4.46 million head (up 4.0 percent from 2016). In absolute numbers, Oklahoma added 172 thousand cows to the beef herd, slightly more than the 170 thousand head increase in Texas. The 2017 Oklahoma beef cow inventory slightly exceeds the recent 2010 peak and is the highest state inventory since 1985. This follows the 2013 low of 1.694 million head, the lowest Oklahoma beef cow herd since 1962. In the last four years, the Oklahoma beef cowherd has expanded 23.7 percent, the largest percentage increase from recent lows among top 10 beef cow states. In addition to Texas and Oklahoma, other top 10 beef cow states with strong growth in 2016 included Missouri (ranked number 3), Kansas (6), Nebraska (4) and North Dakota (10) with modest expansion in Iowa (9); while South Dakota (5), Montana (7) and Kentucky (8) all showed little or no beef cow expansion in 2016.

The southern plains region — Kansas, Oklahoma and Texas — has the largest regional beef cow inventory of 8.13 million head, up 5.5 percent from 2016. Next is the northern plains region — North Dakota, South Dakota and Nebraska — with 4.54 million head, up 2.5 percent year over year. The third largest region is the Midwest — Illinois, Indiana, Iowa, Missouri and Ohio — with a 2017 beef cow inventory of 3.90 million head, up 4.9 percent from the previous year. The northern Rockies

— Montana and Wyoming — have a 2017 beef cow inventory of 2.20 million head, up just 0.5 percent year over year. Close behind is the Appalachian region — Kentucky, Tennessee and West Virginia — at 2.14 million head, 1.5 percent higher than one year ago, along with the southern region — Alabama, Georgia and Florida — at 2.10 million head, up 0.7 percent from 2016. Other regions have less than 1.5 million head of beef cows, with strong growth in California (up 9.2 percent) leading to a 5.7 percent year-over-year increase in the southwest — Arizona, California, Nevada and Utah — and strong growth in New Mexico — up 12.0 percent — leading to a 5.7 percent increase from 2016 in the southern Rockies — Colorado and New Mexico.

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



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MANAGEMENT MATTERS

A Step Ahead

Research expands scenarios for estrous synchronization

Story By Rebecca Mettler for Cattlemen's News

Increase efficiency of the Lcowherd while also improving genetic merit of the next calf crop. What cattleman wouldn't want that goal? Technological advancements in beef reproduction research are helping cow-calf producers do just that.

The University of Missouri's animal science department is recognized as being a leader in beef cattle reproduction research. And, Jordan Thomas, MU senior research specialist and Ph.D. candidate, provided a beef reproduction update at the recent Southwest Missouri MU Extension Beef Cattle Conference held in Stockton, Missouri.

Thomas discussed recent research projects conducted by MU animal scientists regarding synchronization protocols for artificial insemination (AI) in both mature cows and heifers. One such study focused on the common problem area of 2-year-old cows and decreased fertility.

"They present a unique challenge to beef producers," Thomas said. "Maybe there's been an increased dystocia rate that could affect the return to estrus, plus there's an increased nutrient demand and overall longer postpartum intervals associated with 2-year-olds."

Producers know that 2-yearolds are the hardest age range to get bred back and that's why Jill Abel chose this as her area of interest during her master's work at MU. The study looked at the effects of long-term CIDR-based estrus synchronization in two-yearold beef cows.

Progestin-based protocols like the 14-day CIDR and the 7-day CIDR increase the proportion of the cows cycling at the start of the breeding season, increases the proportion of the cows that calve early, resumes the normal estrous cyclicity, reduces reproductive failure and increases the retention rate, according to Thomas.

posed to the group.

The two protocols used were the 14-day CIDR and the 7-day Co-Sync+CIDR.

"If I take these 2-year-old cows, managed in a separate group, do I have the opportunity to use these protocols in a specific way to increase pregnancy rates," Thomas pro-

progestin-based

2-year-olds."

96 percent.

with good management when

calved as heifers, and good

body condition scores can re-

sult in good management of

Pregnancy rates for the 14-day

CIDR and 7-day Co-Sync+CIDR

were 63 and 64 percent, re-

spectively. Overall pregnancy

rates at the end of the 60-day

breeding season were 95 and

The percentage conceiving in

the first 30 days of the breed-

ing season was 86 percent for

the 14-day CIDR protocol and

88 percent for the 7-day Co-

Sync+CIDR. This statistic is

exciting due to the economic

protocol

Progestin-based breeding protocols like the 14-day CIDR and the 7-day CIDR can help increase the proportion of cows cycling at the start of the breeding season.—Cattlemen's News stock photo.

The 14-day protocol requires: the insertion of the CIDR for 14 days with prostaglandin being administered 16 days after CIDR removal; fixed-time AI and GnRH (gonadotropinreleasing hormone) administered 72 hours (for mature cows) after the prostaglandin.

The 7-day Co-Sync+CIDR reguires CIDR insertion for seven days with GnRH administered at CIDR insertion and prostaglandin at CIDR removal. Fixed-time AI 66 hours after prostaglandin with concurrent GnRH administered at

Thomas reported that both protocols were effective in synchronizing estrous prior to fixed-time AI in primiparious 2-year-old post-partum cows.

"The implementation of a

benefits of having a majority of the calves being born in the first half of the calving season.

Sex-Sorted Semen and Splittimed AI™ – Can it work?

One of the more promising topics of research revisits the combination of sex-sorted semen and split-timed AI, which until recently, was considered an unlikely pairing due to the past performance issues of sex-sorted semen.

"When we think about sexsorted semen, the sorting process and everything about it, the technology from a semen handling standpoint is continuing to improve," Thomas said.

The fertility of sex-sorted semen products has improved

even within the last two to three years. But with that said, the number of sperm cells in a unit of sex-sorted semen is 1/10 that of conventional semen.

"Despite the fact that the semen product continues to improve, it's a different product than conventional semen in terms of fertility. The cells get compromised in the sorting process and probably doesn't remain fertile as long in the reproductive tract."

Thomas explained that fixedtime AI demanded the sperm cells live in the reproductive tract a fairly long period of time, which might not be an appropriate expectation to have of sex-sorted semen.

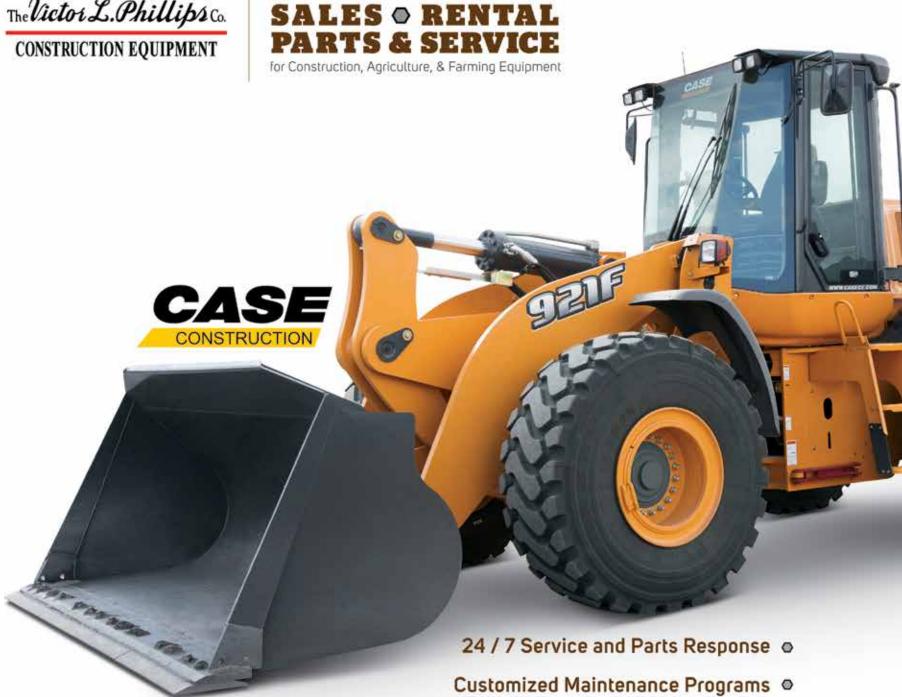
The idea of inseminating females closer to the optimal time of breeding, even with synchronization protocols led the researchers to study split-time AI with the 14-day CIDR protocol through a series of studies. In the end, the preferred technique utilizes estrus detection patches to detect estrus by 66 hours after the prostaglandin was administered. Females that had exhibited estrus were Aled.

