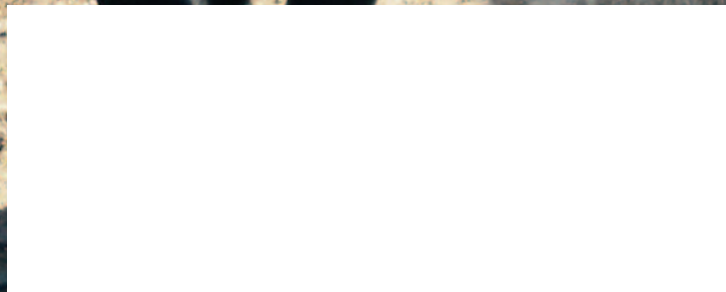


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Volume XXIV Number 5

August 2016



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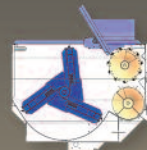


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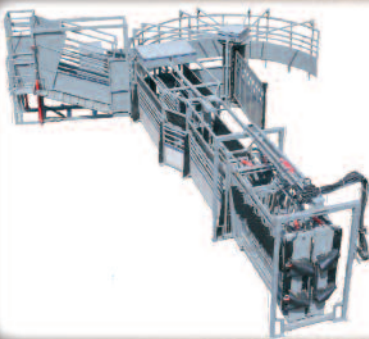
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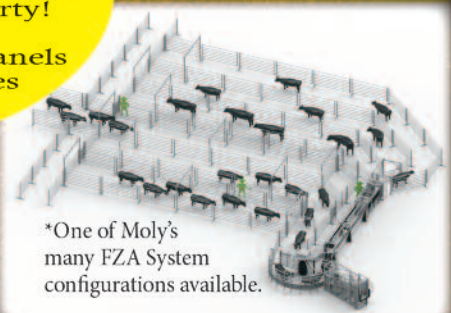
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Life lessons at the feedyard

BY JILL J DUNKEL

In this business, it's easy to get caught up in the day-to-day activities at the feedyard and the issues that come with it. But sometimes it's good to step back and see things from a younger, more innocent perspective.

I follow Anne Burkholder's Feedyard Foodie page on Facebook. In a recent post, her 14-year-old daughter Megan took to the keyboard detailing lessons she has

learned from helping at the family operation. Megan's comments reminded me that in all of the issues we face on a daily basis, there are many life lessons and invaluable skills that are learned each day. I've highlighted a few of Megan's...

"If you love what you do, you will never work a day in your life..." People come to stay with us every once and a while and right before they leave Doug, our beloved foreman, always tells them that he has never worked a day in his life. They get very confused because they have just watched him working hard. He explains to them that he loves the job that he has; consequently, he has never worked a day in his life.

"Two wrongs don't make a right..." I first learned this when perched on the arm of the chair in the inner cubical of the office, staring blankly at the computer screen full of numbers – never leave a mistake without correcting it. Always fix what went wrong even if it means admitting that you are human and you made a mistake. If you do not correct a mistake, the problem just grows.

"Leave it how you found it..." When cooperating with members

of a "team" you should always: leave things how you found them, replace tools to their proper "home," and, when in doubt, shut the gate. When working with farmers, mechanics, or welders always put their tools back where they belong. They get very angry very quickly if they cannot find the tool they are looking for. Always shut the gate behind you. A feedyard manager's worst nightmare is leaving a gate open.

"Think like a calf..." It is important for any cattle handler to step into the calf's hooves. Looking through a calf's eyes can be tricky. In order to do that you have to have empathy and think like a prey animal. I learned this when I was little so it comes like second nature to me but some people struggle changing their perspective.

"For the love of Pete..." Whenever our cowboy is agitated but not quite angry enough to start cussing, he starts loving Pete. Usually he says this under his breath, but after a while you can understand the mumbling language. We have never figured out who Pete is but wherever he is, he is much loved."

Thanks Megan for reminding us of these lessons and making us smile!



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The logo for Pancosma, featuring a stylized green leaf icon above the word "Pancosma" in a bold, white, sans-serif font. Below it, the tagline "makes sense" is written in a smaller, white, sans-serif font. The entire logo is set against a green background.

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So You're Seeing **RED**, Now What?

— Bankers Offer Advice To Those Dealing With A Loss Of Equity —

“Cattle feeders simply cannot afford to not manage risk,” says Tim Meyer, Senior Vice-president of Producers Livestock Credit Corporation. “They need to pay attention and act when the markets allow profit. They can’t assume profit will be there when they market cattle.”

“That doesn’t mean it’s an easy decision,” adds Bob Butcher, President and CEO of Community Bank based in Holstein, Iowa. “Every operation and marketing situation is different. It’s not easy out there these days, but there is still a future in this industry.”

Meyer and Butcher spoke to Iowa beef producers at the Iowa Cattlemen’s Association BeefMeets in June, aiming their presentation at the guy with boots on the ground

struggling to find security in the beef market downturn.

For that producer, Meyer says a put option is often the best strategy: “It’s like crop insurance for livestock. It may not make money, but it can keep you in business. You can put a floor on losses and keep the top open to capture any available profits.”

Meyer and Butcher say the key to any risk management strategy is knowing your break even point. “Know how much risk you can bear and don’t take on more,” says Meyer.

“Sometimes,” adds Butcher, “that might mean locking in a loss – because a small loss is better than a big one. It’s still best to put a floor in there.”

Marketing cattle at a loss is

something most U.S. cattlemen did not see coming when they were riding the last couple years’ wave of high prices. Drought conditions throughout the Southwest liquidated the herd in record numbers. To recoup, replacement heifers were held back, creating a demand market. By November of 2014, \$1.70 fat cattle were the norm. “Hogs set record highs about the same time,” explains Meyer, “creating a window of euphoria in the livestock industry. People paid whatever it took to own feeder cattle.”

It was a bubble that couldn’t last. “By Labor Day 2015, a 600 pound steer was down \$400 when he walked off the truck,” says Meyer.

The result for stockers and feeders was a significant loss of working

capital, and that creates challenges not only for producers, but for the lending institutions that support them.

Helping your banker help you

“The most important thing you can do is communicate with your lender,” says Meyer. “Don’t assume because you fed 1,000 head last year that will happen again this year when you lost money.” He adds the need for communication applies to both sides. “We have to be up front about what we can and can’t do for a customer. If we need to cut back his credit line we need to tell him clearly and early on.”

Understand the banker’s position. Lenders are under more scrutiny than ever – from regulatory agencies and from bank management and ownership.

“Our board of directors and owners are paying attention to portfolio quality,” explains Meyer. “A lot of people are asking a lot of questions. If a feeder borrowed \$5 million last year and lost \$1 million, someone is asking, ‘You’re going to let him do that again?’”

“Mostly, it’s crucial to get to the bank and do what needs to be done,” he continues. “Talk to your banker. The worst thing a producer can do is live in denial and refuse to acknowledge the situation.”

The first step in any plan is to get your balance sheet in order. That

may mean selling assets, or refinancing assets, converting short-term debt into long-term debt.

