JOPLIN REGIONAL STOCKYARDS

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VIEW FROM THE BLOCK

The July Cattle on Feed Report was somewhat of a surprise with placements 16 percent higher than last year. That's a sack full of 'em to work through. Going forward, it will be about whether or not we continue to sell cattle

in a timely manner. We've got a lot of things going for us with China and other world countries now in the market for our beef. A year ago, we thought the market was going to be a disaster, and it turned out to be better than we anticipated. If we can stay current on the fat cattle side of this market, we'll be fine. If we can't, we're going to be in trouble quick. We have a wealth of cattle; we don't need any extra tonnage from big carcasses.

Historically, August is one of the best times of the year to sell feeder cattle and calves, too. Until we get into bigger runs at the livestock auctions later in the fall, we should have a pretty good market. As the years have gone on, it gets a little more difficult to predict the market because of so many things in the world that weigh on prices.

Cattle health is always a concern, especially in the fall. Buyers want cattle that are healthy because they don't want to take the risk that comes with

added medicines and potential death loss. As we approach weaning time, remember buyers are willing to pay extra for preconditioned cattle. We've got ample feed and hay available, so if you can put an extra hundred pounds on your calves and get a \$1.40 or \$1.50 for the gain that's pretty simple math; you can get an extra \$40 or \$50 a head at marketing time. It's certainly a way to add value to your cattle.

As a whole the market is stout. If we continue to take care of business and do our job as producers, we'll be fine.

Good luck and God bless.

Jackie



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Jr. Smith: Melbourne, AR M(870-373-1150

Kent Swinney: Gentry, AR H(479)736-4621, M(479)524-7024

KANSAS Chris Martin (Video Rep): Alma, KS M(785)499-3011

Alice Myrick: Mapleton, KS M(620)363-0740

Bob Shanks: Columbus, KS H(620)674-3259, M(620)674-1675

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CATTLE RECEIVING STATION
OKLAHOMA

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H(417)751-9580, M(417)849-5748 Ted Dahlstrom, DVM: Staff Vet

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M(417)321-3339 CATTLE RECEIVING STATION Tim Durman: Seneca, MO

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Late summer brings with it thoughts of weaning spring-born calves. Stress-free weaning tips and more inside this issue. — *Cover photo by Jillian Campbell.*

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Contact Us

Publisher/Advertising: Mark Harmon | Email: markh@joplinstockyards.com Phone: 417-548-2333 | Mobile: 417-316-0101 Fax: 417-548-2370 Editor/Design/Layout: Joann Pipkin | Email: editor@joplinstockyards.com

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GATTLEMENS NEWS

Cattlemen's News, published by Joplin Regional Stockyards, is a nutsand-bolts news magazine dedicated to helping cattle producers add value to their operations. From "how-to" articles to economics and industry trends, our mission is to put today's producers in touch with the information and products that will make them profitable for tomorrow. Published monthly. Circulation 10,000.







Lost Creek Cattle Co. began in 1976

with the purchase of 430 heifers and has never bought another female. We use a three-breed rotational crossbreeding system using Angus, Charolais and Black Simmental breeds to increase individual and maternal heterosis to 86% of maximum.

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We have used exceptional sires in each breed stressing balanced EPDs, meaningful pedigrees and only use sons of proven sires. They come from some of the best breeders and sales in Oklahoma, Missouri and Kansas and have generally been the top selling bulls in these sales.

Crossbreeding is the only way I know in which you can get something for nothing, and it is called heterosis or hybrid vigor.

3-BREED, CROSSBRED HEIFERS FOR SALE IN MAY

Heifers to calve in September and October, and they will be black, black with some white, or Charolais-influenced, mostly smokes with some yellows. They are sired by outstanding sons of the most preferred sires in each breed.

• Our current Angus herd sires are outstanding sons of A A R Ten X 7008 S A, Sitz Upward 307 R, and SS Objective T510 026. Ten X has been the dominant sire in the breed the past two years with a wide margin in calf registrations, and Sitz Upward was the registration leader in 2013 and remains one of the breed's foremost sires. S S Objective is one of the all-time leaders with the widest EPD birth weight to yearling weight spread of any of the Top 50 Angus Sires and has had great maternal influence being the breed's number two Pathfinder Sire.

• Our Simmental and SimAngus bulls are equally impressive and were bred by the Irvine Ranch, Manhattan, KS, which has consistently had the highest or second highest indexing herd in the USA in recent years according to the American Simmental Association. These bulls have an allpurpose index of 160 placing them in the top 5% of their breed. Not to be outdone, our Charolais bulls have a Terminal Sire index ranking them in the top 10% of their breed.

• Our heifer bulls are SimAngus and have a remarkable set of EPDs that rank them in the top 1% for birth weight, top 2% for direct calving ease, and top 1% in all purpose index. Their pedigrees include S A V Final Answer, Mytty In Focus, and S S Objective, along with other great sires in both breeds. All are homozygous black and homozygous polled.

• Since the inception of EPDs we have stressed balance and consistently selected for docility. Our goal has never changed and remains a live calf, born unassisted, that will have superior growth before and after weaning, that can be worked with acceptable effort and will ultimately produce a desirable product.



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ON TARGET

Marketing Quality

How does your calf nutrition stack up?

Story By Justin Sexten

The day you make breeding choices, purchase bulls or buy bred heifers, marketing the calf crop begins. With those decisions in the rear view, it's time to consider how to make the most of a great mating. Sale day for your spring-born calves grows closer as each day grows shorter, and that brings up weaning.

Three considerations dominate all related plans: when to wean, what to feed and how to keep them healthy.

Timing implies giving some thought to "the market," along with local forage availability and cow body condition scores (BCS). As for predicting the best time to market, I will leave that to others.

As summer wears on and calves get older, cow condi-

tion falls off with the decline in forage availability. Weaning is the way to improve a cow's BCS while reducing the stress on grazing resources. You might have read or heard that creep feeding can reduce grazing pressure and cow nutrient requirements, but don't expect a big response. It's more of an add-on for the calves; while eating creep, calves will consume less forage but that does not change nutrient needs for their dams. It takes weaning to remove the requirements for milk production that make up 20 percent of those needs.

Weaning before cow BCS drops below a 4 (where 5.5 is average at calving) lets you start developing the next generation's high-quality carcass. While the influence of fetal programming during the first trimester is not fully understood, placental and organ development patterns suggest nutrient limitation then can reduce performance and quality grade later. That's because underdeveloped lungs are more likely to be affected by a health stress.

While we are discussing future health, let's consider this year's calf, obviously nearer to marketing.

We have often discussed the importance of calf vitality because sickness means lower quality grades. Preventative measures to enhance health ring bells for both management and marketing, so work with your veterinarian to develop a specific plan and your marketing agent to match that plan to a program. Working in concert with these advisors helps value-added health programs capture more of that value for the calf producer.

Creep feeding can play an important role, of course, and that is partly because it helps transition calves from only nursing and grazing to a feed ration as well. Illinois data suggest creep should be fed for 56 days to see a difference in performance. While a consensus of earlier studies suggested starch-based creep to optimize marbling development in young calves, new Illinois research opens doors to other options, such as corn coproduct-based rations relatively higher in fat and protein.

This recent work showed an up-regulation of genes associated with marbling and fat deposition, although no changes were seen in ultimate carcass composition. A corn-based control diet showed similar up-regulation while tending to enhance quality grade in the finished cattle. Although this mechanism (up-regulation) and its link to final carcass quality might not be fully understood, data shows the genes are moving in the right direction to improve quality. Further down the supply chain, cattle feeders can tell you it pays to include these coproducts in the diet because

CONTINUED ON NEXT PAGE



MARKETING QUALITY FROM PREVIOUS PAGE

they help keep cattle on feed while moderating rumen acid load.

Opportunities to meet the nutritional needs of growing calves continue to expand with our knowledge of animal genetics, gene regulation and feed composition. As we approach the time when respon-

sibility for calf nutrition shifts from the cow to the yard manager, we can still capitalize on a genetic decision made long ago if we talk about potential added value and collaborate to develop a diet that allows calves to express their genetic potential.

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

BEEF IN BRIEF

MCA Backs Legislation to Delay Electronic Logging

The National Cattlemen's Beef Association (NCBA) and Missouri Cattlemen's Association (MCA) back inclusion of language in the U.S. House's Transportation, Housing and Urban Development (HUD) appropriations bill to delay for one year a requirement mandating the use of the new Electronic Logging Devices (ELDs) for livestock haulers.

The U.S. House Appropriations Subcommittee on Transportation-HUD approved its appropriations bill including this ELD language specific to the livestock and insect industries.

According to NCBA, the livestock industry now has an additional year to work with the Federal Motor Carrier Safety Administration (FMCSA) for the flexibility necessary to more fairly regulate the transportation of livestock, especially concerning the restrictions within Hours of Service Rules. NCBA has relayed the message to FMCSA for the past year that their rule that limits driving time to 11 hours within a 14-hour window after the driver comes on duty, is simply too restrictive on the industry.

MCA President Butch Meier said he hopes the industry's work with FMCSA will allow them to understand the needs of the beef industry.

"We must find the best solution that allows us to keep the roads safe and ensures we are following the best practices for animal care and handling," said Meier. "We need to be able to move cattle in the safest, most efficient way possible."

—Source: MCA Prime Cuts.

NCBA Supports Foot and Mouth Disease Vaccine Bank

The National Cattlemen's Beef Association (NCBA) has joined with more than 100 other agricultural groups and industry leaders in calling for Congress to establish and fully fund a robust Foot and Mouth Disease (FMD) vaccine bank as part of the 2018 Farm Bill. The letter was sent to U.S. Senate Agriculture, Nutrition and Forestry Committee Chairman Pat Roberts (R-Kansas) and Ranking Member Debbie Stabenow (D-Mich.), as well as U.S. House Agriculture Committee Chairman Mike Conaway (R-Texas) and Collin Peterson (D-Minn.)

"An outbreak of FMD will have a devastating effect on all of agriculture – not just livestock producers – and will have longlasting ramifications for the viability of U.S. agriculture, the maintenance of food security in this great nation, and overall national security," the letter stated. "An outbreak of FMD would immediately close all export markets. The cumulative impact of an outbreak on the beef and pork sectors over a 10-year period would be more than \$128 billion... The annual jobs impact of such a reduction in industry revenue is more than 58,000 in direct employment and nearly 154,000 in total employment."

—Source: National Cattlemen's Beef Association.

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HEALTH WATCH

Building Stronger Immunity

Health management for newly-weaned calves

Story By Dr. David Rethorst for Cattlemen's News

Despite years of work, there is still much more to do in the area of health. Cattle simply need stronger immunity at the time they leave their farm or ranch of origin, and this problem is more about producer education and implementation than it is about technology or know-how. There are still way too many cattle entering feedyards with naïve immune systems."

These words were spoken by Tom Brink of Five Rivers Ranch Cattle Feeding at a **Beef Improvement Federation** meeting several years ago, and they still hold true today. Preconditioning, the vaccination, castration, weaning and feeding of calves on the ranch of origin for 45 days prior to marketing improves the function of the immune system of many cattle entering the feedyard by addressing the major causes of immunosuppression.

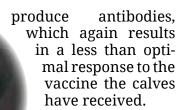
Immunosuppression, whether caused by stress, inadequate nutrition, a heavy internal parasite load, infectious bovine rhinotracheitis (IBR) virus or bovine virus diarrhea (BVD) is the real culprit in the development of bovine respiratory disease (BRD). Immunosuppression is what allows viral infections such as bovine respiratory syncytial virus (BRSV), bovine corona virus (BCV) and parainfluenza virus (PI3) to develop into BRD. It is also what lets bacteria such as Mannheimia haemolytica, Pasteurella multocida and Histophilus somni become involved in the disease process.

Stress — the altered physiological state that occurs when one's confused mind overrides the body's basic desire to choke to death someone who desperately needs it — is responsible for a great deal of the immunosuppression that occurs associated with weaning. Whether stress is created by the way calves are gathered and sorted or by the excessive use of hotshots as they are worked, castration associated with weaning, a trip through the sale barn, or a semi ride

sale barn, or a semi ride of several hours, cortisone is produced that results in suppression of the immune system.

The end result is a less-thanoptimal response to the vaccine the calves have received. Plus, the effects of these various stressors are additive — the more that are stacked on each other, the more profound the immunosuppression. Imagine, if you will, how many calves would like to choke someone as a result of the way they have been managed.

Heavy internal parasite loads in calves reduce the protein levels in the calf, which in turn has a negative impact on immune system function. Protein is the basic building block required for antibody production. This loss of protein caused by the parasites reduces the body's ability to



Whether we talk about protein, energy, trace minerals, macro minerals or vi-

tamins, the importance of nutrition to the lifetime health and performance of the calf begins at conception and continues into the weaning and finishing phases of production. While all five are necessary for cellular production, growth and function, I tend to pay particular attention to the protein and trace minerals because that is where many producers cut corners. Both are critical to immune system function, protein for antibody production and trace minerals for cellular enzymatic reaction.

Vaccination protocols can be simple, yet very effective if a plan is developed for the production system that addresses nutrition, low-stress handling, parasite control and biosecurity in addition to the vaccination protocol. Vaccine storage and handling at chute-side are important to the effectiveness of a vaccination protocol. Make sure vaccines are stored at proper temperatures in addition to keeping them cool and out of direct sunlight while working the calves. Work with your veterinarian to develop a protocol that fits your system.

A calf that is vaccinated on ranch of origin and weaned in the trailer on the way to the sale barn is not a preconditioned calf. The prevaccinated calf usually does not perform health wise in the feedyard as well as the preconditioned calf, but it is a step in the right direction. Attention to the details of a system plan is critical in these calves.

Preventing BRD at weaning and in the feedyard is more than giving vaccine prior to or at the time of weaning. It requires a systems approach and an understanding of how each part of the system affects the other parts. It is about sound animal husbandry practices, not new vaccines or new antibiotics. As Mr. Brink

CONTINUED ON NEXT PAGE



8 August 2017

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NEWS TO USE

Drive to Feed Kids Targets Food Insecurity in Missouri

Missouri Farmers Care, Missouri FFA tackle hunger

T^O combat childhood food insecurity in the state, Missouri Farmers Care has launched a summer of service with Drive to Feed Kids, a program that leverages existing food bank and distribution networks to deliver kid-friendly meals to youth. Food is delivered through backpack programs and in-school food pantries to help children in food-insecure households.