Heifers not expressing estrus were not handled, but given an additional 20 hours to come into heat. At the end of 20 hours, all the remaining heifers were Aled. To activate the ovulation process, females not yet in heat recieved GnRH. Waiting an additional 20 hours to inseminate the females brings the insemination closer to the ovulation time period and gives the sex-sorted semen a better chance at fertilizing the egg.

SexedUltra 4MTM, a brand of sexed-semen was used and compared with conventional semen. A pregnancy rate for split-time AI showed a 52 percent while conventional semen achieved a pregnancy rate of 60 percent.

"The study concluded that effective pregnancy rates could be be obtained when SexedUltra 4MTM sex-sorted semen is used in a split-time AI following the 14-day CIDR-PG protocol," Thomas said.





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TRENDING NOW

2 Quick Tips:

Managing Spring Pastures

Limit grazing of winter annuals to improve animal nutrition, extend hay supplies and allow use of limited high quality forage.

2 Strip graze any remaining stockpiled forage to extend grazing days.

—Source: University of Arkansas Beef Tips.

PASTURE PLANNING

Cutting Expenses?

How to prioritize your pasture

Story By Hugh Aljoe

When economic times necessitate tightening of the purse strings, so to speak, too often livestock producers cut back severely on pasture management and associated expenses. This often leads to the deterioration of pasture resources, the basis of the food source required to sustain the livestock we strive to produce. A better approach to managing pastures during lean economic times is to develop a prioritized plan of activities so that effort and expenses are allo-

cated to the activities and resources that produce the greatest return on investment. Below are steps to help you prioritize key activities in your pasture management plan.

1. Identify.

Identify the most productive pasture resources for cropland, introduced pastures and native rangeland. Estimate the number of acres in each of these priority land resource categories

2. Prioritize.

Determine if herbicide applications are needed for optimum forage production. Prioritize herbicide applications over fertilizer applications, especially on introduced pastures. On rangelands (prioritize the most productive areas), herbicide should be considered if potential weed pressure will significantly inhibit forage production.

3. Prepare.

Prepare to fertilize the most productive introduced pastures and all cropland established for grazing. If soil sampling has not been performed in recent years, collect samples this winter for analysis to determine which soils require the least amount of fertilizer to achieve production goals.

Key Procedures

Fertilize Cropland First

The cropland established for grazing purposes is of highest priority to receive fertilizer. Usually grazing cropland pastures are established for growing livestock and secondarily for lactating cows. Only establish the amount of pasture required to meet the needs of these classes of livestock and that you can afford to fertilize correctly — using the soil tests recommendations — for the optimum level of production.

CONTINUED ON NEXT PAGE







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CUTTING EXPENSES FROM PREVIOUS PAGE

Fertilize introduced pastures

The most productive introduced pastures are the second highest priority to receive fertilizer. Hybrid bermudagrass varieties such as Midland 99, Tifton 85 and Coastal are typically very responsive to nitrogen fertilizer, as is B-Dahl bluestem of the introduced bluestem varieties, and tall fescue. Applications of at least 50 to more than 100 units of actual nitrogen are recommended. If pasture is fertilized, be prepared to spray weeds.

Fertilize early

Fertilize early in the growing season for each forage type for all pastures that are deemed a priority for fertilizer applications in the final management plan. Apply herbicides to pastures and rangeland while the primary weed species are immature, typically less than 4 to 6 inches tall. These practices provide for optimum grow-

ing conditions for the longest period of time.

Manage grazing

Plan and manage grazing of the pastures. Manage for adequate residuals at all times. Do not graze forage too short during any one grazing event (exception: end-of-season, graze-out cropland). Provide adequate recovery for perennial pastures and rangeland.

Purchase hay

If hay is required as part of the management plan, then it should be purchased instead of produced on-farm. Have forage tests conducted on all possible hay purchases. Only purchase hay at the best price per ton of nutrients that closely meet or exceed the nutrient requirements for the classes — and physiological condition — of livestock to be fed. It is best to feed hay that requires no or very little supplemental feed if you are substitute-feeding hay for an extended period of time.

ns for the longest **Budget accordingly**

If budget is still available, then address the moderately productive pastures and rangelands, continue through the preceding process and steps again while always considering where you will get the biggest bang for the buck.

Consider weed control

On marginal lands with introduced pastures, consider annual weed control if needed and fertilize at a low rate every other or every third year. This is particularly effective with common or other seeded varieties of bermudagrass and most introduced blue-

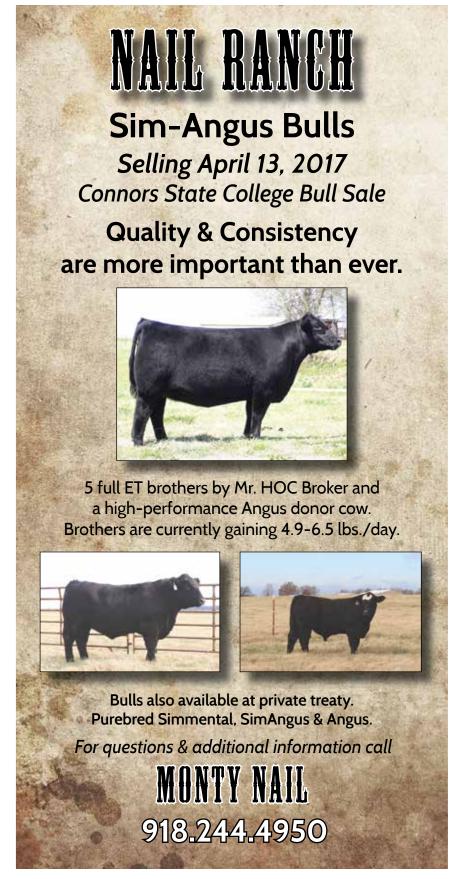
stems. Always be prepared to spray weeds where fertilizer is to be applied.

Match stocking rates

Destock accordingly to match stocking rate to carrying capacity of your adjusted pasture management plan. Maintain and manage only the most productive livestock as forage availability will be more limited.

—Source: Hugh Aljoe is producer relations manager at the Samuel L. Roberts Noble Foundation for Agriculture. This article is reprinted with permission. Visit the Noble Foundation on the web at www.noble.org.





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MANAGEMENT MATTERS

How is the Data Used?

Putting the BCI Pregnancy Analytics App to work

Story By Bob Larson

The BCI Pregnancy Analytics App was released in the fall of 2016 by Kansas State University's Beef Cattle Insistute and is being used by veterinarians and beef producers to enhance monitoring and evaluating cowherd breeding season success. Veterinarians know that being able to visualize the percentage of a cowherd that becomes pregnant each 21-days of the breeding season can provide important information to identify the contributing causes for situations when a lower

than desired percentage of the herd becomes pregnant, or to identify areas for improved reproductive efficiency. Until now, collecting and evaluating that information while at the chute during preg-checking has been difficult. Data entry for the BCI Pregnancy Analytics App is even easier than using a paper-and-pen method and has the benefit of data analysis that is as powerful as a chute-side computer.