“That can be difficult psychologically,” says Meyer. “It can be hard to pay for something ‘again’ that used to be paid for. But you need to get your financial house in order.”

The good news is most producers started the market downturn in good shape. “The good years gave operators a breather,” says Butcher. “They have some equity on their balance sheet. Now they need to use some of that up to try and recover losses.”

The other bright spot is interest rates are likely to stay low. “That’s just about the only tool the Fed has left,” Butcher explains, “so they’re not likely to take much action.”

The second step is to work closely with your lender on a risk management plan.

“You have to have some tool for price protection,” says Meyer. For some that will be a put option. For others a different hedging vehicle. But the overall strategy is the same. “It has to be workable and doable, and you have to set a mark to pull the trigger and stick to it.”

Management matters

“There is an inherent risk to beef production,” says Meyer. “There are so many variables, like weather for instance, we can’t control. That’s why good management to

control what we can is crucial.”

“And that’s why you and your lender have to figure out a risk management tool,” he continues. “You have to have some price protection to hedge against those variables.”

“With good management, there is hope for the coming year,” says Butcher. “Input costs, including feed, are lower. Interest is reasonable. And feeders are buying cattle at one-half the price of last year. I’m almost convinced it could be a good year for cattle feeding.”

Yet, Meyer warns the deck remains stacked against the producer, especially smaller operations. “The reward for risk has decreased. “What used to be a \$1200 investment for a fat steer is now \$1800, but the return is still \$50-\$100. It’s like playing Black Jack at the \$20 table with a \$10 payout. It’s not the same game. Too many dollars are controlled by too few people and the ebb and flow is not there for the little guy.”

And that, according to Meyer, emphasizes the need for a solid risk management strategy. “You have to grab it while you can.”

“It’s a matter of how much risk you can afford to take,” adds Butcher. “Proceed with caution, know how much risk you can afford, and protect yourself against big losses so you can live to play another day.”

FL



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



Antibiotic

100 mg of tulathromycin/mL

For use in beef cattle (including suckling calves), non-lactating dairy cattle (including dairy calves), veal calves, and swine. Not for use in female dairy cattle 20 months of age or older.

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

DESCRIPTION

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

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

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

INDICATIONS

Beef and Non-Lactating Dairy Cattle

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

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

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

Suckling Calves, Dairy Calves, and Veal Calves

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

DOSAGE AND ADMINISTRATION

Cattle

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

Table 1. DRAXXIN Cattle Dosing Guide

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

CONTRAINDICATIONS

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

WARNINGS

FOR USE IN ANIMALS ONLY.

NOT FOR HUMAN USE.

KEEP OUT OF REACH OF CHILDREN.

NOT FOR USE IN CHICKENS OR TURKEYS.

RESIDUE WARNINGS

Cattle

Cattle intended for human consumption must not be slaughtered within 18 days from the last treatment. Do not use in female dairy cattle 20 months of age or older.

PRECAUTIONS

Cattle

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

ADVERSE REACTIONS

Cattle

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

NADA 141-244. Approved by FDA

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



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TAKE TIME



OBSERVE LABEL DIRECTIONS

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Revised: February 2014

What is a VCPR?

Information about the Veterinary Feed Directive has floated around for more than a year now. Pharmaceutical companies have been encouraging producers to be proactive and prepared for the new FDA requirements, which become effective January 1, 2017. One necessary step is establishing a veterinarian-client-patient-relationship (VCPR). But what exactly constitutes a VCPR? Ohio State University Extension Program Coordinator Jeff Workman offers these tips on what fulfills a VCPR.

A veterinarian-client-patient-relationship (VCPR) is defined by the American Veterinary Medical Association as the basis for interaction among veterinarians, their clients, and their patients and is critical to the health of your animal. A VCPR means that all of the following are required.

1 The veterinarian has assumed the responsibility for making clinical judgments regarding the health of the patient and the client has agreed to follow the veterinarians' instructions.

2 The veterinarian has sufficient knowledge of the patient to initiate at least a general or preliminary diagnosis of the medical condition of the patient. This means that the veterinarian is personally acquainted with the keeping and care of the patient by virtue of a timely examination of the patient by the veterinarian, or medically appropriate and timely visits by the veterinarian to the operation where the patient is managed.

3 The veterinarian is readily available for follow-up evaluation or has arranged for the following: veterinary emergency coverage, and continuing care and treatment.

4 The veterinarian provides oversight of treatment, compliance, and outcome.

5 Patient records are maintained.

The practical explanation is that it is a formal relationship that you have with a veterinarian who serves as your primary contact for all veterinary services and is familiar with you, your livestock/animals, and your farm operation. This veterinarian is referred to as your Veterinarian of Record (VoR), and both the VoR and the client should sign a form to document this relationship. You can download a VCPR template developed by the Ohio Veterinary Medical Association Drug Use Task Force at: vet.osu.edu/extension/general-food-fiber-animal-resources.

This can be thought of as similar to having a primary “family doctor” where that individual is the one whom you consult with regarding prescription needs, changes in health status, or specialized services. Because the VoR somewhat regularly provides veterinary services to you, they may be able to approve prescriptions and provide consultation over the telephone. Having an established VCPR is important to help protect consumers and avoid residues in meat and milk. This becomes even more crucial to a farm operation with the changes regarding the purchase of antibiotics and the veterinary feed directive (VFD).

For more information on the Veterinary Feed Directive, contact your local veterinarian or visit the FDA website at: www.fda.gov/AnimalVet/DevelopmentApprovalProcess/ucm449019.htm



Shelia, Brock, Karena
and Jessica Karges
Owners
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(tulathromycin)
Injectable Solution



On your phone, use the bar code scanner app to scan this code and watch a video about the Karges family operation.

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

For more details, please see full Prescribing Information.

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ZACTRAN
(gamithromycin)

150 mg/mL ANTIMICROBIAL
NADA 141-328, Approved by FDA
For subcutaneous injection in beef and non-lactating dairy cattle only. Not for use in female dairy cattle 20 months of age or older or in calves to be processed for veal.

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

INDICATIONS

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

CONTRAINDICATIONS

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

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

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

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

PRECAUTIONS

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

ADVERSE REACTIONS

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

EFFECTIVENESS

The effectiveness of ZACTRAN for the treatment of BRD associated with *Mannheimia haemolytica*, *Pasteurella multocida* and *Histophilus somni* was demonstrated in a field study conducted at four geographic locations in the United States. A total of 497 cattle exhibiting clinical signs of BRD were enrolled in the study. Cattle were administered ZACTRAN (6 mg/kg BW) or an equivalent volume of sterile saline as a subcutaneous injection once on Day 0. Cattle were observed daily for clinical signs of BRD and were evaluated for clinical success on Day 10. The percentage of successes in cattle treated with ZACTRAN (58%) was statistically significantly higher ($p < 0.05$) than the percentage of successes in the cattle treated with saline (19%).

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

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

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WTAMU Research Results Signal Potential for Increased Efficiency in Beef Industry



Alpha and Gamma 1 were cloned from Prime, Yield Grade 1 carcasses and produced high quality offspring that graded above industry averages.