The Missouri Farmers Care effort will culminate with several events at the Missouri State Fair. A

film premiere of "Where the Fast Lane Ends" and a concert will be held on Thursday, Aug. 10. The first Missouri FFA Food Insecurity Service Day will take place Tuesday, Aug. 15 when Missouri FFA members will pack 50,000 child-friendly meals.

"Hunger isn't an issue that only happens somewhere else," said Dr. Alan Wessler, chairman of Missouri Farmers Care. "It is a pervasive concern across Missouri's rural communities." A recent study from Feeding America revealed that food insecurity exists in every county in the nation, from a high of 38 percent in Jefferson County, Mississippi, to a low of 3 percent in Grant County, Kansas. The study also showed that:

• Children are at greater risk of hunger than the general population. Across all counties, 21 percent are food-insecure, compared to 14 percent of the general population.

• Food-insecure individuals are often ineligible for federal nutrition programs such as the Supplemental Nutrition Assistance Program (SNAP) and free and reduced-priced school lunch programs, underscoring the importance of not only the charitable food assistance sector but also a strong and effective safety net of public nutrition assistance programs.

• 76 percent of counties in the top 10 percent of food-insecure counties are rural. Predominantly rural counties have higher rates of food insecurity than urban counties.

Missouri Farmers Care is seeking the partnership of companies and individuals to make its summer of service a success.

Contact Missouri Farmers Care at 660-341-8955 to explore how to partner with Missouri Farmers Care, Feeding Missouri, and the Missouri State Fair to address childhood food insecurity across Missouri.

—Source: Missouri Farmers Care.

BUILDING STRONGER IMMUNITY FROM PREVIOUS PAGE

stated, "This problem is more about producer education and implementation than it is about technology or know-how." If we would all develop this type of thinking, dealing with antibiotic resistance, judicious use of antibiotics and Veterinary Feed Directives would be much easier. It would also alleviate much of the waste of resources entrusted to our care that occurs as a result of the losses caused by BRD.

—Dr. David Rethorst is a veterinary practitioner and consultant, Beef Health Solutions, Wamego, Kansas.

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MVMA's Quality Assurance Program

What Is the Missouri Stocker/Feeder Quality Assurance Program?

The Missouri Stocker Feeder Quality Assurance Program is designed to meet the quality improvement and pre-conditioning needs of producers, feeders, and consumers.

This program educates participants in immunology, animal well-being and the economics of disease. Participation in the program increases producer accountability for quality and safety of the product they sell.

How Does the Program Work?

Veterinarians and producers must be certified. Veterinarians are certified by MVMA MSFQAP Committee members. Producers are certified by their veterinarian. Veterinarians and producers learn how they can influence carcass quality and consumer confidence by monitoring where and when injections are administered.

Once certified, the producer may participate in the program at one of three levels (white, red or blue tag). The three-level approach allows all producers the opportunity to match their level of management and facilities to the level of participation.

Level 1: Show-Me Select (White Tag)

• Participating veterinarians and producers must be certified.

• Calves must be properly identified with an approved ear tag. Tag numbers will be listed on an approved certificate.

• External and internal parasite control is administered.

• Calves will be dehorned and healed. Calves will also be castrated with a knife and healed or verified to be steers.

• Vaccinations: 7-way clostridial, IBR, BVD, PI3, BRSV, Mannheimia haemolytica with leukotoxoid, (Histophilus is optional.)



• Cattle must be born on the producer's farm. A range of birthdates or the birthdate of the oldest calf in the group must be recorded.

• Bull in and out dates will be provided.

• Individual calf treatments will be recorded to include date, product, dosage, route of administration and injection site.

• Vaccinations must be given no younger than four months of age and at least 21 days before sale.

Level 2: Show-Me Superior (Red Tag)

• Weaned 45 days before offering for sale.

• Meet Level 1 requirements - *NOTE:* Initial vaccinations may be given at an age determined by an attending veterinarian.

• In addition, a second round of vaccinations must be given using the following guidelines:

• A 7-way clostridial as well as a modified live vaccine containing IBR, PI3, BVD and BRSV must be administered;

• Histophilus somni is optional;

• Only one dose of Manheimia heamolytica is required if that dose is administered to calves 5 months of age or older;

• The time frame between initial and second vaccinations must be a minimum of 21 days and all vaccinations must be completed at least seven days prior to sale;

• If a veterinarian determines initial vaccinations should be given to calves less than 4 months of age then second vaccinations must not occur until calves are 5 months of age or older.

Level 3: Show-Me Supreme (Blue Tag)

• Meet Level 1 and Level 2 requirements.

• All cattle must be tested and be negative for persistent BVD infection.

• Genetic information is optional.

For more information, contact your local veterinarian.

NEXT GENERATION

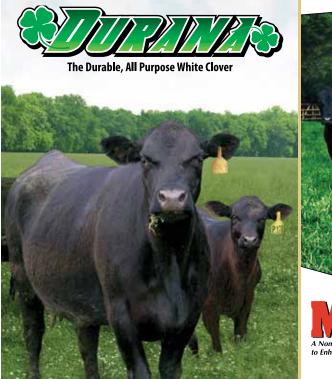
Find Value in Action

What means the most to the future of your operation?

Story By Darren Frye for Cattlemen's News

As you think about what matters most to you about your farm and farming, what comes to mind first? It might be the history and legacy you're carrying on through continuing your family's tradition of farming. It could be the values you use in decisionmaking and in running your operation each day.

People probably also come to mind — those who taught you how to farm, as well as those you hope will carry on the farm and family legacy in the future. Maybe you appreciate the lifestyle that farming allows you and your family to have, with the freedoms



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and opportunities it brings for more enjoyment in your life.

Continuing the legacy

Considering what you value — what holds the most worth for your farm and your life as a farmer — can be a good way to start thinking about what you can do now to ensure that those valuable aspects will continue. Your lega-

cy is made during your farming career, and it lives on in those you select to lead the farm in

the future. Now is the time to give these questions some serious attention.

Questions of value and worth tend to hold a lot of meaning for those of us in farming. It usually isn't all that difficult for us to identify what we value most, but deciding what we need to do

next to protect and preserve those valuable aspects into the future often takes a bigger leap — and much thought and commitment.

When the farm's current leaders have identified what they value most and believe is worth passing on to the next generation, they then have a choice to make. Do we take action to make sure our operation will move smoothly into the future — or just hope things work, the farm continues to make enough money to keep operating and that we'll all just suddenly know how we're going to transition the farm to the next generation?

Values in action

If you truly value and care for your operation and the people in it, I believe you'll choose to take action in building a more solid farm — one that's run as a business with the future in mind and that will transition smoothly into the future, to the next generation. First, that means a full financial analysis of your operation, to get a clear picture of the current status of the numbers and what they mean.

It also means taking time to work on detailed business plans for the farm operation and any other included side businesses. The major stakeholders of the farm should all take part in this planning process together. The plan needs to stake out the goals for the future of the operation. Everyone needs to know and understand why those particular goals are the priority and what achieving them will mean for the farm.

These business plans should also include how it will all happen, including how the farm is going to reach each goal. It also includes who, what, when, where and how that goal will be accomplished with timelines for completion. The goals should all work toward the shared future vision.

Clear plans for how the operation will transition to the next generation are also critical. It might be helpful to have an outsider — a non-family, third party advisor — guide the planning process and provide perspective throughout. An-

CONTINUED ON NEXT PAGE

Report Drought Conditions

Drought reports available to the public

University of Missouri Extension Climatologist Pat Guinan urges Missourians to report the impact of drought in their areas to the Drought Impact Reporter (DIR) at droughtreporter.unl.edu.

The National Drought Mitigation Center, drought.unl.edu, works to inform the public about drought planning, mitigation and response, he says. It also helps decision-makers identify and reduce vulnerability to drought.

Input from citizens statewide helps decision-makers gain a more complete and accurate portrayal of the location and severity of drought in each state and region. "Nobody knows a drought better than the person living in it," Guinan says.

Examples of drought impact include crop and forage damage; livestock stress; low water in streams, ponds, lakes or public water supplies; and burn bans or water restrictions set by public officials.

The Drought Monitor map droughtmonitor.unl.edu at is based on measurements of climatic, hydrologic and soil conditions as well as reported impacts and observations from hundreds of contributors across the country, including people who participate in the DIR. A dozen individuals from partner organizations take turns serving as the lead author for the Drought Monitor map each week.

"We, including me, do not determine drought categories for Missouri," Guinan says. "But we all can provide suggestions, recommendations and impact information on what is happening in our state to the Drought Monitor authors." Authors review reported data and use their best judgment to create the drought map.

The DIR online tool makes it easy for private citizens to report conditions, says Guinan. The drought reports are available to the public and are archived for future use. Reports and impacts are mapped separately.

The National Drought Mitigation Center at the University of Nebraska-Lincoln, the U.S. Department of Agriculture and the National Oceanic and Atmospheric Administration (NOAA) produce the Drought Monitor map. Established in 1999, the Drought Monitor provides a weekly update

VALUE IN ACTION • FROM PREVIOUS PAGE

other party can help the family navigate the details of planning and facilitate some of the conversations that need to happen at different points in the process.

When you value your operation strongly and want to see it thrive into the future, it's wise to create plans for how it's all going to happen. Otherwise,

of drought conditions every Thursday morning. NOAA and USDA's Risk Management Agency fund the DIR.

—Source: University of Missouri Cooperative Media. you're left only with the hope that things will work out in your favor. To get the planning process started, get in touch with our advisors to talk about what you value about your farm and the unique challenges your operation is facing.

Read the current issue of the Smart Series publication, bringing business ideas for today's farm leader 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. Contact them at 866-249-2528.



MANAGEMENT MATTERS

Take the Stress Out of Weaning

Start on day one

Story By Lisa Henderson for Cattlemen's News

Weaning begins the day the calf is born." That's the philosophy of Tom Noffsinger, D.V.M. A Binkelman, Nebraska, expert on low-stress animal handling, Noffinsinger says how you handle the cow and her calf from day one will impact the stress they experience on weaning day.

"Bud Williams (considered a mentor and pioneer in lowstress livestock handling) taught us that we should expect animals to gain the same amount of weight on weaning day as they did the day before," Noffsinger says. "If we start training and preparing the cattle, there's no reason those animals can't have a high level of appetite and confidence on the day that they're separated from their mothers."

Noffsinger has witnessed weaning day on ranches where calves are quiet and content, the result of caregivers who have prepared the animals properly.

"We begin building trust in those animals from day one," he says. "If we tag those calves correctly, if we approach branding as an opportunity to teach the animals that they can be separated, if we refine the way we sort and separate mothers from their babies, all of a sudden weaning day is just like any other day of production."

The short separation of calf from cow while tagging or vaccinating can help the calf build confidence for the day the final separation occurs. Noffsinger says some ranches create six- to eight-hour separation of cow and calf on days of vaccination, with the calves in a corral and the cows outside in a pasture. He also advocates taking the extra time to let a group of calves go through the alley and the chute the first time untouched so their first impression is not a negative one.

"You can send 80 calves through that chute in 10 minutes," he says. "Simply then, stop, bring the cattle back and ask them to start through the facility for real. It's just amazing how that changes those animals for the rest of their lives. And, it absolutely gives those cattle more confidence so that whether you're weaning or shipping or transferring these cattle, they're more willing to work for you."

While low-stress handling will provide weaning benefits, producers have several additional concerns that can pay dividends. Jaymelynn Farney, beef systems extension specialist for southeast Kansas, provides the following checklist for weaning calves.

Provide protection from pathogens prior to stress.

• Vaccinate calves about three weeks before weaning against respiratory pathogens (BRD, IBR, BVD, PI3). Protecting against respiratory pathogens might be the most important while also making sure that a clostridial has been given.

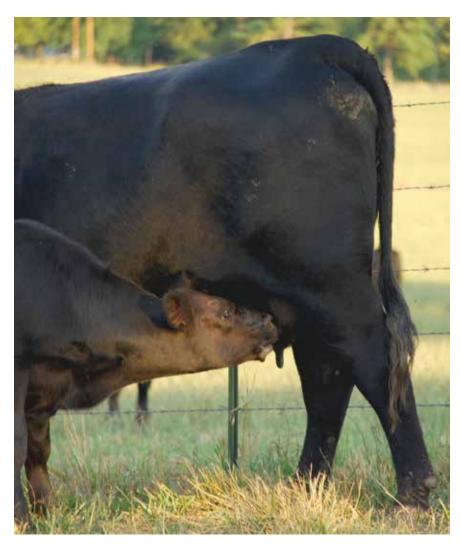
• Give a booster vaccine at weaning.

Train the calves to eat and drink.

• Expose the calves a couple of weeks prior to weaning to feeds they will be fed, feedbunks and water tanks. If you introduce them to these foreign objects while they are with their mothers, they will transition to a new environment more easily. Do this if the weaning location is completely different than where they were previously located.

Fenceline weaning is a lowstress method of weaning.

• Fenceline weaning is a management system in which calves are removed from their mothers but are allowed to see, hear and smell them.



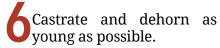
Dr. Tom Noffsinger, D.V.M., says sorting and separating calves from their mothers prior to weaning helps ease the transition at weaning time. —Photo by Joann Pipkin.

Two-stage weaning, for example using nose-flaps, is another very low-stress method of weaning.

• An anti-suckling device is attached to the calf's nose and then is allowed to return to its mother. These devices prevent calves from suckling but allow them to graze and drink.

5 Practice low-stress handling, the calmer and easier their separation from mother and location move, the easier the transition for the calf

> • Especially for replacement heifers - try to make the handling experience enjoyable so that they do not develop an aversion to handling because heifers will be handled a lot in their lives.



• Research shows that stress of castration and dehorning are lowest when the animal is young. As Dr. Dan Thomson of Kansas State University says, "The longer the testes are attached to the calf, the more attached the calf becomes to the testes."

• Castrating at a young age and providing an implant result in greater calf gains than an intact bull calf at weaning.

Provide rumen-protecting products in the diet

• Supplying ionophores in feed help manage acidosis and coccidiosis.

• Ionophores do not require a veterinary feed directive.

Provide plenty of bunk and water space.

• The quickest way to cause illness in cattle, regardless of the vaccination history, is to short them on the essential nutrient — water.

Have an alternative weaning location plan in place.