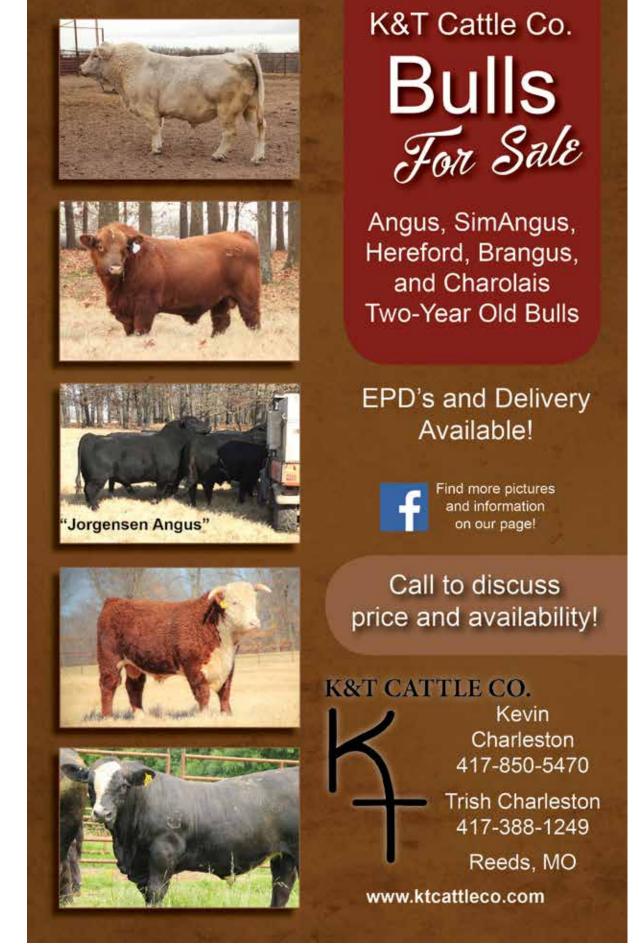
Beef cow reproduction is limited by two key factors, the first being a relatively long period of infertility following calving, and the second being that only 60 percent to 70 percent of successful matings between a fertile bull and fertile cow will result in a viable pregnancy at the time pregnancy status is determined a mid-pregnancy. We know that approximately 30 percent to 40 percent of fertile matings result in either failure of fertilization or death of the early embryo, but in most situations, the cow will express heat and ovulate a fertile egg about 21 days after her last heat and have another 60 to 70 percent probability of conceiving and maintaining a pregnan-

cy. Fertile cows that have three opportunities to be bred by a fertile bull in a breeding season — each with a 65 percent probability of a successful pregnancy — will have a 96 percent probability of being pregnant at the time of a preg-check about one-half way through pregnancy.

If nearly all the cows in a herd calved early enough so that they have resumed fertile cycles by the start of the next breeding season, and the bulls are fertile and able to successfully mate, then the ideal pregnancy pattern would have about 60 percent to 65 percent pregnant in the first 21 days of the breeding season, 85 percent to 90 percent pregnant by the 42nd day of breeding, and about 95 percent pregnant after 63 days of breeding.

Herds that only have 50 percent of cows cycling by the end of the first 21-days of the breeding season are expected to have no more than 30 to 35 percent of the herd become pregnant in the first 21 days — 60 percent to 70 percent pregnancy success from the mating of fertile cows to fertile bulls — and the pattern will be flatter and longer than the ideal pregnancy pattern. The magnitude of non-pregnant cows at the end of the breeding season will depend on the length of the breeding season. Even if the breeding season is limited to 63 days, at least 80 percent of the cows are expected to be pregnant if the problem is confined to issues of cows resuming fertile estrous cycling during the breeding season. If non-pregnant cows exceed 20 percent of the herd, it is not likely due to cow problems alone and either bull problems or a combination of cow problems and bull problems should be investigated.

Poor pregnancy success due to bull problems can often be detected at the time of preg-check by using the pattern to identify a substantial decrease in the pregnancy success by 21-day periods. Because previously fertile cows rarely become infertile over a short period of time, but bulls



CONTINUED ON NEXT PAGE

HOW IS THE DATA USED FROM PREVIOUS PAGE

can suddenly become less fertile due to testicular, penis or leg problems, any time that reproductive efficiency suddenly decreases during a breeding season, bull problems should be considered likely.

The only data required by the Pregnancy Analytics App is the dates for the start and the end of the breeding season and an estimate of the fetal age for each cow's pregnancy. Additional information such as cow ID, cow age, body condition score and breed (or other descriptor) can be added to enhance the value of the preg-check information.

The veterinarian and producer can decide whether to share the cow data with BCI or not. No herd identifiers are available to BCI – so even if you share the data we can't identify any person with the herd. If you agree to share the data, BCI

will have access to the cow information — % pregnant, % with each BCS and starting date for breeding season — but not the producer or veterinarian information. By submitting the data, the herd's data is compared to a benchmark created from all the submitted herds or a benchmark of the herds submitted by that veterinarian/clinic. If you choose not to submit the data to BCI, the app works the same, but no benchmark for comparison exists.

After preg-check data is entered, projected calving dates are generated

The BCI Pregnancy Analytics App from Kansas State University can help veterinarians and producers improve reproductive efficiency of beef cattle herds. —Cattlemen's News stock photo.

and graphs are created to display the distribution of the upcoming calving season. These pregnancy patterns can help identify the most likely contributing factors when investigating herds with lower than desired percent pregnant.

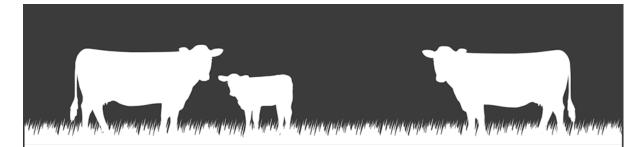
The BCI Pregnancy Analytics App can serve as a valuable tool to assist veterinarians and producers in improving reproductive efficiency of beef herds.

—Source: Kansas State University Beef Cattle Institute.

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Get your fescue pastures in grazing shape this spring.

If you have tall fescue pastures, consider an early season herbicide application to both control weeds and lessen the harmful effects toxins found in tall fescue seedheads have on your cattle. Ingesting these toxins leads to a condition called fescue toxicosis, which can cause — among other things — reduced weight gains, poorer conception rates and rough hair coat in beef cattle.

An early spring application of Chaparral™ herbicide provides broad-spectrum weed control, while at the same time suppressing toxic fescue seed heads. When applications of Chaparral are timed for optimum seedhead suppression, they will control winter annual weeds and other early season broadleaves, as well as many woody plants.

For best results, Chaparral herbicide should be applied at a rate of 2.0 ounces per acre plus 0.25 percent nonionic surfactant. Apply as early as three weeks prior to seed head emergence and as late as the early boot stage, with later applications preferred over earlier applications. Following this pasture treatment plan has shown an increase in average daily gains in stocker cattle of between 0.33 and 0.62 pounds per day, as well as a 9 percent to 18 percent increase in pregnancy rates, with heavier calves (17 to 55 pounds/head) at weaning.

However, just as you can expect to see a difference in the appearance and performance of your cattle when you effectively manage fescue toxicosis, you can expect to see a change in your pastures. too.

The early application timing somewhat intensifies the effect Chaparral has on tall fescue. You will see grass yellowing, which can last at least a couple of weeks. Also, because production of these mostly unpalatable stems and toxin-laden seed heads will be suppressed — the result is a noticeable change in the appearance of tall fescue pastures and a reduction in pasture biomass. However, tall fescue pastures treated with Chaparral for seedhead suppression keeps tall fescue leafy and maintains forage quality longer through the season, and fescue will begin growing at a normal rate three to four weeks after application.

For more information about spring treatments or Chaparral™ herbicide, contact your local ag-chem dealer, Dow AgroSciences sales representative or county weed department, or visit www.noweedsnobrush.com.

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Label precautions apply to forage treated with Chaparral and to manure from animals that have consumed treated forage within the last three days Consult the label for full details.

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Contact your state pesticide regulatory agency to determine if a product is registered for sale or use in your state. Always read and follow label directions.