Scientists at West Texas A&M University confirmed on Wednesday that they have taken a step closer to achieving a cattleman's dream: a herd of cattle that consistently produces the highest quality beef, and more of it per animal.

In the beef industry, conventional wisdom holds that the quality of beef suffers as the yield—the amount of boneless, closely trimmed retail cuts—increases and vice versa. But the initial results of WTAMU's research involving cloned cattle demonstrate that it is possible to improve both simultaneously, which means higher value beef can be produced without wasteful trim fat.

"This outcome indicates that the antagonistic relationship between beef carcass quality and yield can be overcome by crossing rarely occurring animals," said Dr. Ty Lawrence, professor of meat science and lead researcher on the project.

In 2012, WTAMU successfully cloned a bull, which they named Alpha, from the carcass of a steer that graded Prime, Yield Grade 1—the best combination of quality grade and yield grade in the U.S. Department of Agriculture's beef evaluation system. Such a rating is only achieved by about .03 percent of all beef carcasses. Three heifers—Gammas 1, 2 and 3—were cloned from another Prime, Yield Grade 1 carcass.

While not clones themselves,

the 13 calves of Alpha and the Gammas were the first bovine offspring ever produced from two cloned carcasses. Last month, seven of them were harvested. The seven steer carcasses were evaluated by a third-party USDA beef-grading supervisor and graded significantly above the industry average. One of the seven achieved the Prime grade, three graded High Choice, and three were Average Choice. The industry average is Low Choice. Industry-wide, less than 5 percent of all beef—fewer than one in 20 carcasses—grades Prime.

"As someone who has been following this project closely, I am extremely excited by these results, which have the potential to revolutionize the beef industry," said Texas A&M University System Chancellor John Sharp. "I'd like to offer the research team at WTAMU, as well as their industry partners, my congratulations. The Texas A&M System is committed to conducting cutting edge research with practical applications, and their work is a fine example of our philosophy in action."

All seven of WTAMU's steers produced a yield grade of 1 or 2. The industry average is a 3. Compared to the average animal reported in the 2011 National Beef Quality Audit, the offspring of Alpha and the Gammas have 16 percent less trim fat, 9 percent more ribeye and 45 percent more marbling.

“By finding, cloning, and crossing these rare genetics, we have demonstrated the ability to create exactly what the market desires: high quality taste fat without unnecessary waste fat,” Lawrence said.

These findings have been five years in the making and the ongoing project has included numerous partners. WTAMU teamed up with ViaGen, a private company now based in Cedar Park, to develop the initial clones for the purposes of breeding them.

“A goal of WTAMU is to support research that has a significant, positive impact on the economy of the State of Texas and specifically on the well-being of the agricultural sector of the Texas economy,” said WTAMU President J. Patrick O’Brien. “Through the public-private partnership of University faculty and members of the private sector working on this cloning project, I believe we have advanced our goal and created some-

thing really special for the benefit of the cattle industry and for the average consumer.”

Collaborating with their industry partners, animal scientists from WTAMU were careful to raise the offspring of the clones in the same way that cattle would normally be produced for commercial meat production.

“The calves were raised by their mothers while grazing our native pastures, in the herd with our other commercial cattle,” said David Lust, a research team member and associate professor of animal science. “They were weaned at a normal time and then fed at the WTAMU Research Feedlot for 185 days on a typical feedlot diet. They have been treated just like commercial cattle throughout the industry.”

The research team is encouraged that the data thus far points toward a new way to improve beef production efficiency.

“I think the biggest innovations

will be the intersection of technology and biology,” said Dr. Gregg Veneklasen, a research team member and veterinarian at Timber Creek Veterinary Clinic. “West Texas A&M University will be at the forefront of this cutting edge technology, and our students will be the ones who benefit.”

“This project is an example of a public-private partnership that produced great results,” said Dr. Dean Hawkins, research team member and dean of the College of Agriculture and Natural Sciences. “West Texas A&M University is thankful to Blake Russell and the team at ViaGen, Dr. Gregg Veneklasen at Timber Creek Veterinary Clinic, Jason Abraham at Mendota Ranch and many others who propelled this idea to fruition.”

“We anticipate this to be the beginning of a long relationship of positive research outcomes,” he said.

FL

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Hydration and electrolyte balance key to reducing **HEAT STRESS**

Simply put, it's hot. Unless you live in the southern hemisphere, August is typically one of the hottest months of the year. You feel it. Your employees feel it. And so do your cattle. Feedlot cattle can generally handle air temperatures up to 75-80 degrees without many problems or negative effects on performance. But as the temperature exceeds that comfort zone or as humidity rises, cattle quickly enter the danger zone of heat exposure.

According to 2014 research from University of Nebraska's Dr. Terry Mader, heat stress has led to documented feedlot cattle losses exceeding 5,000 head in seven of the last 20 years. Non-death costs are estimated at five to 10 times greater than death losses.

While there are several aspects to a heat stress mitigation plan, some take advanced planning such as building shades and installing sprinklers. Others can be implemented immediately, such as changing feeding times to late afternoon or evening and applying light colored bedding in pens. Another easy-to-implement tool is adding electrolytes to the water or feed.

Greg Hermesmeyer, Ph.D., Technical Service for TechMix, makers of Bovine BlueLite electrolytes, said as cattle become heat stressed or dehydrated, they lose electrolytes. "Sodium, potassium and chloride are electrolytes that all work together in water balance at the cellular level. Those are key in keeping cattle hydrated."

Cattle typically drink 8 to 9% of their body weight. However on hot days, water requirements can increase by two and a half times that. During heat stress events, a 1,000 pound feedlot steer may require more than 20 gallons of water.

If water is not adequately con-

sumed during heat stress, the body will draw water from tissue, affecting performance at the cellular level. Core body temperatures also begin to increase. If there is not access to adequate water, intake can drop below what is required. Then feed intake drops.

As heat stress kicks in, an animal naturally attempts to dissipate the heat by redistributing blood from the gastro-intestinal tract and the internal organs to the outer layer of skin and outer extremities. This vasoconstriction means less blood flow to the internal organs. Hermesmeyer explained that can compromise the GI tract and can affect performance. It can also affect the immune system.

During periods of heat stress, cattle lose a large amount of potassium through sweat. Cattle do not have the ability to manage potassium levels and therefore require dietary input of potassium. Due to sweating and dehydration, cattle can easily become deficient in potassium without adequate potassium supplementation, he said.

"We want to replace electrolytes and maintain hydration at the cellular level to keep core body temperatures down," Hermesmeyer said.

Energy is also important for electrolytes to work. Potassium is stored inside the cell while sodium is stored outside the cell. An animal's body works to maintain the potassium/sodium balance, and that requires energy at the cellular level.

"You need energy at the cellular level to take advantage of electrolytes. Glucose helps with the transport of sodium across the intestinal wall to get into the body of a preruminating calf," he said. Hermesmeyer also noted that taste is important to encourage consumption,

as well as acidification to maintain the correct pH in the gut.


"If it makes them feel better, they are going to drink more. It's all about increased hydration," he said.