• Sometimes Mother Nature likes to interfere with our plans. If the facility you were planning to wean into is completely in mud with no dry places to lie down, your calves will not have a healthy weaning transition.



Extended-Release Injectable Parasiticide 5% Sterile Solution NADA 141-327, Approved by FDA for subcutaneous injection For the Treatment and Control of Internal and External Parasites of Cattle on Pasture with Persistent Effectiveness

CAUTION: Federal law restricts this drug to use by or on the order of a licensed veterinaria.

INDICATIONS FOR USE

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

Gastrointestinal Roundworms	Lungworms
Bunostomum phlebotomum – Adults and L_4	Dictyocaulus viviparus – Adults
Cooperia oncophora – Adults and L_4	
Cooperia punctata – Adults and L_4	
Cooperia surnabada – Adults and L_4	
Haemonchus placei – Adults	Grubs
<i>Oesophagostomum radiatum</i> – Adults	Hypoderma bovis
<i>Ostertagia lyrata</i> – Adults	
$\textit{Ostertagia ostertagi} - Adults, L_4, and inhibited L_4$	
Trichostrongylus axei – Adults and L_4	Mites
Trichostrongylus colubriformis – Adults	Sarcoptes scabiei var. bovis
Parasites	Durations of Persistent Effectiveness

Gastrointestinal Roundworms	
Bunostomum phlebotomum	150 days
Cooperia oncophora	100 days
Cooperia punctata	100 days
Haemonchus placei	120 days
Oesophagostomum radiatum	120 days
Ostertagia lyrata	120 days
Ostertagia ostertagi	120 days
Trichostrongylus axei	100 days
Lungworms	
Dictyocaulus viviparus	150 days

DOSAGE AND ADMINISTRATION

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

WARNINGS AND PRECAUTIONS Withdrawal Periods and Residue Warnings

Animals intended for human consumption must not be slaughtered within 48 days of the last treatment. This drug product is not approved for use in female dairy cattle 20 months of age or older, including dry dairy cows. Use in these cattle may cause drug residues in milk and/or in calves born to these cows. A withdrawal period has not been established for pre-ruminating calves. Do not use

in calves to be processed for veal.

Animal Safety Warnings and Precautions The product is likely to cause tissue damage at the site of injection, including possible memory and a constit

granulomas and necrosis. These reactions have disappeared without treatment. Local tissue reaction may result in trim loss of edible tissue at slaughter. Observe cattle for injection site reactions. If injection site reactions are suspected, consult your veterinarian. This product is not for intravenous or intramuscular use. Protect product from light. LONGRANGE® (eprinomectin) has been developed specifically for use in cattle only. This product should not be used in other animal species.

When to Treat Cattle with Grubs

LONGRANGE effectively controls all stages of cattle grubs. However, proper timing of treatment is important. For the most effective results, cattle should be treated as soon as possible after the end of the heel fly (warble 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 anthelmitic 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 bulks, as reproductive safety testing has not been conducted in males intended for breeding or actively breeding. Not for use in calves less than 3 months of age because safety testing has not been conducted in calves less than 3 months of age. **STORAGE**

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

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¹Dependent upon parasite species, as referenced in FOI summary and LONGRANGE product label. ² Based on product labels.

based on product labels.

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table ^{2*} CYDECTIN [®] (moxidectin) Injectable ^{2*} DE	CTOMAX® (doramectin) Injectable ²
L INTESTINAL WORM (C. oncophora)	
MALL INTESTINAL WORM (C. punctata)	
STOMACH HAIRWORM	
BARBER'S POLE WORM	
NODULAR WORM	
)WN STOMACH WORM (0. ostertagi)	
DWN STOMACH WORM (0. lyrata)	
LUNGWORM	
HOOKWORM	
	120 150
	L INTESTINAL WORM (C. oncophora) MALL INTESTINAL WORM (C. punctata) STOMACH HAIRWORM BARBER'S POLE WORM NODULAR WORM NODULAR WORM (0. ostertagi) DWN STOMACH WORM (0. ostertagi) LUNGWORM HOOKWORM

(eprinomectin)

*SAFE-GUARD® (fenbendazole) has no demonstrated persistent activity.

Your satisfaction is guaranteed.

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Treat your cows this season with LONGRANGE.

*As provided in the LONGRANGE Guarantee.

IMPORTANT SAFETY INFORMATION: Do not treat within 48 days of slaughter. Not for use in female dairy cattle 20 months of age or older, including dry dairy cows, or in veal calves. Post-injection site damage (e.g., granulomas, necrosis) can occur. These reactions have disappeared without treatment.



Available in 500 mL, 250 mL and 50 mL bottles. Administer subcutaneously at 1 mL/110 lbs.

NEWS TO USE

Weather Stations Help Farmers Know When to Spray

Off-target herbicide movements linked to temperature inversions

Nine Missouri weather stations recently received updates to help farmers and chemical applicators know when to spray herbicides to avoid off-target movement caused by temperature inversions.

The University of Missouri Extension Commercial Agriculture Program operates 24 real-time weather stations throughout the state. The Missouri Soybean Merchandising Council recently funded updates for stations in Monroe City, Vandalia, Albany, Columbia, Green Ridge, Hayward, Lamar, Linneus and Mountain Grove.

MU Plant Sciences researcher Mandy Bish says these weather

stations now read air temperatures at three ground heights. MU Extension climatologist Pat Guinan and systems administrator John Travlos collaborated with Bish and MU Extension weed scientist Kevin Bradley to select and equip stations in multiple cropping districts in the state. Reports from each station feed immediately to the free Missouri Mesonet website at mesonet.missouri. edu. This information indicates whether conditions are right for temperature inversions that contribute to chemical drift.

Temperature inversions are stable air masses in which cooler air is near the earth's surface, and warmer air is on top. Inversions are common throughout the growing season. Inversions might occur at different times of the day, but they typically start between 6 and 7 p.m. during early months and 7 and 8 p.m. in later summer.

They also happen at times when farmers might have once thought it safe to spray: when skies are clear, and the wind is still.

Off-target movement of herbicides due to temperature inversions is thought to happen when herbicide particles are suspended in the stable air mass. Another possibility is that herbicide droplets could initially land on the intended target but then volatilize, or evaporate, into an inversion, Bish says.

Bish says four main indicators of temperature inversion exist: a clear night sky, wind speeds under 3 miles per hour, presence of dew or frost, and a lowlying horizontal fog.

The group recently released smoke bombs to test whether

the smoke could signal that a temperature inversion was occurring.

During the recent MU Pest Management Field Day, Bish showed slides of colored smoke bombs being set off to show how particles suspend in the air. Dispersion and movement of the colored particles correlates to data from weather station data.

Bish noted that inversions are not the only possible component in herbicide drift. Volatility and physical drift due to wind, droplet size, sprayer speed and boom height can also contribute to off-target herbicide movement.

Missouri Mesonet provides real-time weather data from stations across the state. Click on the "Temperature Inversion Potential" option.

Presentation slides on "Knowing When to Spray: Monitoring the Weather" are available at weedscience.missouri.edu. Select the "slideshows" link.

—Source: University of Missouri Cooperative Media.





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MANAGEMENT MATTERS

Keep an Eye on Withdrawl Times

Follow BQA guidelines when treating and selling cows

Summer often brings a few infectious ailments to beef cows. Common problems include eye infections and foot rot. Treatment of affected cows often involves the use of antibiotics.

On very rare occasions, violative residues of pharmaceutical products have been found in carcass tissues of cull beef cows. Violations of drug residue regulations can result in expensive fines — or even worse, jail time — for the rancher and a black eye for the entire beef industry. It is vital that cowcalf producers have a close working relationship with a large

animal veterinarian in their area. If a cow has an infection or disease that must be treated, her owner should closely follow the veterinarian's directions, and also read the label of the product used. Most of these medications require the producer to keep the treated animal for the label-directed withdrawal time. The Oklahoma Beef Quality Assurance Manual contains the following discussion of medication withdrawal times.

"A withdrawal time may be indicated on the label of certain medications. This is the period of time that must pass between the last treatment and the time the animal will be slaughtered or milk used for human consumption. For example, if a medication with a 14-day withdrawal period was last given on Aug. 1, the withdrawal would be completed on Aug. 15, and that would be the earliest the animal could be harvested for human consumption. All federally approved drugs will include the required withdrawal time for that drug on the product label or package insert. These withdrawal times can range from zero to as many as 60 days or more. It is the producer's responsibility to be aware of withdrawal times of any drugs used in their operation. Unacceptable levels of drug residues detected in edible tissues collected at harvest may result in traceback, guarantine, and potential fines or jail time. Substantial economic losses may result for the individual producer as well as negative publicity for the entire beef industry."

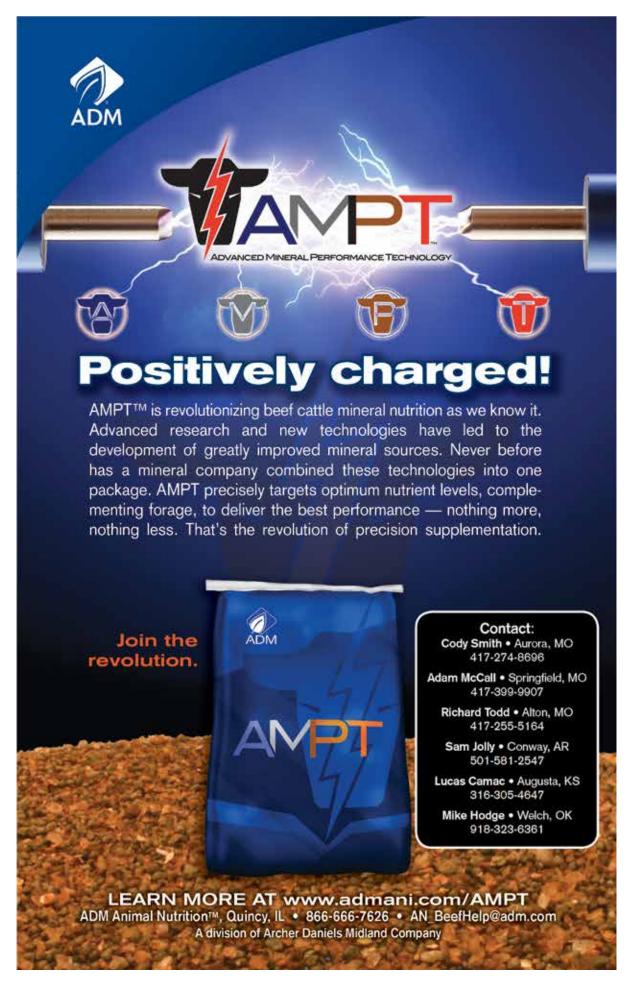
Producers are responsible for residue problems and should follow these four rules:

If ever in doubt, rely on the veterinarian-client-patient relationship you have established with your veterinarian.

2Use only medications approved for cattle and exactly as the label directs or as prescribed by your veterinarian. **3** Do not market animals for food until the withdrawal time listed on the label or as prescribed by the veterinarian has elapsed.

Keep well-organized, detailed records of pharmaceutical products given to individually identified animals. Include in the record the date of administration, route of administration, dosage given, lot or serial number of product given, person delivering the product and label or prescription listing of withdrawal dates. Examples of Beef Quality Assurance records can be found in the Oklahoma Beef Quality Assurance Manual website at the menu item "Record Keeping Forms." Records should be kept for three years after sale of the animal.

—Source: Glenn Selk is Oklahoma State University Emeritus Extension animal scientist.



Control Anaplasmosis with Medicated Minerals

Watch out for disease signs through early fall

Story By Daniel Scruggs

naplasmosis is a disease of cattle that tends to occur most commonly in mature cows and bulls during the summer and early fall. We've always thought of it as a disease that mostly affects cattle in the southern tier of states, which is mostly true, but with increased cattle movement over the last decade, the footprint of anaplasmosis has spread. Anaplasmosis is caused by Anaplasma marginale, a microorganism that invades red blood cells and causes severe anemia. Transmitted through the blood, the disease is spread by biting flies or ticks or infected blood transferred on contaminated needles or other equipment.

Death is a common outcome of cattle developing anaplasmosis. The cattle that don't die might experience a long recovery time after infection, pregnancy loss is common and bulls might experience infertility. Signs of anaplasmosis can include:

- Orange-yellow coloration of the mucous membranes
- Thin, watery blood

 Cattle that are slow, reluctant to move or short of breath

- Aggressive behavior shortly before death
- Sudden, unexplained death of adult cattle
- Abortions

Cattle that are infected with anaplasmosis might recover, but they remain chronically infected carriers and a source of infection to the rest of the nera. Cattle infected early in life might never show signs of disease, but they serve as a source of infection for herdmates. This chronic carrier state is what allows anaplasmosis to persist in cowherds in endemic regions and partially explains the unpredictable nature of the disease occurrence.

In fall-calving herds, heavy bred cows and recently calved cows seem to be at greatest risk of death or abortion. Anaplasmosis causes a rapid onset of profound anemia, and those cows experiencing the extra metabolic requirement of advanced pregnancy, or the stress of early lactation are less capable of managing that anemia. In spring-calving herds, cows are getting bred during the peak of vector season, so bull health and fertility are of particular concern. Cows nursing calves at this time are also at risk.

One of the most commonly used and predictable methods of controlling anaplasmosis is incorporating a feedgrade chlortetracycline, like Aureomycin[®], in the animal's feed or mineral supplements. Aureomycin is labeled for control of active infection of anaplasmosis in cattle over 700 pounds at a daily level of 0.5 mg per pound of body weight per day and aids in the control of active infection at a free-choice level of 0.5 to 2.0 mg per pound of body weight per day. This is an important distinction because there are feeding practices that need to be adhered to with each of the two formulations.

veterinarian signing The the veterinary feed directive (VFD) for these products needs to be aware of which formulation is being used. If it is a hand-fed formulation, they must choose the product with the appropriate gramsper-ton level of chlortetracycline to achieve the correct dosage based on anticipated intake and weight of the cattle.

Hand-fed formulations are approved at the level of 0.5 mg per pound of body weight per day. These for-



Anaplasmosis is transmitted through blood and can be spread by biting flies or ticks. — Photo by Joann Pipkin.

feeds that are formulated to deliver 0.5 mg per pound of body weight per day of chlortetracycline. These formulations are available in a variety of concentrations depending on the weight of the cattle and the anticipated consumption per day. The label instructions will state how much needs to be hand-fed each day to deliver the required level of 0.5 mg per pound of body weight per day. Most of the currently available anaplasmosis control minerals are labeled for a hand-fed formulation. It is important to make sure the hand-fed formulation chosen will adequately deliver the amount of chlortetracycline required based on the size of cows.