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TRENDING NOW

Trich Cases Continue Down in Missouri

No plans on tap to change state testing requirements

PRODUCT INFORMATION

NADA 141-299, Approved by FDA.

(Florfenicol and Flunixin Meglumine) Antimicrobial/Non-Steroidal Anti-Inflammatory Drug

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 (BRD) associated with Mannheimia haemolytica, Pasteurella multocida, Histophilus somni, and Mycoplasma bovis, and control of BRD-associated pyrexia in beef and non-lactating dairy

CONTRAINDICATIONS: Do not use in animals that have shown hypersensitivity to florfenicol or flunixin.

WARNINGS: NOT FOR HUMAN USE. KEEP OUT OF REACH OF CHILDREN. 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.

For customer service or to obtain a copy of the MSDS, 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. Toxicity studies in dogs, rats, and mice have associated the use of florfenicol with testicular degeneration and atrophy. 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 site 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 florfenicol 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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The Missouri Department approximately 1,800 samples **▲** of Agriculture began testing for trichomoniasis in the MDA Veterinary Diagnos-Laboratory-Springfield, Missouri, the Fall of 2009. The testing requirement for trichomoniasis for bulls entering Missouri was implemented in January 2010, with intrastate regulations following in July 2011. In the beginning, Missouri saw a prevalence of 4-5 percent positive test results and performed

in 2010. The prevalence of trichomoniasis has been declining through the years and the past few years the percentage of Missouri bulls that tested positive in the Springfield laboratory has ranged from 0.8-1.0 percent. In 2016, the laboratory tested more than 15,000 bulls, including bulls located in Missouri and outside the state. More than 11,000 bulls sampled resided within Missouri.

What is Trich?

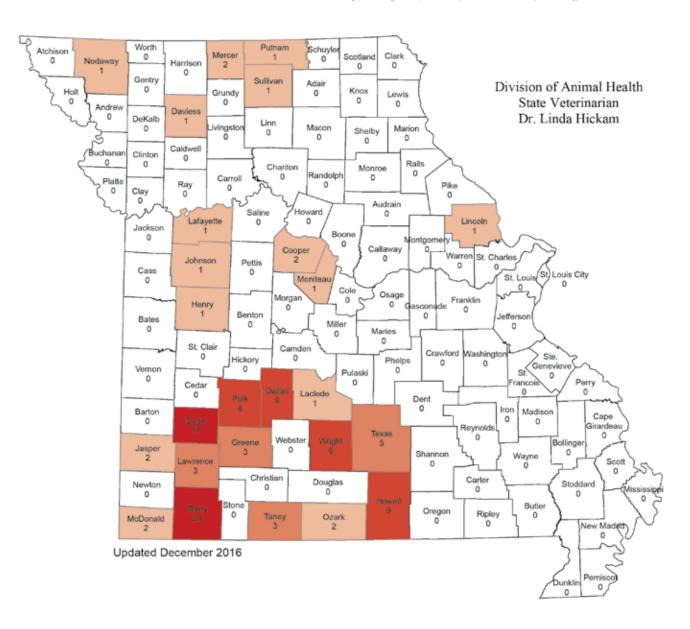
Economic losses to the U.S. beef industry from reduced conception rates, lowered weaning weights and increased culling from trichomoniasis exceed \$100 million annually.

—Source: University of Missouri Extension.

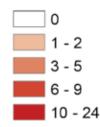
Department staff continue to educate producers about the risk associated with purchasing open and short-bred cows and nonvirgin or leased bulls. Currently, changes in movement requirements are not planned within Missouri.

—Source: Missouri Department of Agriculture.

Number of Trichomoniasis Positive Results by County



Number of Positive Results





Missouri Department of Agriculture

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NOT FOR HUMAN USE. KEEP OUT OF REACH OF CHILDREN. This product contains material that can be irritating to skin and eyes. Animals intended for human consumption must not be slaughtered within 38 days of treatment. This 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 these cows. A withdrawal period has not been established in pre-ruminating calves. Do not use in calves to be processed for veal. Do not use in animals that have shown hypersensitivity to florfenicol or flunixin. Not for use in animals intended for breeding purposes. The effects of florfenicol and flunixin on bovine reproductive performance, pregnancy, and lactation have not been determined. When administered according to the label directions, RESFLOR GOLD may induce a transient local reaction in the subcutaneous and underlying muscle tissue. Brief summary available on adjacent page.

MANAGEMENT MATTERS

From the Field to the Cow's Mouth

How to make hay harvest count

Story By Rebecca Mettler for Cattlemen's News

Providing cows with goodquality hay takes a little more work than the good fortune of beating the rainstorm on the horizon. Until the hay is in the cow's mouth, a multitude of problems can arise.

As a producer it's important to understand what hay losses in the best- and worst-case scenarios could be, says Bob Schultheis, natural resource engineering specialist with the University of Missouri Extension

Let's assume everything went right and the weather cooperated. A loss of 12 percent to field curing, 8 percent at harvest, 5 percent in storage and 8 percent at feeding can be expected. In the end, roughly 70 percent of the hay made it into the cow.

On the flip side, if everything went wrong and the weather didn't cooperate along with improper storage and feeding, a producer could be getting only 30 percent of the bale into the cow.

"If you have this management scheme, you are putting up three bales to get one bale in the cow. That's not good math," Schultheis said.

The imperative factors of putting up quality hay include cutting the forage species at the correct stage of maturity to maximize quality, baling at the right moisture content, along with handling, storing and feeding.

Moisture Content

Baling hay at the correct moisture content is critical for suc-

Field-cured hay requires moisture content of 20 percent or less, depending on which baling method is used. Small square bales are ideally baled

at 18 to 22 percent moisture, round bales range from 14 to 18 percent

and large squares are best baled at 12 to 16 percent moisture. —*Photo by Joann Pipkin*



While not every producer has the herd size or capability to warrant unrolling a day's worth of hay at a time, the practice can help minimize waste when feeding. —*Photo by Joann Pipkin*.

cessful maintenance of hay quality during storage.

Preferred moisture content depends on the type of baling technique being used. Field-cured hay requires moisture content of 20 percent or less, depending on which baling method is used. Small square bales are ideally baled at 18 to 22 percent moisture, round bales range from 14 to 18 percent, and large squares are preferably baled at 12 to 16 percent moisture. The slight differences in moisture content are to account for the differences in bale surface area and how

that effects moisture and heat dispersion. Field-cured hay can also be baled closer to 30 percent moisture with the addition of preservatives.

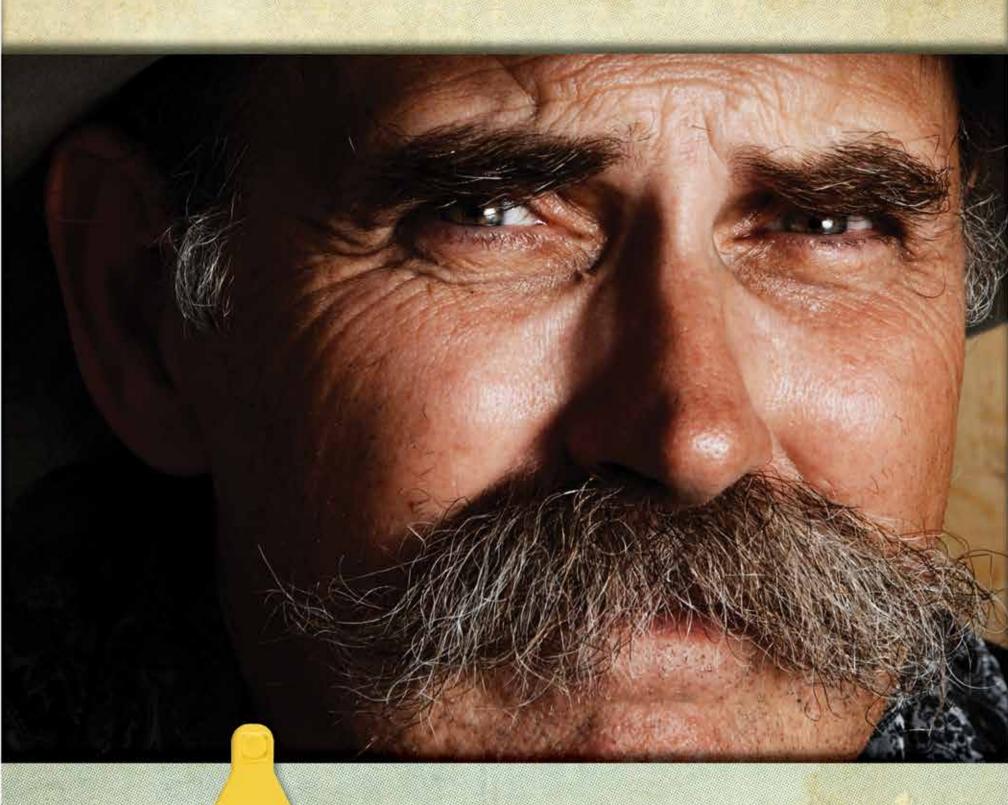
"Then there's a no man's land right between 30 and 50 percent, which is what I call the garbage zone. You can't make good anything," Schultheis said.