Although periods of heat stress is when electrolytes are typically used, Hermesmeyer said maintaining electrolyte balance and well hydrated calves is key during other times of other stresses, like transportation. Cattle tend to back off feed and water, especially during long hauls, which leads to dehydration. Getting cattle rehydrated and eating as soon as possible will reduce performance-related losses.

"When we process those cattle, if they are in better hydration status, their immune system will respond better and vaccines will perform better. Animals that are hydrated are under less stress. They get on feed quicker," said Hermesmeyer.

The theory also applies to fat cattle. TechMix research showed a decrease in shrink and an increase in hot carcass weight when Bovine BlueLight was used two days pre-harvest. Additional data from South Dakota State University showed an increase in tenderness and a longer shelf life.

He cautions that not all electrolyte products are the same, and it's important to use species-specific formulations. "Electrolytes are a general term. Many are multi-species and can be used on any class of livestock. But there are different ratios and levels of electrolytes needed depending on the species."

Bottom line: animals that are well hydrated and that maintain a correct electrolyte balance are more prepared to respond to vaccines and treatment with improved gut health, and are better equipped to deal with heat stress. 

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¹ Sifferman RL, Wolff WA, Holste JE, et al. Field efficacy evaluation of gamithromycin for treatment of bovine respiratory disease in cattle at feedlots. *Intern J Appl Res Vet Med.* 2011;9(2):171-180.

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

³ ZACTRAN product label.

⁴ Kahn, CM. *Merck Veterinary Manual*. 10th edition. 2010:1319.

⁵ Van Donkersgoed J, Merrill JK. A comparison of tilmosin to gamithromycin for on-arrival treatment of bovine respiratory disease in feeder steers. *Bovine Practitioner.* 2012;46(1):46-51.



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Stop Stress From Stealing Profits

STRESS

When stress creeps into Gary Price's operation, he feels gains slipping and profits sliding. He can almost see the cattle's rate of gain slow and antibiotic treatment costs rise as he pulls cattle for respiratory illness even though his calves are not high risk.

Price is a cow/calf and feedlot producer near Center, N.D., who recently returned to the family farm to join his father, Duane. The pair grow wheat, corn and soybeans and run 200 cow/calf pairs. In addition, the family owns a 900-head starter feedlot where they finish their own calves and custom feed cattle from November through January.

Retaining ownership through finishing focuses Price on stressful events like weaning, shipping and inclement weather especially heat stress. It's during these times that cattle are most susceptible to disease. Sick cattle stop eating, stop drinking — and stop gaining. Inevitably, they require an antibiotic treatment, which only further shrinks the profit margin per head. To top it off, treating calves makes for a long day, Price says.

"Pulling and treating freshly weaned calves is awful," he says. "Prevention is worth the cost."

Avoiding illness with vaccination is the backbone of Price's health protocol, but he is always on the lookout for proven ways to minimize the need for treating sick cattle.

In 2013, he supplemented his tried-and-true disease prevention

program with an active dry yeast probiotic to help manage stress and keep gains on track. Price chose a brand of probiotic that includes the yeast strain *Saccharomyces cerevisiae boulardii* CNCM I-1079. It's a naturally occurring product that has been shown to help reduce the negative effect of stress in cattle. As a natural product, *S. c. boulardii* CNCM I-1079 doesn't require a prescription or veterinary feed directive (VFD) and fits with any marketing program, which allowed Price to continue business-as-usual with the added benefit of cattle that had less illness, less time off feed and less antibiotic treatment cost.

For the past two years, Price used the probiotic at weaning and continued feeding for 45 days on every calf. He credits the product for helping keep calves on feed during stressful situations and promoting overall health.

"In the past couple of years, we've pulled less sick calves," Price says. "We've reduced our antibiotic use by 25 percent. The calves gained better, and we've improved our cost of gain. The calves just didn't seem to lose as much weight as they typically have in the past. We're going to keep using what works."

Focusing on prevention is one of the reasons Price's animal health supplier, Guy Halvorson at Stockmen's Supply in Mandan, N.D., recommended using *S. c. boulardii* CNCM I-1079.

"When you have fewer animals sick, you will always see increased gain. It's just a two plus two equals four equation," Halvorson says. "With the producers we've seen using it, they've hardly treated anything."

Many of the Stockmen's Supply

customers were familiar with other types of yeast products, but unlike others, the active dry yeast *S. c. boulardii* CNCM I-1079 works by favoring beneficial microbes in the animal's gut, which is especially important during periods of stress. The product easily mixes into producers' total mixed ration (TMR) and integrates into daily feeding operations.

In the future, Halvorson believes the industry will have less access to antibiotics. Proven natural probiotic products will help his customers meet that challenge and continue to achieve steady gains. Introducing producers to probiotic alternatives today will help his customers' profitability tomorrow. Active dry yeast probiotic products can work in conjunction with vaccination and antibiotic treatment programs.

"With what's coming in the industry, we believe that a preventive approach will make producers more profitable in the long run," he says. "It's unbelievable what calves cost, and it's worth it to take the extra step to limit losses."

Despite the industry's best efforts, bovine respiratory disease complex (BRDC) is still the most common cause of cattle deaths, notes Angel Aguilar, Ph.D., Dipl. ACAN, Technical Services Manager, Lallemand Animal Nutrition, an active dry yeast probiotic manufacturer.

"The average pull rate in high-risk feedlot cattle has remained around 30 percent for years even with advances in vaccines and antibiotics to tackle both viral and bacterial BRDC causes," Dr. Aguilar says. "If cattle producers are trying to battle BRDC with just one method, they are almost guaranteed to not reach their animals' genetic and profit potential."

Vaccination, management and feeding a probiotic can work

together to help prevent BRDC losses. Probiotics are fast becoming a mainstream and research-proven part of producers' protocols, Dr. Aguilar says.

In fact, *S. cerevisiae* boulardii CNCM I-1079, has been proven to improve cattle feed uptake, lower morbidity and lower mortality. In a recent study, cattle fed the active dry yeast strain had 39 percent fewer re-treatments for BRDC as compared to controls.

As an in-feed probiotic, the action of *S. c. boulardii* CNCM I-1079 starts in the gut but has a systemic effect throughout the animal. Probiotics fit into producers' animal health protocols even if they are in all-natural programs, like Duane Keller, a cow/calf and backgrounder in the Mandan, N.D., area.

Reducing antibiotic treatment is important to his 800-head all-natural, GAP-certified operation Keller owns with his son, Chris. Keller feeds his calves *S. c. boulardii* CNCM I-1079 for 40 days after weaning to help them better manage stress. He also feeds it as a top dress prior to shipping.

"Since we implemented it in our protocol, we've seen a 70 percent reduction in antibiotic use," Keller says. "We kept them on feed better. They went to feed better and stayed there. We're going to use it again for the simple fact that I believe we had less sick calves. Normally we don't have a lot of pulls, but we cut it in half. It just keeps the cattle healthier."

Typically, Keller aims for an aggressive rate of gain on grass, silage and chopped hay — the cattle never receive grain. Keller has worked closely with the feedlot to feed his cattle to their specifications and believes the effort has paid off.

"If you can keep cattle healthy, they are going to do better," he says. "I think I've seen better gain, probably about a quarter of a pound per head."