For example, cows weighing 1,400 pounds will require 700 mg of chlortetracycline per head, per day. If the feeding rate is 4 oz. per head, per day, that would require a mineral containing 5,600 grams per ton of chlortetracycline. The veterinarian writing the VFD will need to know the average weight of the cows to make the appropriate recommendation on the level of chlortetracycline in the mineral to effectively treat those cows.

Free-choice formulations **L** are approved at the level of 0.5 to 2.0 mg per pound of body weight per day of chlortetracycline. Not all chlortetracycline products have a free-choice label indication. Aureomycin is one of the few on the market that does. Free-choice minerals containmulations can be in hand-fed ing aureomycin must use a minerals or other hand-fed formulation approved by the

Food & Drug Administration, therefore a limited number of products are available as freechoice minerals. Notice freechoice minerals have a wider approved dose range. This wider range of dosage helps to correct for the variability in mineral consumption seen during some seasons of the year, and it helps to address the variability in animal size, particularly in mature bulls that weigh substantially more than the average cow. Most importantly, the free-choice formulation has the convenience of free-choice delivery, meaning that mineral feeders do not have to be filled every day.

It is always important to consult your veterinarian regarding proper use of animal health products. Under the VFD, a veterinarian must authorize the use of feed or mineral products containing medically important antibiotics. The veterinarian will make the medical decision if anaplasmosis control is warranted, and recommend the correct product to deliver the necessary dose to achieve the desired control.

A strong collaborative working relationship between your veterinarian and your feed/ mineral supplier is necessary to ensure the proper delivery of feed additive to achieve the results you expect. Visit Cattle-FeedAdditives.com for more information.

[—] Source: Daniel Scruggs is managing veterinarian, Zoetis Beef Technical Services. Release from Zoetis. 🌱



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MANAGEMENT MATTERS

More Cattle In, Outside of Feedlots

Cattle inventory report reveals surprises

Story By Derrell S. Peel

Feedlots surprised the industry with sharply higher than expected June placements. Placements were up 16 percent, fully 10 percent higher than expected. This pushed feedlot inventories for July 1 up 4.5 percent from last year despite continued strong June marketings. Feeder cattle demand has been extremely strong based on very good feedlot profitability re-



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STIMULATOR® IBR			MLV								
MULTI-VAC® 3			MLV	MLV	MLV						
SUPER POLYBAC® B + IBRk & BVDk	К		К			К	К	К	К	К	
SUPER POLY-BAC® B SOMNUS						К	К	К	К	К	
POLY-BAC® B3						К	К	К	К		
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compare your current raccine											

cently. Placements were up across all regions suggesting that placements were driven by industry-wide factors rather than regional factors. However, the Northern Plains drought likely contributed a bit to larger placements, especially the strong placements in South Dakota, up 67 percent year over year. In total, I don't believe that drought was the major reason for the large June placements.

Feedlot demand has dipped deeper into feeder supplies, and feedlots have placed more lightweight cattle, beginning in May and especially in June, when most of the increase in placements was in lightweight feeder cattle. This includes, for example, a 29.3 percent year-over-year increase in placements under 600 pounds. Placements over 800 pounds were up only 1.5 percent in June.

This is important when anticipating the impacts of larger placements the past four months. The lightweight placements in May and June will not be on top of earlier heavy placements.

> Moreover, placements have clearly pulled cattle ahead, meaning that more cattle placed now imply fewer relative placements later. However, overall feeder supplies are larger and will continue to grow into 2018.

> The July Cattle report indicates a 2017 calf crop of 36.3 million head, up 3.5 percent from 2016. The estimated July 1 feeder supply outside feedlots is 37.0 million head. No comparison to last year is possible as the report was canceled in 2016 (and 2013 as well). The July 1 beef cow herd was 32.5 million head. When compared to the January beef cow inventory, this inventory level suggests that herd expansion is continuing in 2017. The ratio of the July beef cow inventory to the January level is the highest since 1993, during the last herd expansion. The total inventory of all cattle and calves for July 1 is estimated at 102.6 million head.

> At the same time, herd expansion could be slowing down in 2017. The ratio of July beef replacement heifers to the January estimate is the lowest in the data series, though 2013 and 2016 are missing, perhaps suggesting that heifer retention is slowing. The quarterly estimate of heifers on feed was up nearly 11 percent from last year, adding additional support to the idea that fewer heifers are being retained as replacements. Heifer slaughter so far in 2017 is up nearly 11 percent and is likely to remain elevated for the balance of the year.

> Taken together, this new data suggests that herd expansion is continuing in 2017, probably more modestly than the previous two years. Heifer retention appears to be slowing further and might suggest little or no herd growth in 2018. A bigger 2017 calf crop implies larger feeder supplies into 2018 and increased beef production into 2019 at least.

> -Source: Derrell S. Peel is Oklahoma State University Extension livestock marketing specialist.

Move Over Antibiotics

K-State study finds essential oils can assist with livestock digestion

Kansas State University researchers have found that essential oils can play a role in livestock health.

Essential oils are removed from plants and distilled into concentrated forms that distributors say support immunity and other functions of the body.

In a study, professors Evan Titgemeyer and T.G. Nagaraja found that limonene, which is in lemon oil, and thymol, which is in thyme oil, help combat a harmful bacterium in cattle stomachs. The bacterium, Fusobacterium necrophorum, makes dietary protein less available to the animal.

The results have been published in the Journal of Dairy Science and the Journal of Animal Science.

The Food and Drug Administration has issued guidance to minimize the use of some antibiotics in livestock. The FDA's guidance aims to avoid exposing people's food to antibioticresistant bacteria, according to Nagaraja, a university distinguished professor of microbiology in the university's College of Veterinary Medicine.

As the researchers started studying alternative treatments to antibiotic use, one of their team members, Eman Elkaweel, who was then a graduate student in animal science, suggested a substance that was new to the professors.

"She wanted to test some products that might have the potential to be used in her home country of Egypt, so we contacted a company that sold products containing essential oil components," said Titgemeyer, who is a professor and graduate program director in the animal sciences and industry department in the College of Agriculture.

With funding from DSM Nutritional Products Inc., which supplies nutritional solutions for animal health, Nagaraja and Titgemeyer tested five essential oil components: eugenol, guaiacol, limonene, thymol and vanillin. They wanted to determine the compounds' ability to inhibit growth of Fusobacterium necrophorum. Limonene and thymol performed best. Follow-up testing between the two showed that limonene

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was slightly more effective than thymol and nearly as effective as tylosin, a commonly used antibiotic and feed additive used to hinder bacterial growth and the incidence of liver abscesses in cattle.

"While livestock producers often turn to antibiotics, our study shows that some essential oils also can inhibit microbial growth," Titgemeyer said. "Certain essential oil compounds can target specific bacterial populations and optimize animal health."

-Source: Kansas State University Extension.

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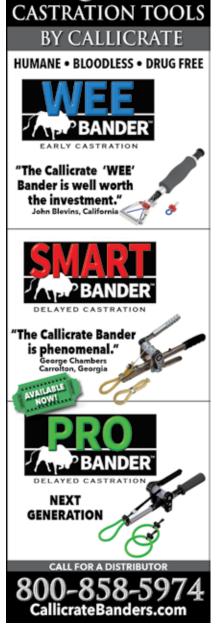
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PASTURE PLANNING

12 Tips for Fall Fertilization

Get the most out of your fall pasture



Compiled By Austin Black for Cattlemen's News

Editor's Note: The following information was compiled from Patricia Miller, University of Missouri Extension agronomy specialist, and Dr. Jason Weirich, MFA Incorporated director of agronomy.

Fall fertilizer applications keep pastures healthier by providing timely nutrients and boosting growth the following spring.

2 Potassium and phosphorus ensure plant hardiness during the winter and benefit root growth when plants are dormant.

- 3 Applying potassium and phosphorus in the fall helps soil make good use of nitrogen in the spring.
 - Always conduct a soil test before application to determine the appropriate nutrient blend.
- 5 Conduct the soil test at the same time each year to ensure uniform recommendations, since nutrient availability in the soil varies throughout the year.
- 6 Collect samples every year for up to three years on pastures that are nutrient-deficient. This alleviates long-term problems if one sample is inaccurate.
- Collect samples every three years on pastures that have adequate nutrients.

8 Manure distribution causes uneven nutrient levels in pastures. Variable rate application ensures pastures receive an even amount of nutrients overall.

940 to 60 lbs. per acre of potassium and phosphorus can be applied from mid-July to mid-August for fall grazing.

1 OApplying before a rain helps push nutrients into the soil. As soil freezes and thaws through the winter, nutrients will continue to move throughout.

Ensure pastures have a pH of 6.3-6.8. Low pH will limit the soil from releasing phosphorus to plants.

2 Lime application to increase pH should occur after fertilizer application, with a rain in between.

PASTURE PLANNING Brush Up on Weed Control

Some weeds need sprayed as fall approaches

Story By Travis Harper

Now that hay season is over, it's time to start thinking about getting pastures and hayfields into the best possible condition heading into fall. One management practice that should not be overlooked is weed control.

Musk thistle is a common weed that nearly everyone recognizes when it's in bloom this time of year. It's also the weed that extension specialists receive the most calls about, typically from individuals complaining that their neighbors are not doing anything to control the weed. Unfortunately, there's not a whole lot to be done about thistles when they are in bloom. Spraying at this time does not provide good control. Mowing might only spread the seed further. One option is to cut the flower heads off by hand and

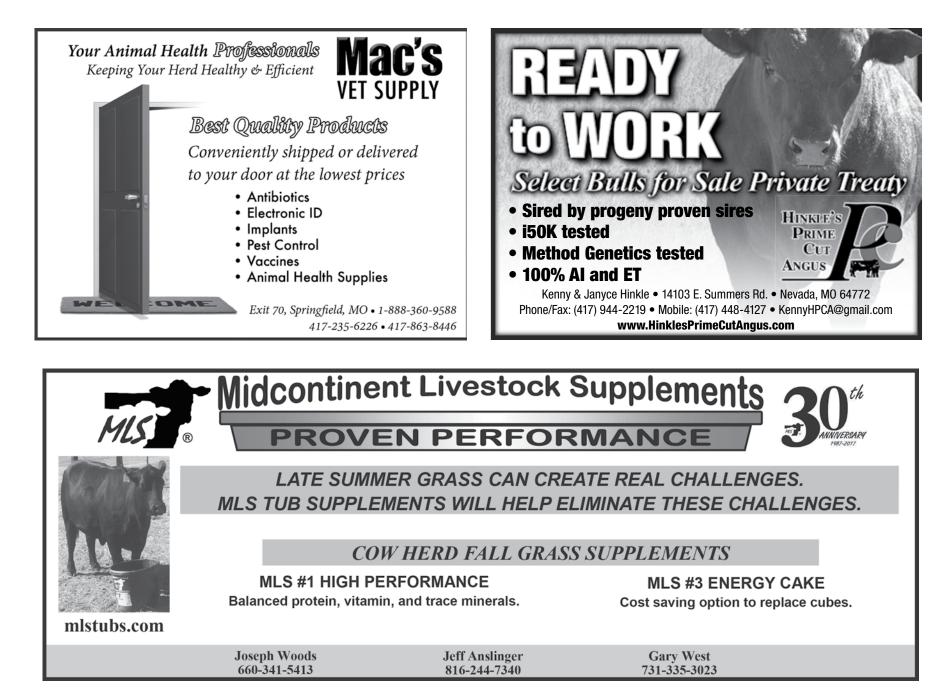
destroy them, but this is extremely time- consuming and inefficient. The best thing for this time of year is to hope that the musk thistle weevil is working on the plant. Musk thistle control is best achieved by spraying rosettes in the spring or fall.

Is johnsongrass a weed or isn't it? Early in the spring, when johnsongrass is young, it has a forage quality similar to that of tall fescue. As it matures, it becomes more of a problem. It is capable of accumulating high levels of nitrates on fields that have been heavily fertilized. In the fall, it can produce high levels of prussic acid when stressed due to freezing temperatures. It is also an aggressive spreader that can quickly take over large sections of pastures. Unfortunately, no selective herbicide options on cool-season grass pastures are available. Outrider is often mentioned as an option, but specific label restrictions exist regarding its use on certain forages. Glyphosate used as a spot spray or with a weed wiper is effectiven but has limited utility.

Sericea lespedeza is rapidly becoming a major problem throughout the region. A single plant has dozens of stems and each of those stems can produce up to 10,000 seeds, making a small problem this year a big problem in future years. Sericea lespedeza can be effectively controlled with herbicides at two specific times: when it 12 or more inches in height, usually in June, or when it is in the bud to flowering stages, typically in late August to early September. Sericea lespedeza should not be sprayed when the plant is under drought stress, as the herbicides will not be effective. Seed in the ground will make multiple years of spraying a necessity to achieving good control.

Poison hemlock is not a summer weed, but it is a weed that was especially prevalent this past spring. Much like musk thistle, poison hemlock is a biennial and is best controlled by spraying the rosette in the fall or early spring. Poison hemlock is somewhat more concerning than musk thistle because of its toxic properties. Ingestion of a relatively small amount can easily kill a cow. Grazing animals are unlikely to selectively consume the plant in a pasture setting as long as other forage is available. However, livestock will eat it in a bale of hay and the plant remains toxic long after the hay has been put in the barn. A lot of farmers tell me they don't want to spray their pastures because they don't want to kill legumes. If weed pressure is severe enough, I tell them not to worry about the legumes as they are relatively cheap and easy to reestablish. However, depending on the herbicide that was used, plantback restrictions of several months up to a few years for legumes and other forage species might be possible.

—Source: Travis Harper is an agronomy specialist with University of Missouri Extension.