However, the options pick back up at 50 percent moisture. Round bale silage, which has gained popularity in Missouri,

CONTINUED ON PAGE 56



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TO THE COW'S MOUTH FROM PAGE 54

can be baled at 50 to 60 percent moisture content.

Round bale silage gives producers quicker turn-around time from cutting to baling and thus works better when the weather is less that cooperative. Temperature and relative humidity play a critical role in the hay drying process and can wreak havoc on a producer's plan for high quality field cured hay, especially earlier in the hay season.

"If you are putting hay up and it's 80 degrees and 18 percent moisture will make ideal hay, if there's 70 percent humidity, its going to be hard to obtain that moisture content," Schultheis said. "The driest you're going to get is 20 percent. Bump that up to 85 degrees and 70 percent relative humidity, and yes, we can get that 18 percent moisture."

Nearly all hay goes through a "sweat" after baling, which should peak at four to seven days in field-cured hay. It's important to get the internal temperature of the bale down below 120 degrees before storing the bales in a barn due to fire hazard. But, fire concerns aren't the only reason to monitor temperatures.

"High temperatures for a prolonged period of time create spoilage issues in the hay. Anytime the temperature goes above 105 degrees you will have damage to the hay," Schultheis said.

Heating to a certain temperature causes caramelization, which the cows find very appetizing. However, the protein changes to an unavailable form during the heating process, which cattle can't digest properly; therefore it doesn't provide enough nutritional value.

Hay storage

Storing hay in a barn is ideal for maintaining hay quality and minimizing spoilage losses; however, with the barn comes the hefty price tag, too. In the place of a barn Schultheis credits a 40-year-old underutilized hay storage practice as a viable option. Stacking bales in a pyramid shape on

top of a rock or gravel pad and covering with a tarp saves hay quality, just as if the bales were in a barn.

"After six months of storage they are going to be as green as the day you put them in there," Schultheis commented.

If bales must be stored outside uncovered, Schultheis recommends picking bale pen area that has a slope with the ability to run the rows north and south for the most sunlight. Spacing the rows three to four feet apart also provides proper air circulation. If the bales are the same diameter, butt them up end-to-end. Also, if possible, anything to reduce ground contact such as tarps, gravel or pallets decreases spoilage.

Feeding

It's hard to imagine that producers would knowingly waste up to 40 percent of a hay bale. But, that's exactly what happens when a bale is fed to cows without being placed in a hay ring, rack, or some kind of containment mechanism.

One could debate the effectiveness of the differing styles of hay bale feeders relative to cost, but Schultheis tells producers to keep a few key concepts in mind. Cone feeders that have angled bars and skirt on top and bottom have been proven to waste the least amount of hay.

"The cone feeder had significantly less loss than the open or poly feeder and the one that had a skirt was the middle of the road," Schultheis said. "But the cone feeder is more expensive than a ring feeder."

Even better, unrolling one day's worth of hay for the cows to eat is one step up. However, Schultheis understands that not every producer has the cowherd size or the labor required for daily hay feeding.

Following these tips for proper hay harvest, storage and feeding can increase efficiencies in the operation and maybe even stretch the hay supply just enough to get by a little longer.



TRENDING NOW

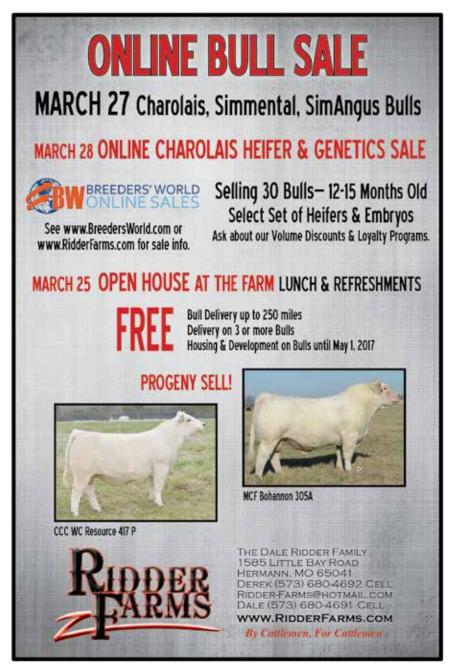
5 Quick Tips: **Solving Weed Problems**

- Clip before the seed sets. Remember, mowing and clipping at the wrong time spread a lot of seed.
- Prevent overgrazing. Weeds love to take over pastures. ■ that are overgrazed.
- Test the soil. Increased production of hay fed elsewhere results in low potassium levels.
- Justify spraying. Weeds dominating 25 percent of a 4 Justify spraying. Weeks.
- Scout fields and develop a spray schedule based on the weed species you find.

—Source: Tim Schnakenberg, University of Missouri Extension agronomist.

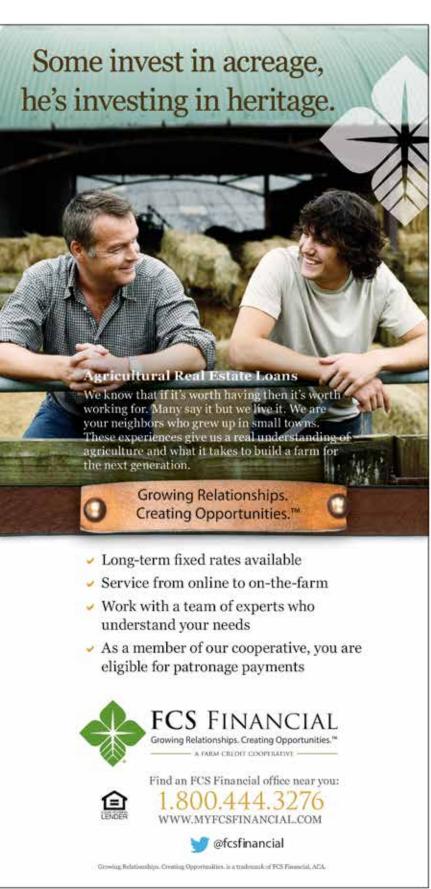
> HELPFUL HINT: Get help identifying weeds at http://weedid.missouri.edu/ or download the ID WEEDS app for Apple and Android phones.