PROTERNATIVE-THE NEW MEASURE OF PREVENTION

The industry is changing; it's time to take cattle feeding down a new road. Recent advancements in cattle nutrition have opened new routes to help limit pulls, treatment and positively benefit the health of an animal. Adopting a *new measure of prevention* through the feed is an important first step to help minimize delays on the road ahead.

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CARE AND CLEANING OF SYRINGES AND NEEDLES

Beef Quality Assurance (BQA) guidelines include use of clean syringes and needles for any type of injection to minimize the risk of contamination or infection at the injection site. Sterile, disposable syringes and needles that are used just once, on one animal, are the safest, but most producers are processing multiple animals at once and utilize multi-dose syringes. If care is taken when filling them – using a sterile needle each time you draw the product from the bottle – and needles on the syringes are changed each time you refill, contamination is kept to a minimum.

It is also important to properly clean syringes after use. Dr. Rachel Endecott, Extension Beef Cattle Specialist, Montana State University says that when you finish giving injections, the sooner you can rinse the syringes, the better.

“It will be easier to get everything out. Don’t leave syringes on the counter for a week, or until next year, and then try to clean them. The sooner you can get them clean, the better—even if it’s just a

quick rinse and then more thoroughly later that day when you have more time. Leaving residue in there to dry and solidify makes it more challenging the next time you clean it,” she says.



Wash inside of syringe.

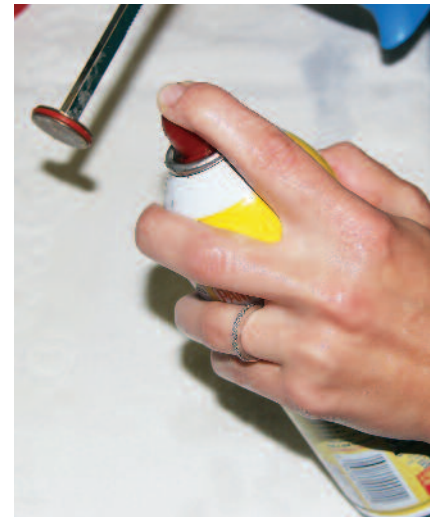
In years past, with the old glass syringes, people just took them apart to boil all the pieces, and this still works. “I think the newer syringes with nylon/plastic barrels are also durable enough to withstand boiling water,” says Endecott.

The important thing is to not use any soaps or disinfectants because any residue from those can inactivate modified live vaccines. “Instead, you can use very hot water. My tip for cleaning syringes is to clean it until you think it’s clean and then do it one more time,” says Endecott.

Nora Schrag, DVM, Assistant Clinical Professor, Field Service, Kansas State College of Veterinary Medicine says the multi-dose syringe guns are a little difficult to clean but they always need to be cleaned. “A good rule of thumb is to clean them with regular soap and

hot water on the outside, and hot water on the inside. If you’ve used a vaccine that’s very thick, take the syringe apart completely and clean it with soap and water, and then rinse thoroughly with clean water,” says Schrag, making sure to remove ALL of the soap residue.

“You should use distilled water to rinse with, so it won’t leave any deposits or residue from the water. Many people have hard water (with minerals in it) and modified live virus vaccines are very sensitive to mineral deposits and disinfectants. The minerals in hard water will mix with the components of the vaccine sometimes and cause some problems. Never clean a syringe with disinfectant and then use it for a MLV vaccine, or the vaccine will be deactivated,” she says.



Lubricate rubber rings with cooking oil spray—it’s sterile.

“The final step is to boil some distilled water or heat it in a microwave for 2 minutes to get it boiling. Put the recently cleaned syringe back together. Then suck up the boiling water and blow it out ▶



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Care and Cleaning... from previous page
 the end of the syringe, three times. After you've done that, the syringe is not perfectly sterile (not like it would be in an autoclave), but it is very clean, and safe to use to vaccinate cattle," she explains.

"After the syringes are thoroughly



Draw up hot water into syringe and squirt it out.

rinsed with boiling water, we put them in Ziploc bags to store in a cabinet so they won't get dusty. Don't tighten the Ziploc or it will seal dampness inside. Leave it open enough to dry out. Then you can come back in a day or so when it's all dry, and seal it up. Then we can put that syringe in our treatment box or wherever we will be using it next or storing it until the next use. When we pull it out, it's clean and ready to go," she says.

Sometimes after many uses, the plungers need some lubrication. "We've gone away from using mineral oil for lubrication, because mineral oil tends to break down the O rings over time," says Endecott. "Glycerin or vegetable oil are the most recommended lubricants, these days."

Most needles should not be re-used. The exception might be transfer needles for rehydrating modified live vaccines. "Some vaccines

come with disposable plastic ones, but if you have a metal one that you always use for transferring the sterile solution into the vaccine vial, don't forget to clean it after use," says Endecott. "It has residue in it, and over time some dry residue buildup means it won't flow as well." Even though you think it's clean because that's all you use it for, it still needs to be rinsed (just like your syringes) after you are done working cattle.

"If you have more than one type of vaccine you are mixing up during a day, it's a good idea to have a separate transfer needle for each type. After use a person can simply rinse and boil these needles," she says.



Put clean syringe in Ziploc bag and seal after it's completely dry.

In earlier years most people rinsed and boiled used needles—especially the ones that were only used on an occasional animal for antibiotic injections. Today, however, disposable needles are cheap, and it's better to simply use a new needle, especially for vaccinating. "If you have a non-disposable needle that you've used for treating one animal, and plan to keep it on hand for later use, rinse it immediately after use, especially if you've injected an antibiotic that is thick and viscous. Otherwise that material will solidify in the needle." Rinse it thoroughly and then boil it before the next use. **FL**

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Heed This Advice on Anaplasmosis

It is difficult to quantify the risk of anaplasmosis in any given herd in any given time of year, but when an outbreak occurs, it can result in devastating consequences for a cow/calf herd.

Anaplasmosis is most commonly caused by *Anaplasma marginale*, a microorganism that invades red blood cells and causes severe anemia. Transmitted through the blood, the main culprits in spreading the disease include biting flies or ticks or infected blood transferred on contaminated needles or other equipment. The disease can result in death, aborted calves, bull infertility, weight loss and diminished milk production as well as additional treatment expenses. The risk for disease increases when mixing noninfected cattle with those that carry the disease or when environmental conditions favor increased activity of biting flies or ticks.

“Anaplasmosis is sporadic, not all factors that cause outbreaks in a herd are known but when they occur, consequences can be significant,” said Daniel Scruggs, DVM, managing veterinarian with Zoetis.

Anaplasmosis causes special concern for cow/calf producers since mature animals have higher susceptibility to the disease than younger animals. Cows in the late stage of pregnancy and those nursing calves have particularly high death loss.

Signs of anaplasmosis can include: orange-yellow coloration of the mucous membranes; thin, watery blood; Slow, reluctant to move or short of breath cattle; aggressive behavior shortly before death; sudden, unexplained death of adult cattle; and abortions

One of the most commonly used and predictable methods of controlling anaplasmosis includes incorporating a feed-grade chlortetracycline, such as Aureomycin, in the animal’s feed or mineral

supplements. In endemic regions where ticks and flies remain active all year, chlortetracycline administration can occur year-round in feed or minerals. In other areas, producers often focus on late spring through fall, the time of highest transmission.