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As of	07/06/20	017																							
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1.5	. 9 1	. 71	. 19/	1. 22	1. 57	1.5	. 1 10	0.10	1.10		. 9/	1.11	1. /	20.00	. 59	. 10	. 17	. 022	. 19 19	. 00 E/	. 10 02	. 1977	2/2	. 19/ 59

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Production		Maternal	Carcass	\$Values	Salation 1
CED BW WW YW RADG D	MI YH SC DOC	HP CEM MILK MW M	1H \$EN CW MARB RE I	FAT \$W \$F	\$G \$QG \$YG \$B

I+4 I+2.4 I+59 I+107 I+.25 I+.53 I+.6+1.87 +22 I+8.0 I+7 I+25 I+50 I+.6 -10.13 +58 +.22 +.77 -.031 +54.94 +64.21 +24.94 +17.10 +7.84 +144.54



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As	of 07	/06/20	17			6	- 22			1.16			68		3893										
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+4		⊦1.9	+59	+104	+.14	+.72	+.3	+.59	+29	+16.4	+12	+21	-5	+.1	+1.19	+42	+.96	+.60	+.051	+58.73	+54.62	+42.83	+43.47	64	+131.45

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MANAGEMENT MATTERS

Where Are Your Calves Headed?

Destination helps determine ration for calf development

Story By Austin Black for Cattlemen's News

Weaning is a big transition in a calf's life. Both diet and method contribute to its success moving forward. Minimizing stress and maintaining feed intake are key.

Producers often use either a fenceline or dry lot to wean calves.

"A lot of folks like fenceline weaning, especially when they have good fence and pasture available," said Dr. David Lalman, Oklahoma State University Extension beef cattle specialist.

This method allows calves to stay on a forage-based diet something they are already accustomed to. "Generally speaking in late summer, lactation yields in cows are declining. Less and less of the diet is milk, and more and more is forage," Lalman said. "It has to be good pasture, not picked over and grazed hard."

Running calves on native grass or high-quality cool season pasture is best. But grass often isn't enough to keep a calf growing. Good-quality pasture might only be 6 to 8 percent protein in the fall, provided enough moisture is available. To keep calves gaining 2 pounds per day or more, they need a 12 to 14 percent protein diet.

The Oklahoma Gold program is a good formula to provide the missing nutrients.

"The principle is to feed an equivalent of 1-pound per day of a 38 to 40 percent protein supplement that includes an ionophore such as Bovatec or Rumensin," Lalman said. His studies show calves gain an average of 0.5 to 0.6 pounds per day on this diet. With about 1.5 pounds of gain on pasture, calves can hit the target of 2 pounds per day easily. "That's an extremely efficient conversion," Lalman said. "You're stimulating forage intake and stimulating digestibility in the forage they consume."

Dry lot diets

Some producers don't have the

option to wean calves on grass, though. When calves go to a dry lot for weaning, their nutritional needs change. It's important for them to transition to a feed that doesn't antagonize the rumen health.

"Something too heavy in starch can complicate a lot of different things," said Dr. Dale Blasi, Kansas State University Extension beef cattle nutrition specialist.

Weaning in a dry lot is often more stressful for a calf. Maintaining feed intake is essential to keep it growing and avoid illness.

"If calves are bawling, you will be lucky to get less than 1 percent of their body weight," Blasi said.

Quality forage is a must to keep calves eating. Early cut prairie or high-quality bermudagrass are good options. But producers should build the diet around what they have available.

"Calves love really bright-green prairie hay," Lalman said.

Blasi added, "If you have some fairly good-quality grass hay, you might be able to shave a couple percent off what you need to provide as supplement."

Still, supplement is important. And several ways exist to provide it. "Leverage the use byproducts," Blasi said. Corn gluten and distillers grain work great. They provide adequate protein without too much starch. And they add moisture to the diet, which increases palatability.

"There's a lot of work that shows you can increase energy on arrival diets by feeding more starch, but you see a lot more morbidity," Blasi said.

At the Kansas State University stocker unit, he feeds a diet that provides 60 net energy gain (NEg). NEg measures the ability for feed to meet the energy requirements for gain. Some researchers find this measurement more useful than total digestible nutrients (TDN). It gives an accurate prediction of energy used specifically for weight gain. This is considered a hot ration for weaned calves, since feedlots feed a diet that is 65 NEg.

But Blasi said the key is to feed protein through by-products. "We're limit-feeding with corn gluten," he said. "We have some calves that are now eating over 3 percent body weight. They're cranking like you wouldn't believe."

Soy hulls are a good option for fiber, but they should be limited. "The fiber digestibility rate is very high," Blasi said. He recommends a maximum of 20 percent in a complete feed. Cottonseed hulls are easier to feed and available in pelleted form.

"Calves that don't know how to eat out of a feed bunk just love them. They are a pretty popular source of effective fiber for a weaned-calf ration," Lalman said. But they aren't cheap. And they don't supply much more than fiber in a diet.

Producers should start calves slowly and increase the amount of grain fed each day. "With newly arrived calves, you would probably feed them 8 to 10 pounds of roughage and then top dress 1 to 2-pounds to get them started," Blasi said. "As you start going up, you can knock the hay back until you get to the level desired with your grain." His preferred ration is 20-30 percent corn, 30 percent roughage and 30 percent by-products. This splits protein, fat and fiber evenly in the diet to create a 14 percent protein ration.

If forage is scarce, Lalman recommends the Oklahoma Supergold program. This diet is high quality hay with 2 1/2 pounds of 25 percent protein supplement. "Those calves will come to the bunk for hay and nibble the feed," he said. "If they're in a dry lot, start there and gradually increase to 1 percent body weight of a 14 or 16 percent protein diet."

Calves that have used a creep feeder before weaning are often more acclimated to eating on their own. But the diet has to be right, and producers have to watch intake.

"In a limited creep scenario where the protein is 18 percent or so, you'll get the kick of protein digestibility with fiber," Blasi said. "I'd be really concerned about corn-based, self-

Help Calves Adjust to New Feed

t's essential for a calf during weaning to transition from mother's milk and grazed forage to grazed forage and supplement, hay and supplement or a ration delivered in a bunk. Feeding both cows and calves a small amount of the supplement or weaning ration prior to weaning in the weaning pen or pasture can help acclimate calves to both the feeds and the environment. Additionally, the feed intake of newly weaned calves often is low, around 1.0 percent to 1.5 percent bodyweight, dry diet must be nutrient-dense to meet requirements of the calves at the expected intakes above.

Unfortunately, the dry feeds calves are often most familiar with — typically grass hays — are not necessarily nutrient-dense. As outlined in Table 1 below, a feeding management protocol for weaning calves developed at the Kansas State University Ag Research Center in Hays, works well for transitioning calves to a total mixed ration.

Essentially, high-quality grass hay and the weaning ration are each offered at 0.5 percent of the calves' current bodyweight (dry basis) on the day of weaning. The weaning ration is placed in the bottom of the bunk and the hay on top. The amount of weaning ration is steadily increased, while the amount of hay offered remains constant. In addition, on day four, the hay is placed on the bottom. Over a period of seven to 10 days, the dry intake of the calves is steadily increased and should reach about 2.2 percent to 2.5 percent of the calves' bodyweight by 10 to 14 days following weaning.

—Source: Justin Waggoner, beef systems specialist, Kansas State University.

Table 1: K-State ARC-Hays Weaning Feed Management Protocol

	Weaning Diet	Нау						
Day	(% Body weight)	(% Body weight)	Feedstuff Order					
1	0.5%	0.5%	Diet bottom/hay top					
2	0.7%	0.5%	Diet bottom/hay top					
3	0.9%	0.5%	Diet bottom/hay top					
4	1.1%	0.5%	Hay bottom/diet top					
5	1.3%	0.5%	Hay bottom/diet top					
6	1.5%	0.5%	Hay bottom/diet top					
7	1.8%							
8	–Increase diet by 0.25 to 0.50 lb. per calf/day							

* Remove any uneaten feedstuffs before feeding current day's ration

watch it and limit it, they'll eat the heck out of it."

This expense isn't always worth the return either. Producers should consider the return on gain compared to the cost of feed.

Monitor consumption

Feeding method is just as important as diet formulation. If producers have a mixer, handfeeding a total mixed ration everyday is ideal. It helps break the feed down and blends ingredients together well. This ensures calves get everything they need in every bite. It also means producers have to feed everyday, which is beneficial to management. Hand-feeding requires ample bunk space. Blasi recommends 20 inches per calf. If space is too tight, some calves

fed supplements. If you don't that don't feel well could join tion exists, too. "Some calves the herd but not squeeze into the bunk and eat.

> "It forces you to go there and see what the calves ate and what they didn't," Blasi said. "Distribute feed so the entire group can get up there and eat. I like to see every head stuck in the bunk."

Still, hand-feeding might not be possible in some cases. If a self-feeder is the only option, it's important to include limiters and check calves on a routine basis. "You have to have a fiber source in the feed to dilute while they are learning how to eat. Otherwise you increase the risk of bloat and founder," Lalman said. "But it's hard to find a cost-effective fiber source that flows through a self-feeder."

A lot of variance in consump-

will start at 2 pounds each day and get up to 20 pounds. Some might only get to 2 or 3 pounds in a few weeks," he said.

Feed for the future

The most important factor in developing a ration is deciding where calves are headed. "That will determine how much they need in terms of nutrient supply," Lalman said. Calves headed to wheat pasture only need to gain 1 to 1 ¹/₄ pounds per day. Their best option is to stay on pasture with limited supplement. If producers plan to ship to the feedlot after preconditioning, they need to push for better gains.

"The destination or next program is pretty important," Lalman said. 🍸

MANAGEMENT MATTERS

No Waiting on the Weather

Early weaning offers more market flexibility

Story By Rebecca Mettler

Mother Nature often does a good job at forcing her hand and making cattle producers play her game. Producers will change management strategies so that their cattle and livelihoods can survive an unfavorable weather event. Early weaning often becomes a hot-button topic when a drought hits home. But, what about when it's a good year?

Is there an argument to employ early weaning strategies when grazing is favorable and rain clouds are on the horizon? An early weaning strategy should be considered more than is done today, regardless of weather, according to Scott Brown, assistant extension professor with the University of Missouri department of agricultural and applied economics.

The fall feeder cattle market outlook is one of the biggest factors when contemplating early weaning during a favorable spring and summer, Brown said.

"My concern all along this year is that it seems to me that there is a lot more downside risk

than upside potential in the market," Brown said. "I would like to move quickly to market spring-born calves with where I think the market is headed."

The idea that early weaning provides producers with more flexibility in marketing their calves is something Brown sees as a major asset. Having calves weaned and set up to perform well further down the supply chain at an earlier time means producers can potentially beat the market seasonality that is almost always present in the fall.

Plus, early weaning doesn't mean you have to sell early; it just means you have the ability to do so if a favorable marketing opportunity presents itself.

"I want that window of opportunity, but I don't have to take advantage of it every year. To me, that is the difference," Brown said.

Cattle producers are sometimes creatures of habit. They might make it a tradition to market calves on the same week every year, which doesn't always work out in their favor. Brown urges producers to be more flexible, which is a message he has been promoting through his Extension work He said that when feed is more expensive, it makes more

As a general rule, producers find it easier to manage production risk than managing price risk.

"I think it's a mindset; they don't always have a great understanding of the markets," Brown said. "They can manage production and have a better handle on that than they do on the price-risk side. Then producers tend to shy away from any price-risk management as a result."

Early weaning doesn't come without production risks. The degree of early weaning can also vary. Producers can wean calves as early as 80 days of age and anywhere in between, up to the standard 205 days of age; the age is variable depending on the management. Younger calves can also pose a higher health risk, which should be taken into consideration.

Provided the cattle producer is a good manager, early weaning can equate to a profitable operation. Labor is also something that should be measured. Weaning young calves requires vigilance and someone to feed and care for the calves for a longer period of time compared to a typical 45day weaning period.

"If I'd have to hire someone, that's a cost that I would want to think even harder about," Brown noted. He said that when feed is more expensive, it makes more sense to leave the calves out to pasture with the cow longer instead of relying upon high-priced grain. Currently, feed isn't that expensive when looking at the larger picture, so that's less of a factor. But, every year is different, and that's one thing that's certain.

Variations in input costs and market trends lead us back to the topic of flexibility. Some years it pays to sell lighter weight calves while other years it's not a good strategy to market lightweight calves.

"Producers need to figure the cost of adding another pound versus what they will get paid for that added pound," Brown said.

From a management standpoint, separating the calves from the cows sooner also allows producers to market cull cows before the seasonal market low. Additionally, it frees up more forage and decreases the nutrient requirements once the cow is not lactating.

Contrary to popular belief, early weaning shouldn't hinge on the weather. Decisions shouldn't be solely made on the fact that we've experienced the wettest spring on record or are in the middle of a drought; other factors need to be considered when making a decision that can ultimately have an enormous impact on calf marketing and the bottom line.

BUILDING A SUCCESSFUL PRECONDITIONING PROGRAM

Importance of preconditioning

Now is the time to prepare your cattle for successful preconditioning this fall. Preconditioning calves before entering the feedlot improves their health and well-being while enhancing the profitability for the cow/calf and feedlot owners.

"When we go from the cow/calf operation to the feedlot, animals are experiencing a new and different environment," said W. Mark Hilton, D.V.M., DABVP and Elanco technical consultant. "It benefits everyone to have a healthy animal, so it's important we do everything we can to start the animal off right."

Hilton suggests that cow/calf producers focus on their calves having a successful transition to the feedlot and trying to reduce disease to nearly non-existent. "Minimizing disease is beneficial for all parties — cow/calf and feedlot producers — and helps us provide a healthy protein source for consumers," said Hilton.

The basics of building a preconditioning program

A successful transition is impacted by several factors, including vaccination, nutrition, environment and genetics.

"One small issue won't cause a disaster, but several small issues can add up quickly and become problematic," said Hilton. "So, it's critical we do everything we can to be successful."

From a nutritional standpoint, Hilton recommends that someone on your team — a feed supplier, nutritionist or veterinarian — help you manage cattle nutrition. The industry continues to learn more about the importance of nutrition in overall health. For instance, starting off with proper nutrition may lead to a better

vaccine response.

"From a health perspective, you need to help the immune system be ready to face diseases it's likely to encounter," said Hilton. "Work with your veterinarian to decide what those important vaccines are, starting with a product that covers infectious bovine rhinotracheitis (IBR) and bovine viral diarrhea (BVD), and making sure you cover any other diseases that typically impact your region."

Developing successful protocols

"Setting up a health protocol — including vaccines — is critical because we should not be giving all vaccines at weaning time, as that puts more stress on the animals," said Hilton. "We know that weaning and preconditioning for at least 45 days on the farm or ranch of origin is the most important factor in ensuring health at the feedlot."