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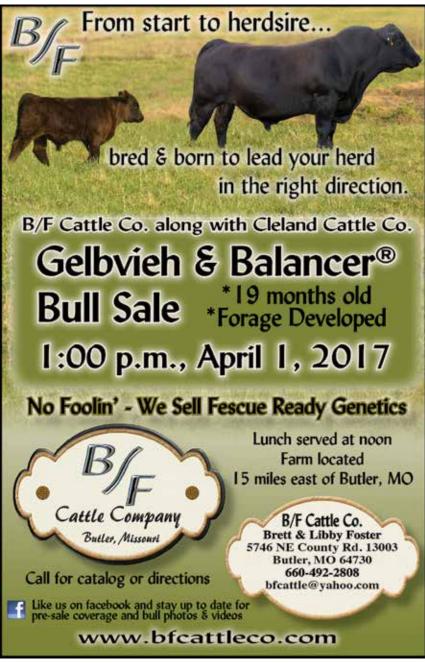
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ON THE CALENDAR

Still Need to Check Your Bull?

Breeding soundness exams scheduled

 $\mathbf{B}^{ ext{efore you turn the bulls}}$ out to pasture for the breeding season, schedule a spring check-up. Bulls need an annual exam that involves more than just a semen check. Vaccinations as well as treatments for lice, ticks and internal parasites are necessary to help keep

your herd sire in top shape for the breeding season.

Bull breeding soundness exams are scheduled for six area locations across southwest Missouri this month. Call ahead of time to make your appointment.

March 9 — Barry County Veterinary Services, Cassville 417-847-2677

March 14 & 15 — Dake Veterinary Clinic, Miller 417-452-3301

March 20 — Countryside Animal Clinic, Aurora 417-678-4011

March 21 — Animal Clinic of Diamond, Diamond 417-325-4136

March 22 — Christian County Vet Services, Clever 417-743-7287

March 11-25 — Countryside Vet Clinic, Bolivar 417-326-2992

Disease Outbreak Workshops Set

Missouri's state veterinarian to speak

Missouri Department of Ag-riculture State Veterinar-Payne, animal waste manage-ment specialist for Oklahoma ian Dr. Linda Hickam, D.V.M., will be among the speakers at University of Missouri Extension's "Preventing and Responding to Disease Outbreak" workshops in March.

The one-day workshops will be held in Neosho, Buffalo, Jackson, Sedalia and Kirksville.

Hickam tells how to detect animal diseases, whom to call, quarantine procedures and resources.

The course is approved for four hours of veterinary continuing education credits.

MU extension veterinarian Corrine Bromfield will give a history of major disease outbreaks in the United States. MU extension economist Ray Massey will talk about the economic reasons to improve and maintain biosecurity systems on the farm and in livestock operations.

MU extension agricultural engineers Teng Lim and Joe Zulovich will discuss what resources are available. Josh Cooperative Extension, speaks on mortality management options during disease outbreaks. Kevin Janni, livestock housing specialist with the University of Minnesota, tells how producers can prevent an outbreak. Representatives from the Missouri Department of Natural Resources will explain local regulations and options for mortality management.

Dates and locations for the workshops are:

March 13 in Neosho, Williams Agricultural Science Center, Crowder College; March 14 in Buffalo, O'Bannon Community Center; March 17 in Jackson, MU Extension Center in Cape Girardeau County; March 20 in Sedalia, Pork Place, Missouri State Fairgrounds; and March 24 in Kirksville, Missouri Department of Conservation Northeast Regional Office. Sessions run from 9:30 a.m. to 3:15 p.m.

For more information, contact Misty Grant at 573-882-2731 or grantmm@missouri.edu.

ON THE CALENDAR

Beef ReproGene Workshop Set

Live animal exercise and new research to be featured

The Beef ReproGene Workshop will provide producers and others with information on reproduction and genetics to make advances in cow-calf improvements according to Eldon Cole, a livestock specialist with University of Missouri Extension.

The workshop will begin at 4 p.m. on Thurs., March 16 in the second-floor room at the Springfield Livestock Marketing Center, Springfield, Missouri. The Livestock Center's Cafe will cater the meal.

Register by March 13 for meal planning. Contact the University of Missouri Extension Center, Mt. Vernon at (417) 466-3102 for details, or find the registration form online at http://bit.ly/BeefReproGene.

On the Agenda

Dr. David Patterson and Jordan Thomas will present re-

search from University of Missouri Extension specialists on estrus synchronization protocols, split-time artificial insemination and the use of sex-sorted semen.

Dr. Jared Decker will bring attendees up-to-date on the basics of genetic prediction programs, how they vary from one breed or cross, and how they can be used to make selection and marketing decisions more intelligently.

Decker will use live animals that have been genomically tested in an exercise on the practical use of genomic predictions. Assisting with that discussion will be Josh Worthington, Dadeville; Jeff Schoen, Springfield; Wilmoth Ranch, Mt. Vernon; and Mike John, MFA, Inc., Columbia.

—Source: University of Missouri Extension release.

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MANAGEMENT MATTERS

Pitching Hay or Doing Homework: The Choice is Ours

Today's beef business centers around knowledge based on data

Story By Kris Ringwall

The answers to the dynamics of today's beef business seem at our fingertips, but the solutions are far off at times. The business of beef initiates within a large, decentralized base of independent producers. Although the model is good, change is slow within the vastness of environments in the beef industry.

Perhaps that, too, is good. Imagine sitting by a glass pane, full of ideas, watching the world go by, but with no way to open the door to go to the other side. The door might be there but is unnoticed. Each person gets to decide. When asked to feed the world or watch the world, I guess educational insurance sesthe choice is ours.

As a youngster, I fed cattle with a pitchfork from a hayrack. I had no concept of the value of the feed, how much to feed, how much was wasted or how heavy the cows were. I didn't know the value of the cow or profit when the calves were sold.

I knew a truck would haul the calves to the sale barn, and would have fewer to feed. It made me happy. And life was good. I had no evidence of good animal care. I just pitched until the cows and calves looked content or I got tired, knowing I would be back tomorrow to pitch some

Recently, I attended a good

sion regarding options for ranchers and farmers. I could not help but ponder the significance of the records required to provide the data for the examples used. The data were not complicated, but numerous questions were asked to fill in all the blanks to run the estimate for the appropriate coverage.

Things have changed since the days of pitching hay. The pondering thought was this: The business side of agriculture is not simple. The requests for documentation and inputs are quite demanding, and to know the financial success of the beef operation,

CONTINUED ON NEXT PAGE



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THE CHOICE IS OURS FROM PREVIOUS PAGE

cattle producers need to keep records.

Likewise, to know cattle nutrition, cattle producers look up the nutritional requirements of cattle. To know cattle genetics, cattle producers look up expected progeny differences and sample cattle DNA. To understand cattle response to disease, cattle producers submit tissue and fluids for analysis of enzymes and other proteins.

To know how cattle reproduce, cattle producers learn and implement appropriate synchronization methods. To know the forage plants, cattle producers seek a botanist for input. To know the environmental requirements, cattle producers conference with professional engineers. I remember pitching tons of slough weeds, and the cows and calves seemed to like it. I remember keeping an eye out for the bull because he was smaller than the cows. I remember a dead calf, a conclusion based on the amount and location of bleeding.

I remember never worrying about breeding cows because the bull seemed to understand that. I remember not worrying about grass plants; each forkful was filled with plenty of green stems. I never worried about the cow manure because that seemed rather trivial. I was clueless, but the cows and calves had a good home and a good caregiver.

Have I changed? Yes. For the better? Yes.

The current challenge for beef producers is the dilemma of engaging the ever-demanding need to experience the intensity of operational data or sticking to pitching hay. This challenge is individual to each beef producer but collective to the beef industry.

The business of beef is knowledge based on data. Data allow for the long-term solutions within a complex production chain. What is the largest and heaviest chain that holds a beef operation back?

As I sit and ponder the links to the chain, some are small,

and some are large. Some are strong, and some are weak. As the saying goes, a chain can only be as strong as the weakest link. Therefore, in theory, the identification of the weakest link should be a notable effort. The challenge with the fix rests with the justification of the problem and lack of data to fix it.