“It’s really a factor of diligence

in making sure cattle are protected,” Dr. Scruggs said. “With spring-calving herds, the bulls are out during the spring and summer vector season. Whether a producer is running a spring-calving or fall-calving herd, there’s never a good time to go to sleep on anaplasmosis control.” **FL**



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What's your approach to BRD?

Veterinarian encourages cattlemen to use all the tools in the toolbox to reduce costs, increase efficiency.

He stands in the back corner. With the blazing sun overhead, he inhales, attempting to fill his lungs with oxygen. The stifling humidity only makes the air thicker, and he works hard for every breath. Feed is in the bunk, but he would have to fight for position and some days the effort is just not worth it. He will settle for what's left later in the day.

We've all seen it. That humpback calf with his head down, off by himself. He's been treated and isn't clinically sick. But the scars of bovine respiratory disease remain. Others are not as obvious. They've been treated and recovered, and appear to mingle with their pen

mates. But they'll finish at the bottom of the pen, a little lighter, a little less efficient.

Bovine respiratory disease costs the cattle industry billions each year from death, reduced feed effi-



ciency, and treatment costs. It is one of the biggest demons of the industry, and despite a multitude of technologies, the disease steals dollars from cattlemen every day. Many treatments are effective and cattle go on to complete the feeding process, but their loss of efficiency is real.

Dr. Jason Nickell, Global Manager of Veterinary Services-Beef Cattle, with Bayer Animal Health said cattle are set up perfectly for BRD as a species. They do not have a great amount of lung volume compared to other animals their size. Due to less lung volume, they are very sensitive to losing functional lung tissue through BRD, and it doesn't take much lung damage to cause reduced performance in the feedyard.

"More energy is devoted to keeping the animal alive," he said. "The maintenance cost of that animal goes up versus his counterpart with no lung damage."

There are variables in the amount of lost performance, but none the less, it is there. According to Nickell, approximately 50 percent of cattle have lung lesions at slaughter. A large population of animals have subclinical BRD, never showing signs of illness. Nickell said 30 to 50 percent of animals with lung lesions have no history of BRD treatment.

Livestock are very adept in hiding the fact they are sick. Historically a prey animal, their instinct is to conceal the fact they are injured or ill. By the time they look sick, they have likely been sick for a number of days, Nickell said.

Add to that, Nickell said we are not only missing a lot of subclinical animals that don't show signs of illness, but we are also treating a number of animals that do not have BRD. The performances losses add up, as do the cost of treatments.

"These are compounded economic losses in that you are losing out on performance and also losing

out in treating animals that do not need it," he said. "We have good therapies across the board. We have efficacious products. But because we can't always diagnose BRD earlier in the disease phase, the efficacy of these products is probably not realized in some situations. Bottom line: it's harder to treat later than early."

So what's the answer?

Nickell said the industry will need to continue to think outside the box, including novel product ideas and improved animal husbandry.

"I'm not discounting any of the tools we have. We have good vaccines and good antibiotics. Other tools like a novel immunostimulant are now available. Animal husbandry must be a tool that is utilized, such as low stress handling, preconditioning, and other management factors... But the reality is we don't have one tool that stops BRD

in its tracks. We need all of these tools to better manage this system."

Ongoing training is also important. With the turnover rate in the feedyard, a continual training program will help teach new employees as well as refresh and remind the steadfast ones. Tools for earlier diagnosis will also help. Economic incentives for proper animal husbandry, low stress handling and preconditioning need to be realized, or discounts for those who aren't doing it right.

"Maybe as an industry we've relied too heavily in trying to find a solution in a syringe and a needle. We need to maximize animal husbandry, and look for ways to synergize our management practices with the tools we currently have," he said.

Maybe one day the headline will be: BRD losses reduced for first time in history. **FL**



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HEIFER MASTITIS:

A Threat to Herd Health and Profitability

Cattlemen know that protecting cattle and their operations from a variety of potential threats is essential to remaining profitable and productive. While ranchers continue to rebuild their herds across the country, they often focus on genetics and nutrition. One lesser known issue that can remove a well bred and otherwise healthy replacement heifer from the herd is heifer mastitis.

“A replacement heifer should be the highest quality animal in the herd,” said Mark Upton, director of sales for the feed additives division of Central Life Sciences, makers of Altosid® IGR. “She can join the herd with a head start if she’s able

to maintain a healthy mammary system. If she’s introduced to the herd with damaged teats, or a blind quarter, that creates a serious problem for the overall health of the herd and the operation’s bottom line.”

It is estimated that 75 percent of heifers have some kind of teat or udder infection before they calve, bacteria spread by horn flies accounting for 50 percent of those infections, according to Dr. Stephen C. Nickerson, professor at the University of Georgia College of

Mastitis can develop from bacteria spread by horn flies. Untreated mastitis infections in young heifers can result in blind quarters developing.



Agricultural and Environmental Sciences. Horn flies are a vector for disease and bacteria, including Staph. aureus, the primary cause of mastitis. These flies are known to take up to 20 to 40 blood meals per day, presenting the opportunity for disease to widely spread throughout the herd.

Horn flies spread the mastitis-causing bacteria as they move

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around the animal to the teats. The pests' painful bites eventually develop into scabs where mastitis-causing bacteria can incubate. The bacteria enter the teat and move upward into the quarter, destroying milk-producing tissue. This can lead to blind quarters in the udder, a condition seriously impacting milk production.

Upton cautions that beef heifers are most vulnerable during their "teenage" stage between reaching puberty around eight months and when they are ready to be bred at 12-14 months. These are critical months where disease-spreading horn flies can be a threat, but are often not given the full attention they require. The heifer should be ready to give birth around 21-24 months, producing milk for the new calf. If mastitis has developed resulting in blind quarters, the limited milk production typically isn't discovered until the new calf begins to

feed. At this point it is too late.

Studies show that milk yields account for 60 percent of weaning weight, underscoring how significant of an impact horn flies can have on an operation's bottom line. The pests can also interfere with cattle feeding habits and force cattle to expend excessive energy to dislodge the biting pests. With damage from horn flies potentially responsible for losses as high as 50 lbs. per animal, the cost can reach upwards of \$45* per head in a season. The economic losses from horn flies alone cost the North American cattle industry over \$1 billion every year. (*assumes value of \$.90 per pound)

To help prevent these losses, Upton recommends a horn-fly control program built around a feed-through solution such as Altosid® IGR. Feed-through products work to limit future fly populations, by moving through the digestive

system and into cattle manure where flies lay their eggs.

"We always recommend that cattlemen incorporate a feed-through solution into their fly-control efforts that specifically targets horn flies," said Upton. "If they start including it in a mineral supplement for heifers when they are young, they can control horn fly populations and help prevent the spread of mastitis and the resulting blind quarters."