Typical timing for vaccine protocols often include:

- Branding (2 to 3 months old) administer first respiratory vaccine and return the animals to the environment they came from
- Two to three weeks before weaning consider other vaccines to cover regional diseases and, potentially, the second respiratory vaccine
- Weaning implement the second respiratory vaccine (if not completed pre-weaning) and parasite control

For cattle that weren't preconditioned, consider a metaphylactic treatment. Protecting against bovine respiratory disease (BRD) is critical to maintaining cattle health, especially as they move to a stocker/ backgrounder environment.

Another critical goal of preconditioning is adding pounds. This can be accomplished with one of the most reliable technologies in the industry — implants.

Profitability of preconditioning

Though nearly every study shows that feedlot producers are financially rewarded for purchasing healthier calves, some cow/calf producers ask if they receive the same financial benefits.¹ In an 11-year study, as average daily gain increased, profits continued to grow.² The net return per calf from preconditioning was approximately \$80 for cow/calf producers in a study from 1999-2009.²

"In all 11 years, cattle earned a profit when good preconditioning practices were followed.² It's not a guarantee that you'll make money, but the odds of making money with a good preconditioning program are more likely than not," said Hilton. "With tight margins for a cow/calf producer, they can 'own' the calf a few weeks to improve its health and improve their bottom-line, while helping feedlot owners receive a healthier calf. Preconditioning is a win-win-win situation."

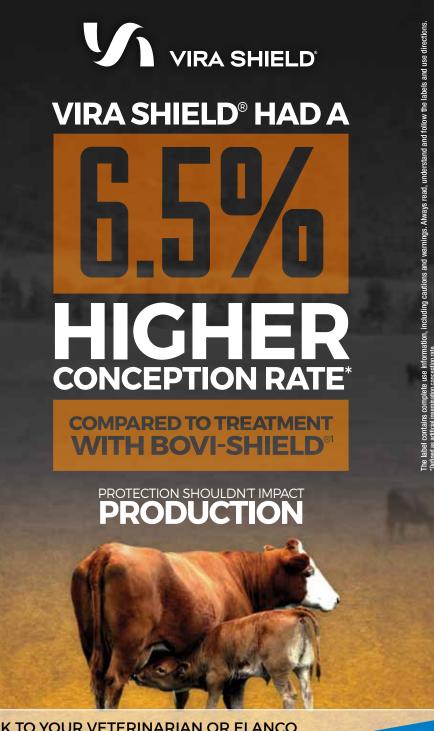
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¹Hilton, M. and Olynk, N. 2011. "Managing Your Beef Herd: Highlighting Key Determinants of Success in Preconditioning." Purdue Extension. ID-446:1-3 ²Hilton, M. and Olynk, N. 2011. "Profitability of Preconditioning: Lessons Learned from an 11-Year Case Study of an Indiana Beef Herd." The Bovine Practitioner. 45:1.

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MANAGEMENT MATTERS

Good for All

Early weaning benefits first-calf cows, calves

Story By Robert Wells



The southern Plains summer heat can be hard on pastures, cows and calves — especially first-calf cows. These cows are in a special class as they are still trying to maintain body condition, actively grow, support reproduction by gestating with her second calf and lactating. Lactation is one of the most nutritionally intensive production stages a cow goes through on an annual basis.

While the cow is trying to support all of the above physiological functions, forage quality diminishes due to grasses going into summer dormancy because of high temperatures and lack of moisture. As a result, the nutritional quality of forage is not enough to support continued growth of either the cow or calf. Early weaning of the calf can benefit both the cow and calf in this situation.

The nutritional requirements associated with lactation will cease for the cow, and the calf can be placed on a high quality feed ration that will better support its genetic potential for growth.

Advantages of Early Weaning

Early weaning of the firstcalf cow can help improve body condition score going into winter and subsequently calving season of the second calf. Additionally, it can help improve calving rates and lower dystocia percentages of the second calf.

Once lactation ends, the nutritional requirements of the cow will drop by 15 to 20 percent. This allows the cow to use the excess nutrition. relative to what is needed for maintenance and gestation requirements, available in late summer and early fall forages for continued growth and regaining body condition before the harsh effects of winter become prevalent. This reduces the need for higher levels of supplementation during winter, which translates into a direct cost savings.

A cow that is not nutritionally deprived will have a better chance of carrying a calf to term. Additionally, if she is in adequate body condition at calving, she should have the necessary energy reserves to complete the birthing process unassisted.

The cow's body condition at calving of the second calf will dictate the cow's condition 60 to 90 days later when she is trying to rebreed for the third calf. The effects of early weaning can carry over into enhanced conception rates for the third calf by ensuring the female goes into the third

CONTINUED ON NEXT PAGE

GOOD FOR ALL FROM PREVIOUS PAGE

breeding season in adequate body condition to support pregnancy. It has been demonstrated numerous times in scientific literature that a female in a body condition of four or less will have greatly reduced conception rates and a longer interval from calving to rebreeding, which translates into a smaller, younger calf at weaning henceforth.

How to Manage Early-Weaned Calves

The early-weaned calf should be placed on a high-quality, nutritionally dense ration in order for it to meet its genetic potential for growth. These young calves are very efficient at converting feed to gain, which helps to economically support the decision to place them on feed at such a young age. Prior to the typical weaning date and age of a calf, the early-weaned calf can have feed conversion ratios that are equivalent to that of the pork industry: less than 5 pounds of feed per 1 pound of gain. Data indicates that British-Continental crossbred

calves weaned at an average of 150 days of age and placed on a finishing ration will reach harvest weights greater than 1,250 pounds by 13 months of age and have a high percentage of animals that will grade choice or better. This equates to reduced days on feed, which saves money in the form of total feedlot yardage costs and feed resources used to produce the calf.

The combined amount of feed saved from reducing cow winter feed supplementation and the increased total days on feed for the calf still results in a lower total amount of feed needed through the system. Couple this with increased conception rates for the second and third calf, and the potential for older, heavier calves for the rest of the cow's life in the herd, and it is easy to see the advantage of early weaning calves off of first-calf cows when summer pastures become limiting in forage quality or quantity.

—Source: Robert Wells is a livestock consultant with the The Noble Foundation. Visit the Noble Foundation on the web at www. noble.org.

TRENDING NOW

Beef Supply Quality Improving, Opportunities Remain

Results of 2016 National Beef Quality Audit are in

Data from the 2016 National Beef Quality Audit (NBQA) suggests the beef industry continues to improve the quality of its products, but room for improvement exists. Results from the research were presented at a session during the 2017 Cattle Industry Summer Meeting in Denver July 13.

The research, funded by the Beef Checkoff Program, has been conducted every five years for the past quarter century, and provides a set of guideposts and measurements for cattle producers and others to help determine quality conformance of the U.S. beef supply. NBQA results through the years have helped lead to improvements in cattle and beef production, including reductions in carcass blemishes and fewer lost opportunities related to branding and other practices.

Among the positive findings in the 2016 NBQA are a significant increase in Choice and Prime carcasses, a high mobility score for cattle entering packing plants and the fact that the number of blemishes, condemnations and other attributes that impact animal value remain small. Among areas for possible improvement are the fact that there was more bruising (although bruising was less severe) and the fact that more than 30 percent of livers harvested did not pass inspection and were condemned.

—Source: National Cattlemen's Beef Association.



PASTURE PLANNING

Quality Seed Counts

Step one to a successful crop

Story By James Locke

Ctarting with good-quality \bigcirc seed is the first step to a successful crop. While we cannot control factors like weather and markets, we can almost always use good quality seed. So, what are the components of quality seed?

Seed Viability

The U.S. Department of Agriculture (USDA) requires all seed sold commercially to be tested and to meet minimum germination standards. Most states also have their own seed laws setting minimum requirements, and most seed companies have minimum standards for seed they will market. However, the standard germination test tells only part of the story. Standard germination tests are conducted under ideal condi-



tions, and they do not give a good indication of how the seed might perform under challenging field conditions. Running a vigor test provides a better estimate of field performance. Types of vigor tests include accelerated aging, cold, electric conductivity and



seedling vigor classification tests. Seed that has an acceptable germination percentage but low vigor might not grow well or even germinate under adverse field conditions. Vigor testing is particularly valuable for seed that has been held over, stored under unknown or unfavorable conditions, or will be planted under less-than-ideal soil or weather conditions.

Varietal Purity

Variety selection is one of the most important decisions a producer makes. A number of factors must be considered when selecting varieties to plant. Regional adaptation, yield potential, end use (grazing, hay or harvest), disease and insect resistance and herbicide tolerance traits all need to be considered. Refer to published variety trial results from unbiased sources, preferably for multiple years and from environments similar to your own, to select varieties that meet your goals. It is preferable to plant multiple varieties to spread out the risks from weather and diseases.

Seed Purity

State laws typically regulate how much and what types of weed seed and other contaminants are allowable in commercial planting seed. Weed seed contamination is a particular problem for binrun seed. Even when seed has been cleaned, weed seed of similar size, shape or density are often difficult to remove. When these weeds are planted with the crop, they germinate with the crop and immediately compete for space, water, nutrients and sunlight. Weed competition can potentially reduce yields by 50 percent or more. In addition to causing yield losses from competition, weeds can reduce crop quality. Weed seed is one of

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QUALITY SEED COUNTS FROM PREVIOUS PAGE

the contaminants that will be docked at the elevator when grain is sold.

So, how does one make sure he or she is able to meet these criteria for quality seed? The easiest way is to plant certified seed. Certified seed is the progeny of breeder, foundation or registered seed classes, and has passed necessary inspections to meet state and federal seed law requirements. Additionally, using certified seed ensures compliance with the Plant Variety Protection Act (PVP). Oftentimes, producers purchase "variety not stated" seed for planting purposes. If any of this seed is from a PVPprotected variety, it is a violation. Most seed companies now aggressively pursue enforcement of their PVP rights.

A common argument against using certified seed is that it increases production costs. While that might appear true on the surface, it might not be the case if all factors are considered. Bin-run seed usually has lower germination rates, which requires increased seeding rates to obtain the same stand. Even then, seed vigor is often lower, resulting in weaker seedlings. It also might be infected with seedborne diseases, in addition to weed seed previously mentioned.

One way to keep the advantages of certified seed while reducing out-of-pocket costs is to plant enough certified seed annually to provide your own planting seed for the next year. This works well because the genetic purity will be maintained for the first year. If seed is saved from subsequent years' crops, the genetics will become increasingly diluted and the variety traits might not be preserved. Note that this is not an option for patented varieties or those carrying a patented gene.

Using quality seed is a key production factor we can control. A number of factors cannot be controlled; it makes good sense to take advantage of the ones we can.

— Source: James Locke is a soils and crops consultant with The Noble Foundation in Ardmore, Oklahoma. Visit the Noble Foundation on the web at www.noble. org.

Seed Production, Storage, Use Guidelines

Use good weed management practices to ensure weed seed will not be harvested with the crop seed.

Apply fungicides to control seed-borne diseases.

Ensure harvest equipment is clean and properly adjusted.

Clean seed to remove weed seed and foreign material before storage.

Store seed under good conditions, and control insects.

beeform seed germination and vigor tests, and adjust seeding rates as needed for saved seed.

Apply fungicides to saved seed to control seedling diseases.

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MANAGEMENT MATTERS Are You Missing the Boat?

Implants can add pounds to calf weaning weight

Story By Rebecca Mettler for Cattlemen's News

Pharmaceutical technologies have led to vast improvements in the efficiency of beef with the advancement of science over the years. And as most cattle producers have experienced, increases in efficiency often equate to decreases in input costs or an increase in the value returned to their pockets.

Of those pharmaceutical technologies, effective parasite control within a cowherd is linked to the most value returned to the cow-calf producer; the use of implants comes in second, according to Mark Corrigan, technical services nutritionist with Merck Animal Health.

As a cow-calf producer, are you giving up 23 pounds of added weaning weight per calf and not getting compensated for the missed opportunity? That double-digit number isn't beyond the stretch of the imagination if a producer is selling non-implanted calves on the commodity market.

Corrigan believes that the perception of a big natural market can sometimes deter producers from implanting calves. However, the natural market only makes up 3 percent.

"If you are in that market, you have to set down and put a pencil to the 23 pounds of weaning weight and also understand that you have to be in a processed, verified program where you sign an affidavit and document everything you do," Corrigan said. "If you are sending them to the commodity market (not implanted) there's no premium there."

An estimated 15 to 30 percent of calves get implanted at the cow-calf level, but once a calf exits the feedyard, roughly 97 percent have received at least one implant. This statistic underlines the opportunity for increased profits at the cowcalf level if more operations would implement an implant program.

Implant Strategies

"When we talk about selecting cattle for growth genetics, a lot of what you are doing is selecting for increases in hormone

levels or hormone sensitivity, which is what animals use in terms of how they grow," Corrigan said. "We are essentially accelerating that process with the use of implants."

The rule of thumb with designing implant programs is that each time an implant is given, it has to be at the same hormone level or go up a hormone level to receive benefit. Implants designed for use in suckling calves are less potent than implants used around weaning or in the feedlot phase.

Corrigan described the classes of cattle and arguments for and against the use of implants depending on various production scenarios. Generally, the opportunity to implant comes as suckling calves, as weaned or stocker calves and during the feedyard phase.

First off, males kept as bulls should not receive an implant. Furthermore, when implants are given to suckling calves, it's important to castrate bulls at or before implantation because of the possibility of a cryptorchid if castration is put off until after implantation.

In Corrigan's opinion, heifers that are to be kept as replacement females should not receive an implant. He explained that the argument detailing an increase in pelvic area at

puberty is misleading. The

time when an increase in pel-

vic measurement matters is at

calving, and studies show there

is no difference in pelvic area

when comparing implanted

verses non-implanted replace-

The debate begins when dis-

cussing heifers whose fate

has not been determined. If

replacement female selection

has not occurred, Corrigan de-

scribes this as a "maybe, prob-

"In a group of 100 heifers, by

the time we sell that sixth or

seventh heifer, we've paid for

implanting the whole group,"

he said. "Every heifer we sell

after that, we will get paid for

the 23 pounds of gain from the

The impact of implants on cat-

tle performance is measured in

percent increase in daily gain.

With suckling calves, a 10 per-

cent increase in average daily

gain can be seen; during the

preconditioning stage, a 15 per-

cent increase in average daily

ments at calving.

ably, yes" decision.

implant.²

gain can be expected.

From a finishing standpoint, growth technologies enhance carcass leanness, increase average daily gain by 20 to 25 percent and yield a moderate feed intake increase.