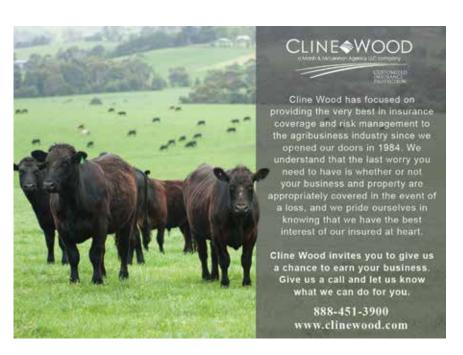
Unfortunately, if the weight of the chain, once fixed, is too heavy, one only develops new problems. Then the weight of the chain must be lightened. A lighter chain has less strength. The heavy chain could be better, but so could the lighter chain. Your choice determines your progress.

I guess these are just ponderings. And, we end where we began. Imagine sitting by a glass pane, full of ideas, watching the world go by, but with no way to open the door to go to the other side. The door might be there but is unnoticed. Each person gets to decide. When asked to feed the world or watch the world, I guess the choice is ours.

The bottom line: The beef industry is a large industry and, as individual producers, we have the opportunity to engage the complexity or pitch hay. I enjoyed pitching hay, but times have changed.

—Source: Kris Ringwall is beef specialist at North Dakota State University Extension Service.









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EVENT ROUNDUP

March March 22 4 Hilltop Farms Gelbvieh & Balancer Bull & Heifer Sale **Bull Breeding Soundness Exam Clinic** Joplin Regional Stockyards, Carthage, Missouri Christian County Vet Service, Clever, Missouri FMI: 417-842-3225 FMI: 417-743-2287 22 4 Mead Farms Multi-breed Bull Sale Stevens Land & Cattle Bull & Female Sale west of Versailles, Missouri at the ranch, near Carmen, Oklahoma FMI: 573-302-7011 FMI: 580-327-7367 Satterfield Angus & Charolais Bull Sale Christian County Livestock & Forage Conference 23 4 at the farm, Evening Shade, Arkansas High School Cafeteria, Clever, Missouri FMI: 501-944-9274 FMI: 417-581-3558 Bull Breeding Soundness Exam Clinic 24-26 Ozark Spring Roundup 9 Ozark Empire Fairgrounds, Springfield, Missouri Barry County Vet Service, Cassville, Missouri FMI: 417-833-2660 FMI: 417-847-2677 Seedstock Plus South Missouri Bull Sale 25 Jacs Ranch Angus Bull Sale 11 Joplin Regional Stockyards, Carthage, Missouri at the ranch, Bentonville, Arkansas FMI: 800-486-1160 FMI: 479-273-3030 Worthington Angus Production Sale 25 Salyer's & Sons Cattlemen's Kind Production Sale 11 At the farm, Dadeville, Missouri at the farm, Billings, Missouri FMI: 417-844-2601 FMI: 417-744-2025 25 Harriman Santa Fe Bull and Bred Heifer Sale Wright Charolais Bull Sale 11 Windsor, Missouri Kearney, Missouri FMI: 660-492-2504 FMI: 816-776-3512 25 Magness Limousin Bull Sale 14-15 Bull Breeding Soundness Exam Clinic CMC Cattle Co. Sale Facility, Miami, Oklahoma Dake Veterinary Clinic, Miller, Missouri FMI: 970-785-6170 FMI: 417-452-3301 26 Hightower Cattle Co. Production Sale University of Missouri Extension ReproGene Workshop 16 LaCygne, Kansas Springfield Lvstk. Mktg. Center, Springfield, Missouri FMI: 913-221-6820 FMI: 417-466-3102 Oleen Brothers Hereford & Angus Production Sale 27 Jasper County Livestock & Forage Conference 16 Dwight, Kansas Water & Electric Building, Carthage, Missouri FMI: 785-482-3383 FMI: 417-358-2158 27 Southwest Missouri All Breed Tested Bull Sale Sunflower Cattle Co. Annual Production Sale 17 Springfield Lvstk. Mktg. Center, Springfield, Missouri Maple Hill, Kansas FMI: 417-345-8330 FMI: 785-256-6461 Green Springs Bull Sale 27 18 Aschermann Charolais Bull Sale 3 Cedars Sale Center, Nevada, Missouri at the ranch, Carthage, Missouri FMI: 417-448-7416 FMI: 417-793-2855 Ridder Farms Online Bull Sale 27 18 Pinegar Limousin Herdbuilder XXIII Sale FMI: 573-680-4691 Springfield, Missouri 28 Genetrust Brangus and Ultrablack Bull Sale FMI: 877-PINEGAR Eureka, Kansas FMI: 417-425-0368 Ogden Angus Ranch Ready Bull & Horse Sale 18 Joplin Regional Stockyards, Carthage, Missouri April FMI: 417-466-8176 Circle A Ranch Angus Bull & Heifer Sale 18 1 B/F Cattle Company Bull Sale at the ranch, Iberia, Missouri Butler, Missouri FMI: 800-CIRCLEA FMI: 660-492-2808 18 Falling Timber Farm Hereford Bull & Female Sale 1 Four State Angus Sale at the farm, Marthasville, Missouri Springfield Lvstk. Mktg. Center, Springfield, Missouri FMI: 636-358-4161 FMI: 573-694-6152 Northeast Arkansas Angus Association Spring Sale Ozark & Heart of America Spring Beefmaster Sale 18 8 Batesville Stockyard, Charlotte, Arkansas Springfield Lvstk. Mktg. Center, Springfield, Missouri FMI: 870-236-3187 FMI: 417-429-6194 Bull Breeding Soundness Exam Clinic New Day Beef Genetics Bull & Female Sale 20 8 Countryside Animal Clinic, Aurora, Missouri Wheeler & Sons Livestock Auction, Osceola, Missouri FMI: 417-678-4011 FMI: 660-492-2777 20 Hinkle's Prime Cut Angus Production Sale 12 New Day Beef Genetics Bull & Female Sale Nevada, Missouri Cattlemen's Livestock Auction, Harrison, Arkansas FMI: 417-448-4127 FMI: 660-492-2777 Bull Breeding Soundness Exam Clinic 13 Connors State College Bull Test Sale 21 Animal Clinic of Diamond, Diamond, Missouri Warner, Oklahoma FMI: 918-244-4950 FMI: 417-325-4136 Heartland Highland Cattle Auction 22 KW Cattle Angus Bull Sale 21 Mid Missouri Stockyards, Lebanon, Missouri Fort Scott, Kansas FMI: 417-345-0575 FMI: 620-224-7305

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MARKET WATCH

Joplin Regional Stockyards

Market Recap | Feeder Cattle & Calf Auction

Receipts Jan. 30-Feb. 20: 26,620 (auction); 1,070 (video) – TOTAL: 27,690

JRS Sale Day Market Phone: (417) 548-2012
Mondays (Rick Huffman) | Wednesdays (Don Kleiboeker)
Market Information Provided By Tony Hancock
Mo. Department of Agriculture Market News Service
Market News Hotline (573) 522-9244
Sale Day Market Reporter (417) 548-2012

Summary

Feeder Cattle Auction Report for 2/20/2017 Receipts: 6,906 Week ago: 6,257 Year ago: 6,835 ***CLOSE*** Compared to last week, steers and heifers traded unevenly steady. Much larger offering than originally expected but all weights and classes of cattle found very solid support throughout the day. Supply moderate to heavy. Demand moderate to good, best for grazing cattle. Feeder supply included 56 percent Steers, 40 percent Heifers, and 4 percent Bulls. Feeder Supply over 600 lbs was 50 percent. Please Note: The below USDA LPGMN price report is reflective of the majority of classes and grades of livestock offered for sale. There may be instances where some sales do not fit within reporting guidelines and therefore will not be included in the report. Prices are reported on a per cwt basis, unless otherwise noted.

Get the complete Joplin Regional Stockyards Feeder Cattle Market Summary online at www.joplinstockyards.com.

Tune in to the JRS Market Report



Monday & Wednesday 11:30 a.m. & 12:30 p.m.