Cattle producers know full well the damaging impact that horn flies can have on the comfort and profitability of the current herd. As more research becomes available, they are also realizing the negative effects the pests can have on the future of the herd. By implementing a horn-fly treatment program established around a feed-through solution, producers can keep cattle healthy and productive now and for generations to come. **FL**



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BRIEF SUMMARY: For full prescribing information use package insert.

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WARNINGS: FOR USE IN ANIMALS ONLY. NOT FOR HUMAN USE. KEEP OUT OF REACH OF CHILDREN. TO AVOID ACCIDENTAL INJECTION, DO NOT USE IN AUTOMATICALLY POWERED SYRINGES WHICH HAVE NO ADDITIONAL PROTECTION SYSTEM. IN CASE OF HUMAN INJECTION, SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THE PACKAGE INSERT OR LABEL TO THE PHYSICIAN.

Avoid direct contact with skin and eyes. If accidental eye exposure occurs, rinse eyes with clean water. If accidental skin exposure occurs, wash the skin immediately with soap and water. Tildipirosin may cause sensitization by skin contact.

For technical assistance or to report a suspected adverse reaction, call: 1-800-219-9266.

For customer service or to request a Material Safety Data Sheet (MSDS), call: 1-800-211-3573. For additional Zuprevo 18% information go to www.zuprevo.com.

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Fed Cattle Exchange on hold, will be back with improvements

BY KATRINA HUFFSTUTLER

When Superior Livestock Auction launched the Fed Cattle Exchange's first online auction on May 25, the goal was to increase frequency, transparency and depth of the negotiated fed cattle trade. And while the website will not be hosting auctions for a short period of time as per a June 29, announcement, Superior President Danny Jones says they're working diligently to return with a seamless service that will benefit the industry.

"We did have some technological glitches but we also had a lot of suggestions from buyers and sellers we want to implement, and it's going to take some program changes," Jones says. "We thought we should pull back for a period of time to work on those. We hope it's sooner rather than later that we're right back up and we're moving forward. We're confident that when we roll it back out, it's going to be good to go."

The Fed Cattle Exchange, which has been about three years in the making and the result of collaborations with various industry leaders, will come back with a different format, the details of which aren't yet known. What is known is they'll be based on feedback from the first four sales' participants.

"We're going to get all their suggestions, put them together and come out with a decision on the best way to format it going forward," Jones says, adding he is hopeful the platform will bring much-needed change.

"I think it will increase confidence in market forces determining price," Jones says. "Putting supply and demand back in charge. In our mind, nothing does that better than competitive bidding."

Visit fedcattleexchange.com for up-to-date information on the return of the Fed Cattle Exchange. **FL**

Ranches Honored for Stewardship

The tradition of cattlemen and women serving as stewards of America's natural resources was honored today with the announcement of the six regional Environmental Stewardship Award Program (ESAP) winners. The recipients who were honored during the 2016 Cattle Industry Summer Business Meeting, span the country and were nominated for their outstanding efforts to protect land, air and water resources on their individual farming and ranching operations. The regional winners will now compete for the national ESAP award, which will be announced in February 2017.

The awards, now in their 26th year, were developed to recognize beef producers for their implementation of practices that improve the environmental sustainability of their

operations. The ESAP award is sponsored by Dow AgroSciences, USDA Natural Resources Conservation Service, U.S. Fish and Wildlife Service, NCBA and the National Cattlemen's Foundation.

The 2016 regional winners are: Huntingdon Farm, John and Kathryn Dawes, Alexandria, Pa.; Stoney Creek Farm, Grant, Dawn and Karlie Breikreutz, Redwood Falls, Minn.; Turkey Track Ranch, Dale Smith and Jay O'Brien, Amarillo, Texas; Cherry Creek Ranch, Lon and Vicki Reukauf, Terry, Mont.; Smith Creek Ranch, LTD, Samuel Lossing, Duane Coombs, Ray Hendrix, Austin, Nev.; Black Leg Ranch, Jerry and Renae Doan; Jeremy and Ashlee Doan; Jay and Kari Doan; Jayce Doan; Shanda and Don Morgan, McKenzie, N.D. **FL**



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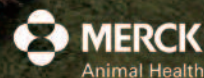
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months of age or older. Use of this drug product in these cattle may cause milk residues. A withdrawal period has not been established in pre-ruminating calves. Do not use in calves to be processed for veal. The effects of Zuprevo® 18% on bovine reproductive performance, pregnancy and lactation have not been determined. Swelling and inflammation, which may be severe, may be seen at the injection site after administration. Subcutaneous injection may result in local tissue reactions which persist beyond slaughter withdrawal period. This may result in trim loss of edible tissue at slaughter. Brief summary available on adjacent page.



Know What You Grow (or Buy)

Knowledge is power when it comes to cow supplementation strategies

It turns out too much of a good thing is a real thing.

Take phosphorus, for example.

Dr. David Lalman, associate professor, Oklahoma State University Department of Animal Science, says while a 12-12-12 mineral is a commonly used formula and considered the gold standard for brood cows grazing native rangeland, many cattle producers don't realize it may not be a one-size-fits-all solution.

"There's quite a few people who use commodities like distiller's grains, or corn gluten feed — even the commercial cube products that are based on wheat midds or cottonseed — that have a high phosphorous concentration. By doubling up on phosphorus through the concentrate supplement and the mineral supplement, phosphorus can be overdone," he says.

Before adding more to the mix, Lalman suggests cow-calf operators test their standing forage and hay and consult with a nutritionist who can help them select a mineral program that will complement their forage base.

"Native grass pastures and native grass hay certainly deserve their reputation for marginal- to low- phosphorous, so a supplemental phosphorus source is generally required," Lalman says. "However,

if they're already feeding a lot of phosphorous through a protein supplement, they probably need to reconsider their free-choice mineral supplement formulation, or at least evaluate it."

Not only is overfeeding phosphorous inefficient, it can be harmful to the cows, too, Lalman says.

"With too much phosphorous and too little calcium, hypocalcaemia or milk fever can develop during late-gestation and early lactation," he explains.

"In situations where forage plus concentrate meets or exceeds the animals' phosphorus requirement, a free-choice mineral product that is high in calcium and low in phosphorus will be a better fit. For example, many wheat pasture mineral products are formulated to meet these specifications," Lalman says.

To ensure they make the best nutrition decisions, he recommends ranchers develop a private feed library, particularly for their pastures and hay meadows. An entry level step would be to test harvested hay from the same meadow soon after harvest each year. This nutritional profile should include protein concentration, an estimate of digestibility usually in the form of total digestible nutrients (TDN), along with macro and

micro mineral concentrations.

The next step? Sampling pastures according to a logical timeline or schedule. For example, if a pasture will only be grazed through the growing season, perhaps an early, mid and late-season sampling schedule would be a logical approach. If a pasture is grazed year-around, producers may choose to sample on a quarterly or a monthly basis depending on how precise they want to be and how much time and effort they are willing to invest.

"Over time," Lalman says, "you'll learn a lot about your pastures, you'll learn a lot about the types of forages you have, and you'll be able to determine the appropriate supplementation program that goes with your most valuable resource."

It's one of those little things that goes a long way, he says.