"With a big increase in gain and a moderate increase in intake, feed efficiency improvements and increased carcass yield is observed," Corrigan said.

One study of calf-fed Holsteins evaluated the value of implanting and found that to produce an 850-pound carcass, the control group, which did not receive an implant, was fed almost one ton of extra dry matter feed compared to the implanted group to get the same weight carcass.

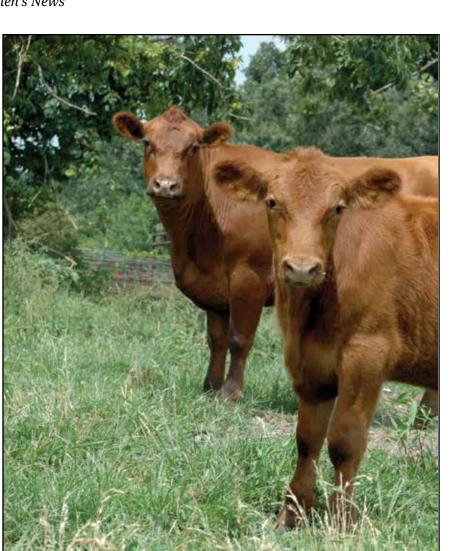
"And the carcass isn't going to have the same composition," Corrigan said. "The control group will be fatter and have less muscle yield."

If the impact of implants was calculated on a same days on feed basis, a 29 to 30 pound increase in dry matter intake would be realized, but that equates to 111 pounds of added carcass weight, which is a pretty dramatic increase, according to Corrigan.

Economically, the application of implants makes sense. However, public perception of the safety of implants has decreased in the last several years. The information the beef industry needs to relay to the consumer is that the added exposure of estrogen from conventionally raised beef is minuscule. The difference is 0.6 nanograms of estrogen between natural and conventionally raised beef, which is less than a billionth of a gram.

"If we look at a 0.6 nanogram increase in estrogen intake of a prepubertal female, it's minuscule," Corrigan said. "We are looking at a one one-thousandth of a percent increase in estrogen intake from eating a 4-ounce portion of conventionally raised beef."

In the end, cow-calf producers are missing an easy opportunity for increased weaning weight if they aren't implanting their calves. Implants have been approved for beef cattle for decades; it's time to put pencil to paper to see if it can work for your operation.









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PASTURE PLANNING

Forages for Year-Round Grazing

No long list is required to get grazing success

Story By Lisa Henderson for Cattlemen's News

and cost effective methods to cut production costs is to lengthen your grazing season. Your goal, say livestock have seen excellent producspecialists, is to graze as many of the days of the year as possible.

In Arkansas, for instance, livestock specialists have shown a 300-day grazing program is both possible and profitable. Tom Troxel, University of Arkansas extension beef specialist, says the program revolves Additionally, Jennings says around a planned grazing and forage management program, and notes that the calving season has to be tight enough — – to no more than 90 days utilize methods like rotational grazing.

For producers considering a year-round grazing program, John Jennings, University of Arkansas extension forage specialist, says, "Think about your pastures and note whether you have forages that can be grazed in each season — spring, summer, fall and winter. This tells you the potential for grazing 300 days."

In northern Arkansas, for instance, Jennings says about two-thirds of the pasture needs to be cool-season, like fescue or ryegrass; the other third should be warm-season, such as bermudagrass. That ratio would be reversed in the southern part of the state.

Producers should also use a combination of stockpiled grasses and planted forages for fall and winter grazing. Stockpiling cool season grasses such as fescue will extend the grazing season and add several days to your grazing season.

"We have good success planting small grains such as wheat or rye and even oats for fall and winter forage," Jennings says. "The wheat and rye are winter-hardy and can be planted in early September for fall grazing or planted in October for late-winter or spring grazing."

ne of the most efficient Jennings says researchers at his university have planted spring oats in the fall, late August to early September "and tion — over 3,000 lbs. dry matter per acre by late November. Oats have to be planted early for this production level. The oats are not winter-hardy at that stage, but producers can use a single hotwire to strip graze the oats like standing hay."

> mixing annual ryegrass with small grains provides a longer grazing period in spring. These should generally be planted alone or interseeded into bermudagrass. They are less compatible mixed with fescue.

> Forage brassica like turnips, rape and brassica hybrids have done very well in tests and farm demonstrations at the University of Arkansas. Plant those forages late August to the first week of September. They can produce similar dry matter yield as the spring oats by late November.

University specialists also suggest a better summer forage grazing plan can help rest cool season grasses so those pastures can recover more easily in the fall. They say summer grazing is more complex than just stockpiling, but the strategy is crucial if you are trying to extend the grazing season.

According to the University of Missouri, adding native warm-season grasses to pasture systems has resulted in increased gains on yearling cattle and improved performance of cow-calf herds during the summer when cool season grasses stop growing.

Prairie grasses such as big bluestem, little bluestem, Indian grass and switchgrass provide excellent summer grazing. Seasonal production of warm season grasses is comparable to that of cool season grasses as production from pure grass stands will average 1.75 to 3.5 tons per acre.

Adding warm season grass pastures to your cool season pasture system will improve the overall efficiency of your forage program. Warm and cool season grasses are most nutritious while they are vigorously growing, forage specialists say. Cool season grasses such as brome and fescue grow most during the spring and fall. Warm season grasses like bluestems, Indian grass and switchgrass grow most in

the late spring and summer. By fully using each species of grass during its prime quality, you can keep your cattle grazing on high-nutrition forage the entire grazing season. Specialists call this a complimentary forage system.

An added benefit of the complimentary forage system is that each type of grass has a rest period while livestock are grazing other pastures. During this period, the grasses are able to strengthen their root systems. The benefit of this rest period is a healthy stand of grasses that maintains a higher production level and continues to produce even in years of adverse weather.

If you're considering implementing a complimentary forage system, forage specialists recommend you ease into the program. They advise starting with just one field or pasture the first year, one that is mostly tall fescue, for example.

"Clip it in the August-September timeframe to get new growth, and then stockpile it," Jennings says. "Experiment with that field the first year and then expand from there."

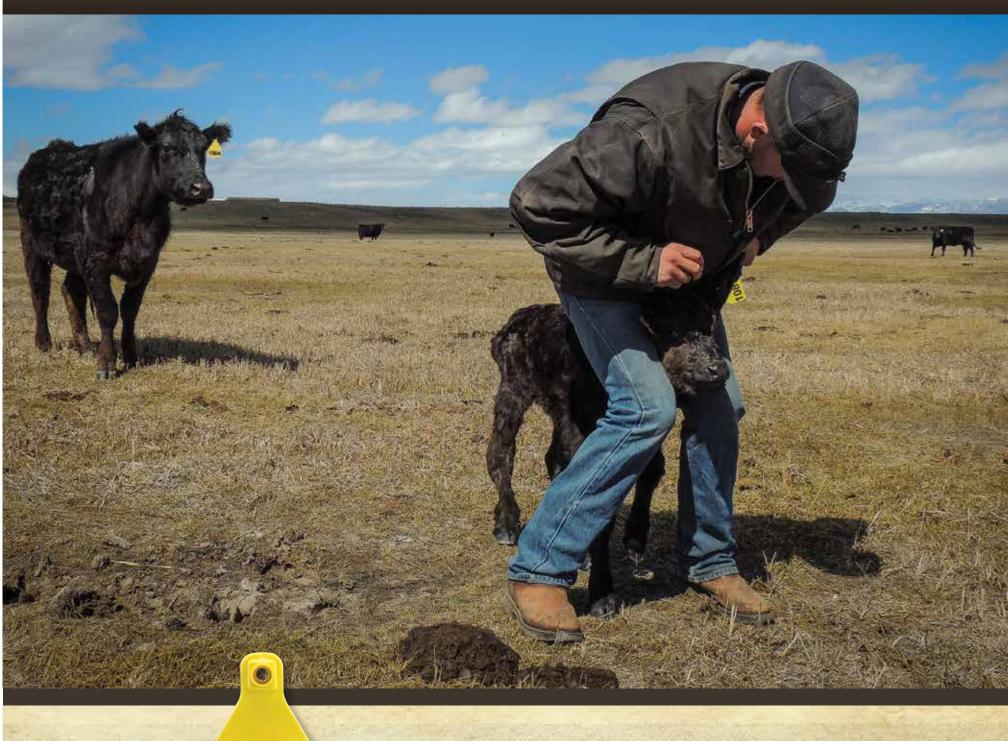
Developing a 300-day grazing program doesn't require a long list of forages, he says. But rotational grazing, managing fertilizer timing and stockpiling forages are critical.

Photo By Jillian Campbell



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MU Southwest Research Center Sets Field Day

Activities planned for farm, non-farm public

The 54th annual University be gained in many ways, talk-of Missouri College of Agri- ing with someone in person is culture. Food and Natural Resources Southwest Research many people. Specialists and Center field day will be held experts in their field enjoy Saturday, Sept. 9. It will start at 9 a.m. and end around 1 p.m. This long-standing tradition has been a great way for those seeking agriculture ter strives to bring agriculinformation and those having it to come together and share. While information can including a family-friendly

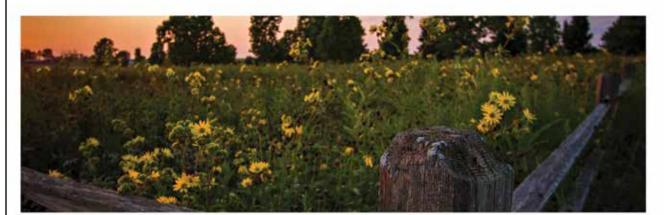
still the preferred method for spending the day interacting with others and truly want to help those with guestions. The Southwest Research Centure to people who do not have a lot of experience by

environment and an open atmosphere for those who have a lot of knowledge and would like to share.

This year's field day will highlight current and past research, as well as speakers addressing a variety of topics including the value of a veterinary diagnostic laboratory to Missouri agriculture; alternative crop production for blackberries; nutrition, soil and crop health; cattle selection for profit; grapes and vineyards; and a working cattle dog demonstration.

This year, attendees will have the opportunity to meet the new CAFNR vice chancellor and dean Christopher Daubert, who comes from

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Southwest Research Center North Carolina State University.

"We are extremely happy to have Dean Daube aboard," said David Cope, Southwest Center superintendent. "We look forward to the positive changes and challenges that CAFNR faces currently and in the future."

In addition to the more traditional field day topics, a new demo crop plot will be available. It will highlight different growth stages of crops including corn, soybeans, wheat, rice and cotton. The purpose of the demo crop plot is to give folks unfamiliar with those crops the opportunity to view different life stages of the plants at the same time.

After their popular debut last year, a pumpkin patch, sorghum grass maze and facepainting will be featured again during the Sept. 9 event.

"The graze maze was enjoyed by ages 1-100," Cope said. "It was wonderful to see children of all ages in the pumpkin patch selecting and cutting their pumpkins off the vine to take home. This is a wonderful opportunity for families to get outside and interact with agriculture."

Following tradition, the first 350 people to register for the annual field day will receive a free lunch provided by the Mount Vernon FFA Chapter.

"What is there not to love about our field day?" Cope said. "You get great information, genuine people to talk to and glean information from, a family-friendly atmosphere and a free lunch — if you hurry. Join us this year for our 54th annual field day. We know you will leave full from great food and great conversations."

-Source: University of Missouri Southwest Center.



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Advantages of Early Pregnancy Diagnosis of Yearling Heifers

The best method for early pregnancy diagnosis varies based on goals, costs and resources available

Story By Aaron Berger

For producers that have yearling heifers that were bred early this spring, many of those heifers are far enough along to be pregnancy tested.

The minimum length to identify a positive pregnancy diagnosis is approximately 26 to 30 days post-breeding using either an ultrasound machine or a blood test. The minimum length to identify pregnancy through rectal palpation requires that heifers be at least 35-45 days post-breeding.

Potential advantages of early pregnancy diagnosis

• Heifers that are not pregnant can be identified and managed differently than their pregnant herd mates.

• Non-pregnant heifers that are going to be retained can be implanted, improving average daily gain and feed efficiency.

• Non-pregnant heifers could be moved off grass resources and sold.

• Historically August and September are seasonally strong markets for feeder cattle, with prices tending to trend down in the fall. Early identification of non-pregnant heifers allows for selling into this market.

The best method for early pregnancy diagnosis will vary based on goals, costs and resources available. A combination of methods may be used under some circumstances to identify pregnancy.

For example, consider a group of heifers that were artificially inseminated and then exposed to a clean-up bull for 30 days. Pregnancy testing 30 days after the bull was removed would mean heifers that conceived to artificial insemination on the first day of the breeding season would be 60 days along. Heifers that conceived on the last day of the breeding season to the bull would only be 30 days pregnant. Heifers that conceived early in the breeding season could easily be identified with palpation. Those that conceived late in the breeding season would require either a blood test or ultrasound in order to be confirmed as pregnant.

In this situation, if palpation was being used to identify pregnancy, heifers identified as not pregnant could have a blood sample drawn while still in the chute and sent off for analysis to verify the nonpregnant designation. It is likely that some heifers identified as non-pregnant through palpation are indeed pregnant, but not far enough along to be recognized. The blood test would remove any guesswork.

Potential disadvantages of early pregnancy diagnosis

Producers should realize that stress to heifers early in pregnancy could result in embryonic loss. Research has shown a pregnancy loss of 1 percent to 3.5 percent when palpation or ultrasound is used for pregnancy diagnosis at 40 to 75 days of gestation.

Currently, I am not aware of any studies that have evaluated the incidence of pregnancy loss using blood testing compared against either palpation or ultrasound for early pregnancy diagnosis. The stress of handling cattle through the chute with blood testing for pregnancy diagnosis could also contribute to early embryonic loss.

In conclusion, early pregnancy diagnosis can provide opportunities to improve profitability. It has some risks associated with it in terms of potentially causing early embryonic loss. Evaluating all of the potential costs and benefits of early pregnancy diagnosis can help producers evaluate whether or not to utilize this in their operations.

—Source: Aaron Berger is an extension educator with University of Nebraska.





AUGUST 2017 37

Reaching Out

Herding Heroes connects fair exhibitors with special needs children

Story By Jillian Campbell for Cattlemen's News

Exhibiting livestock at the Jasper County Youth Fair is a treasured pastime for many youngsters and their parents in the southwest Missouri community. The Jasper County Fairgrounds are a place where friends and family get together once a year to celebrate their love of agriculture through experience and education.