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



Monday 11:30 a.m. Wednesday 11:30 a.m.



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



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



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



Monday 11:45 a.m. Wednesday 11:45 a.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)





TRENDING NOW

Weighing in on Meat Supplies

U.S. per capita availability of red meat, poultry, fish lowest since 1983

Story By Jeanine Bentley

ccording to the food availability data from the United States Department of Agriculture's Economic Research Service (ERS), the annual per capita supply of total red meat — beef, pork, veal and lamb) — poultry — chicken and turkey — and fish/shellfish available for consumption in the United States has fallen over the last seven years after reaching 200 pounds in the mid-2000s.

In 2014, aggregate red meat, poultry and fish/shellfish availability on a boneless, edible basis fell to 181 pounds per person, the lowest level since 1983. ERS calculates food availability in a given year by totaling domestic production, imports and beginning stocks and subtracting exports, ending stocks, and farm, industrial, and other nonfood uses. Per capita availability is calculated by dividing the annual availability by the U.S. population for that year.

While the decline in beef availability from its peak of 88.8 pounds per person in 1976 to 51.5 pounds per person in 2014 is not a new story, availability of other red meats has dropped as well. Pork availability is down from an average 47.0 pounds per person from 1979 to 2010 to 43.1 pounds per person in 2014, and veal and lamb availability is down from 4.2 pounds per person in 1970 to 1 pound per person in 2014. Fish and shellfish availability, up from around 12 pounds per person in 1970, has fluctuated between 14.1 and 16.5 pounds since 1984 and was 14.5 pounds per person in 2014.

On the poultry side, the story is more mixed. Turkey availability grew in most years between 1970 and 1996, reaching 14.3 pounds per person before declining to 12.4 pounds per person in 2014. Availability of chicken, on the other hand, has steadily increased since 1970, reaching 58.7 pounds per person in 2014. Despite the increase in chicken, red meat still accounts for the largest share of red meat, poultry, and fish/shellfish availability at 53 percent, compared with 39 percent for poultry and 8 percent for fish and shellfish.

Multiple supply and demand factors have influenced trends in per capita availability of red meat, poultry and fish. On the supply side, high crop prices, which led to high feed costs and subsequently higher beef prices over the 2006-15 decade, are partly responsible for reduced red meat production. Efficiencies in chicken production have led to lower bird mortality rates and a higher average live weight per broiler, increasing chicken availability. On the demand side, beef and pork's

higher retail price compared to chicken and turkey might also have contributed to poultry's growing popularity. Average retail prices for beef and pork in 2015 were \$5.73 per pound and \$3.89 per pound, respectively, while chicken and turkey sold for \$2.16 per pound and \$1.51 per pound.

—Source: Amber Waves, USDA's Economic Research Service.



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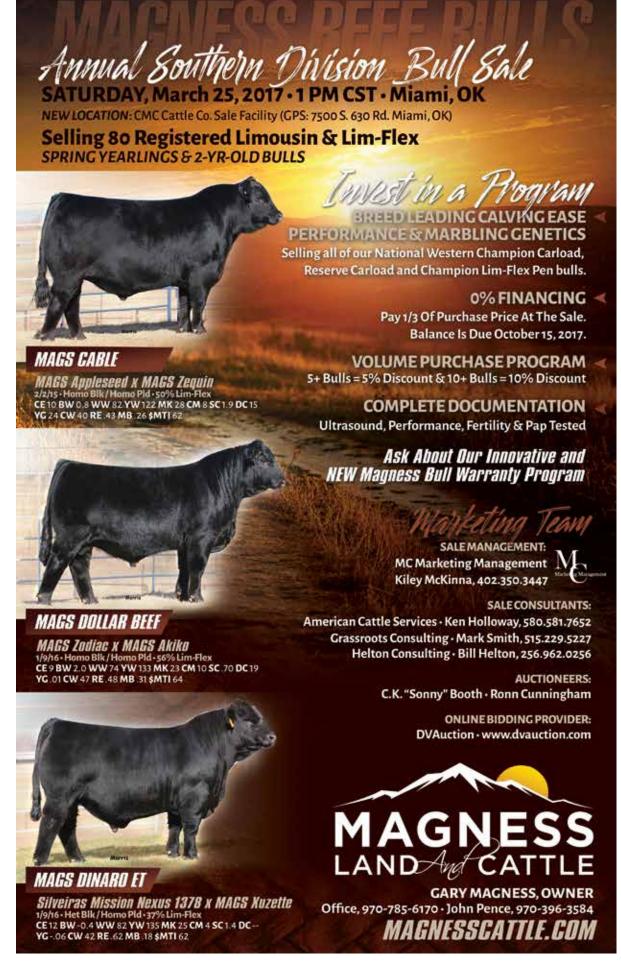
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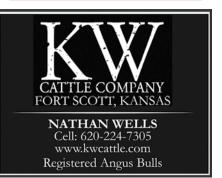
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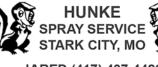
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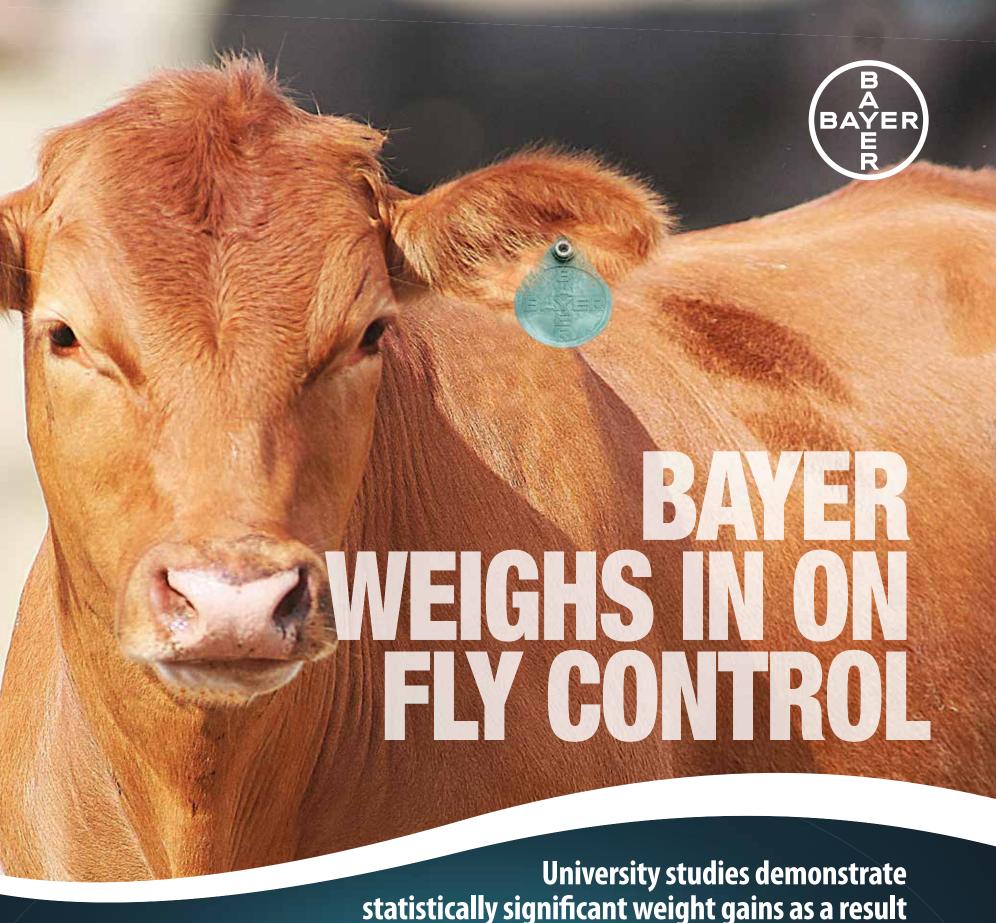
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