For the past three years the Jasper County Youth Fair has hosted a "Herding Heroes" event, which gives special needs children in kindergarten through 12th grade the opportunity to exhibit livestock in a show designed specifically for them. Since its development, Herding Heroes has become a crowd favorite, and a number of fairgoers are excited to see it continue.

Shawn Pryer, a member of the Jasper County Fair Board, witnessed a similar event five years ago at the Interstate Fair and Rodeo in Coffeyville, Kansas. Pryer brought what he witnessed home, and after further review with fair board members, Herding Heroes was created.

"In Coffeyville, they call it their 'buddy barrow show' where they only show hogs," he explained. "We kind of decided to expand on that idea, and we allow the kids to show rabbits, goats, sheep or hogs."

During Herding Heroes, each special needs contestant is paired with a buddy 4-H or FFA exhibitor. Buddies are given the opportunity to teach the special needs exhibitor how to present livestock in the show ring. All contestants receive medallions and t-shirts, while four lucky participants from each breed category receive champion belt buckles. This year, 34 exhibitors and 37 buddies participated in the event.

Pryer believes the event has provided not only positivity, but also a community outreach opportunity. He anticipates growth and continued success for the event in the future.

"The first year we had about 20 participants, and this year we had close to 40," Pryer said. "As we get the word out every year, it just continues to grow."

"Before our first year, we kind of limited the age range because we weren't sure what kind of participation we would get," he said. "Since then, we have taken the restriction off that age range, and now we have it moved into the teenage years. I think next year we may even lift that, so age won't be a factor."

Pryer and other fair board members have learned to coordinate with local organizations including United Cerebral Palsy of Webb City and Special Olympics Missouri in search of kids eager to participate in Herding Heroes. Local community members and area businesses have also been eager to help the event's success rate by offering donations and sponsorships.



Pryer said Herding Heroes has been successful by helping special needs children gain hands-on knowledge about agriculture while encouraging 4-H and FFA members to step into community leadership roles.

Kara Cloud, a 17-year-old Carthage FFA member, has been a Jasper County Youth Fair exhibitor for nine years. Cloud has enjoyed the experience of being a buddy for the past two years. After seeing the large turnout at this year's event, Cloud looks for Herding Heroes to become a long-time tradition for the fair.

"The crowd during Herding Heroes is really energetic," she explained. "Everybody likes seeing these kids interact with the animals, and I really think it's a good way for the kids to get out of their comfort zones while interacting with the animals and the other kids as well."

This year, Cloud helped a young female contestant named Morgan, and enjoyed watching her transition into her role as a showman. "Whenever I showed her the pigs, you could immediately see a connection grow," Cloud said. "She grew more excited to see them, and you could tell that she began to feel comfortable with them, even though when I first talked to her she didn't seem very comfortable at all. I thought it was really cool that she got so used to the animals."

Pryer and Cloud agree that Herding Heroes has made an impressive positive impact on the Jasper County Youth Fair community.

"The most memorable part of the event this year was standing in the ring and seeing all the kids with their awards just grinning from ear to ear," Cloud said.

Herding Heroes serves its name well as it has created heroes in not only the show ring, but also in the Jasper County community. If you know someone who would like to exhibit in Herding Heroes, or you would like to donate to the event, contact Shawn Pryer via email at shawnpryer@hotmail.com or any Jasper County Fair Board member.



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MARKET WATCH

Joplin Regional Stockyards

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

Market Recap | Special Video Cattle Auction

July 7, 2017 • Receipts 16,000

Date:	South Central States		Texas, Okla., 🛛 🛚	lew Mexico,	Kansas, Mo	o. 16,000					
7/7/17	7										
	FEEDER STEERS		MED & LG 1			F	EEDER STEERS		LARGE 1-2		
HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY	HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY
800	925	925	\$143.60	\$143.60	Jul-Aug	60	850	850	\$143.25	\$143.25	December
180	810	810	\$152.25	\$152.25	August	HC	DLSTEIN STEE	RS	LARGE 3		
372	840	840	\$148.00	\$148.00	Aug-Sept	HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY
725	815	815	\$146.00	\$146.00	Nov-Dec	64	775	775	\$90.50	\$90.50	Aug-Sep
59	850	850	\$140.00	\$140.00	Nov-Dec		FEEDER HEIFERS		MED & LG 1		
	FEEDER STEERS		MED & LG 1-2			HEAD	WT RANGE		PRICE RANGE	AVG PRICE	DELIVERY
HEAD	WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY	170	750	750	\$144.85	\$144.85	Current
65	760	760	\$145.00	\$145.00	Current	68	740	740	\$139.00	\$139.00	August
60	835	835	\$145.00	\$145.00	Current	65	800	800	\$138.50	\$138.50	August
60	850	850	\$144.00	\$144.00	Current	285	700	700	\$144.25	\$144.25	September
112	900	900	\$142.00	\$142.00	Current	67	785	785	\$138.75	\$138.75	Nov-Dec
453	825	825	\$142.75-\$145.00		August		FEEDER HEIFERS		MED & LG 1-2		
1014	850	850	\$144.50-\$146.50		August		WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY
116	900	900	\$145.75	\$145.75	August	210	825	825	\$140.75	\$140.75	Jul-Aug
124	850	850	\$140.50-\$142.00		Aug-Sep	90	550	550	\$145.00	\$145.00	August
216	900	900	\$143.50	\$143.50	Aug-Sep	132	750	750	\$138.25	\$138.25	August
288	700-740	719	\$151.50-\$152.50		September	66	750	750	\$138.25	\$138.25	September
64	775	775	\$147.50	\$147.50	September	133	750-775	763	\$136.50-\$138.25	\$137.35	October
240	825	825	\$138.75	\$138.75	September	66	750	750	\$138.25	\$138.25	Oct-Nov
419	850	850	\$139.50-\$146.50		September	228	850	850	\$137.25	\$137.25	November
186	800	800	\$147.75	\$147.75	Sep-Oct	1126	750-785	781	\$137.00-\$138.85	\$137.78	Nov-Dec
278	900	900	\$139.50-\$141.00		Sep-Oct		FEEDER HEIFERS		MED & LG 2		
60	825	825	\$143.00	\$143.00	October		WT RANGE	AVG WT	PRICE RANGE	AVG PRICE	DELIVERY
60	850	850	\$142.50	\$140.41	October	280	725	725	\$141.00	\$141.00	September
5000	875	875	\$142.10	\$142.10	Oct-Nov	70	725	725	\$138.50	\$138.50	Sep-Oct
178	850-875	858	\$140.25-\$142.00		November	480	725	725	\$141.00	\$141.00	October
168	900	900	\$141.00-\$142.75		November	280	725	725	\$138.00	\$138.00	December
120	850	850	\$145.00	\$145.00	Nov-Dec	FEEDER HEIFERS		LARGE 2			
335	900	900	\$142.50-\$143.00		Nov-Dec				PRICE RANGE	AVG PRICE	DELIVERY
124	800	800	\$144.10	\$144.10	December	63	800	800	\$134.00	\$134.00	December
65	850	850	\$141.50	\$141.50					ppi, La. & Ark.	Eastern States	
56	900	900	\$141.00	\$141.00	December	FEEDER STEERS			MED & LG 1		
							WT RANGE			AVG PRICE	DELIVERY
						725	815	815	\$146.00	\$146.00	Nov-Dec



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MARKET WATCH

Get 'Em Bunk Broke

Feed consumption a key element of a successful weaning program

Story By Joann Pipkin, Editor

Weaning time can be full of stressors for calves. From maternal separation to moving calves to a different environment with a new social structure to getting them accustomed to unfamiliar feedstuffs, all impact calf health and performance. Yet, one of the most crucial elements of a successful weaning program is getting calves to consume feed.

"The first step in managing feed intake of calves is to get them to the bunk," explains Justin Waggoner, beef systems specialist, Kansas State University.

Feeding both cows and calves a small amount of supplement or weaning ration prior to weaning — in the weaning pen or pasture — can help acclimate calves to both feeds and the environment.

A 2016 K-State study examined the proportion of calves observed at feedbunks immediately after feed delivery for six days after arrival at the K-State Agriculture Research Center, feedlot in Hays, Kansas. The bottom line: exposing calves to the feedbunk prior to weaning matters.

"The greatest number of calves reported at the bunk for the first five days following feedlot arrival was observed in calves that had been weaned and preconditioned in a drylot, followed by calves that were fed supplement on pasture in portable feed bunks," Waggoner says. "It

was lowest among calves that had essentially no exposure to feed bunks," Waggoner says.

Average daily gain for the first 30 days also followed a similar pattern, indicating that previous exposure might have also impacted calf performance during feedlot receiving, he says.

Another key to managing feed intake of newly weaned calves is transitioning the calf from a diet of mother's milk and grazed forage to a weaning ration. Feed intake of weaned calves is typically low just after weaning. Still, calves have relatively high nutrient requirements.

"The weaning diet must be nutrient-dense to meet the nutrient requirements of the calves at expected intakes of 1.0 to 1.5 percent of bodyweight on a dry basis," Waggoner says. "Unfortunately, the dry feeds calves are often most familiar with are not necessarily nutrient-dense." (See sidebar article on page 25 in this issue.)

Yes, weaning calves has its challenges. But, it is also opportunity for beef producers to prepare our calves for the next phase of the production cycle.

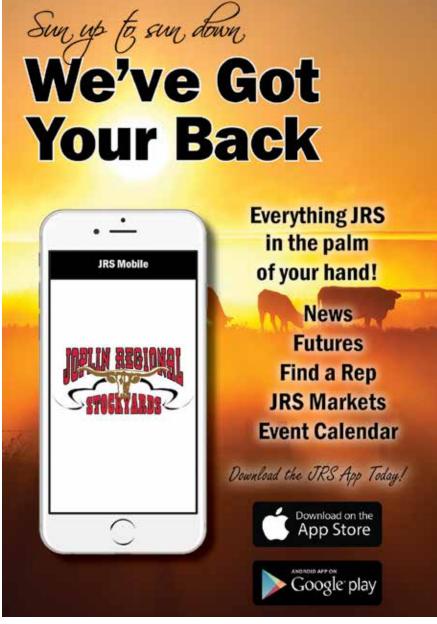
"Preparing calves to consume novel feedstuffs from a bunk is an essential part of the process and research indicates that a little preparation and planning can go a long way," Waggoner says.

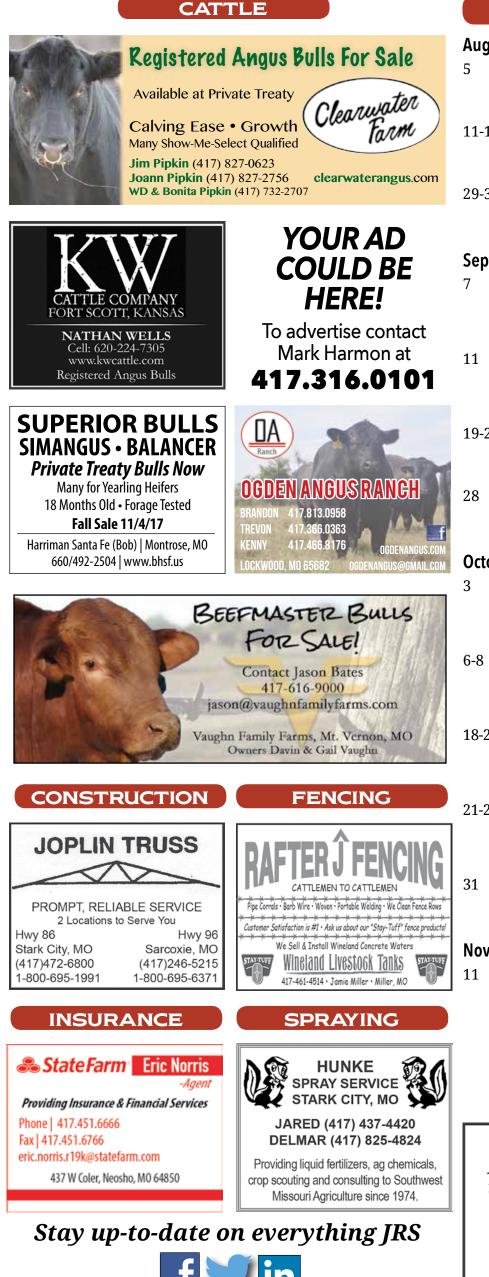
MISSOURI BEEF INDUSTRY COUNCIL DIRECTOR ELECTION VOTING SCHEDULE

Aug. 18 • Ballots mailed

Aug. 31 • Postmark deadline for valid ballots Sept. 8 • Election results announced







EVENT ROUNDUP

August

- 5 p.m. Special Replacement Cow and Bull Sale Joplin Regional Stockyards, Carthage, Missouri FMI: 417-548-2333
- 11-13 Arkansas Cattlemen's Association Convention Fort Smith Convention Center, Fort Smith, Arkansas FMI: 501-224-2114
- 29-30 Applied Reproductive Strategies in Beef Cattle Conf. Hilton Garden Inn and Conf. Center, Manhattan, Kansas FMI: 785-462-6281

September

- Southwest Missouri Cattlemen's Classic Golf Tournament Silo Ridge Golf Course, Bolivar, Missouri FMI: 417-316-0101
- **Buford Ranch Angus & Hereford Production Sale** Buford Ranch Sale Facility, west of Welch, Oklahoma FMI: 918-929-3275
- 19-21 Regional Grazing School Marshfield, Missouri FMI: 417-468-4176, ext. 3
- Grassland Soil Health Workshop/Field Day Greene County, Missouri FMI: 417-831-5246, ext. 3

October

- **Regional Grazing School** Stockton, Missouri FMI: 417-276-3388, ext. 3
- Ozark Fall Farmfest Ozark Empire Fairgrounds, Springfield, Missouri FMI: 417-833-2660
- 18-20 Regional Grazing School Bois D'Arc, Missouri FMI: 417-831-5246, ext. 3
- 21-22 Circle A Ranch Spring Calving Herd Dispersal at the ranch, Iberia, Missouri FMI: 800-CIRCLEA
- Beran Bros. Herefords & B&D Angus Production Sale Claflin, Kansas FMI: 620-587-3709

November

MM Cattle & Moriondo Ranch Production Sale at the ranch, Mount Vernon, Missouri FMI: 417-366-1249

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