"As Steven Covey would say, 'Sharpen your saw.' If you're in business, you need to be looking for opportunities to sharpen your saw if you want to get better at it. That's a simple way for ranchers to gain precious knowledge regarding their primary product and how best to enhance its value to their cattle," Lalman says.

"The better perspective they have on quality of the type of forage they have throughout the year, the better job they can do managing it, and providing what the animals need from an optimal supplementation perspective," he adds.

And that will boost performance as well as minimize costs.

Want to learn more about optimal supplementation? Download the free Oklahoma State University Cowculator, a Windows-based Computer software program designed to assist cattlemen in making informed decisions associated with beef cow nutrition. **FL**

Sampling pastures according to a logical timeline or schedule helps to understand what your forage provides and what you need to supplement at different times during the year



HOW DO I GET RID OF A BOGUS EPA CAFO PERMIT?



In the last issue we discussed that as many as 75% of all EPA CAFO permits are not required by the Clean Water Act. However, EPA and federal designees (state environmental agencies authorized to administer CAFO Permits under EPA authority) keep right on requiring CAFOs to apply for permits and have instituted no process or procedure for canceling your permit if you wish to.

I sent an e-mail to an EPA Regional Counsel over three months back inquiring about the procedure to cancel or rescind a CAFO permit for a client who does not discharge. I have not gotten a reply. EPA apparently chooses not to acknowledge their lack of authority to require permits of non-discharging CAFOs. If they wished to be helpful, in response to the court's orders, they would provide notice of the opportunity to rescind bogus permits and a process to do so.

So what can you do? As a minimum, any CAFO who does not discharge can simply choose not to renew their EPA Discharge Permit when it expires. Almost all state environmental agencies will respond with significant "push-back" when they become aware of intent to cancel or not renew a bogus federal CAFO permit. If they have their own "free-standing" permit required by state statutes, you will most likely have to continue applying for and complying with that

state permit, while seeking the elimination of the federal permit. If the only authority your state has for requiring a CAFO permit is EPA authority under the CWA, they cannot continue requiring you to apply for the permit.

As a CAFO who wishes to get rid of a bogus permit, you should be sure you stand on good ground as

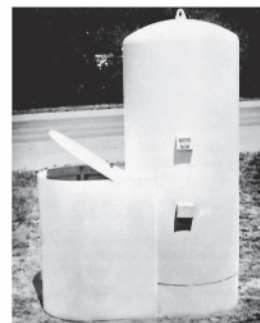
to both the federal and state regulations as they apply in your case. The CWA has changed little in the 42 years since its passage, but many have been confused forever about what it says. If your environmental advisors do not understand well the CWA and CAFO permitting, you would be well advised to seek out someone who does. **FL**

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TRAITS OF GREAT EMPLOYEES

Many employers and managers complain about their inability to find good employees. Their frustration is not just in the lack of skills in new employees, but in the lack of other traits that don't take actual skills or experience to perform. I recently saw a list of "Great work Traits That Don't Take Any Skills" on social media. I would prefer to credit it because it is a very good list, but no source was provided.

The original was just a list of the traits. I think some additional definition is valuable for our purposes.

1. Being on time — Showing up to work on time is one of the most basic obligations for any employee, and is completely within their control.

2. Solid Work Ethic — This can be defined many ways, but there are some elements of work ethic that fit the culture of that business. No skills are needed to meet these cultural expectations.

3. Consistent Effort — Doing the same level of work from one day to the next is not about skill, it is about character and focus.

4. Uses Appropriate Body Language — Seeing an employee roll their eyes, shrug their shoulders, look away during important details of specific instructions, or otherwise show disrespect or disengagement tells us more than any words can express.

5. Energy — We all prefer, as do the employee's coworkers, working with someone who comes to work ready to work and having the energy to start their duties on arrival. Most of us could use some caffeine-induced stimulation in the morning, but that's not the point of

this trait. The appropriate energy level is seen in the person who comes to work fully rested, fully aware and fully engaged—mentally and physically—in their work.

6. Good Attitude — Of all the traits listed here, attitude is the one that people have the most control over from when they rise to when they retire each day. It is a daily choice. It is one that has a clear effect on everything we do, and on everyone that we work with. This is important for owners and managers to remember as well.

7. Passion — I hear this comment often from senior owners and managers, but this trait is also one that many of the elder generation

job, the duties, the opportunities, the people, the products, the industry and/or the daily challenges. They prove that we can grow into a passion for our job—if we see our job as something for which we want to have a passion.

8. Being Coachable — Some people have never played on a sports team or grown up in an environment where they were coached or trained in a particular skill. Learning to play an instrument, riding a horse, learning mechanics and other lessons gained from a more experienced person requires an ability to be coachable. Having the skill is not the issue. Possessing a coachable mindset is completely up to the individual.

9. Doing Extra Work — When a person goes the extra mile they show that they desire to do their best and want to be more than mediocre as an employee.

10. Being Prepared — This trait takes many forms and separates so-so employees from really good ones. It includes the trait of anticipating what needs to be done next, as well as considering the consequences of any decision and how that affects determining the very best solution to a challenge.

Though there may be additional traits that we need to look for in any candidate that do not require any skills, this list is a great starting point to consider during our selection process.

For assistance with these and other employee management issues, or to invite Don to speak about any of these topics, contact him at 765-523-3259 or e-mail: don@dontyler.com



feel is lacking in their offspring that return to the family business. Passion is hard to create in someone from the outside, but it can be tapped into by the person who wants to be fully engaged in their business. Many people who started to work in an area admit that they were not passionate about it at the beginning, but learned to love the

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Pregnancy Testing: Several Options To Fit Your Production System

Many beef producers pregnancy test cows after breeding season because it's a major cost to feed open cows through winter. Another reason to test is that finding more than a few open cows may signal a disease problem such as trichomoniasis, vibriosis, IBR, BVD, or leptospirosis. Feedlots may check incoming yearling heifers to make sure they are not pregnant.

Methods include palpation, ultrasound and blood tests. Rectal

palpation is the traditional method. Clues that the cow is pregnant can be detected as early as 30 days and definitely by 45 days gestation, by feeling the uterus, ovaries, and uterine arteries through the rectal wall. Experienced veterinarians can also estimate stage of pregnancy with fair accuracy.

Dr. Steve Hendrick, Coaldale Veterinary Clinic, Coaldale, Alberta (a feedlot, dairy and cow-calf practice in southern Alberta) says that

being really good at pregnancy testing by palpation (and determining stage of pregnancy) is an art; it's not all science. "There's a lot of variability in size of the cotyledons, size of the fetus, etc. You have to weigh many factors. The same with ultrasound. You can take trunk measurements and crown-to-rump length, to estimate stage of pregnancy," he says.

He prefers to use ultrasound because you can sex the fetus (in early pregnancy) and also assess viability of the fetus. Trans-rectal ultrasound allows visualization of the embryo/fetus as early as 26 days. There are two ways to do it—with the traditional arm-in rectal probe, or the newer extension-arm probe that eliminates the need for inserting an arm into every cow. The big advantage to the extension-arm unit is that it is much easier on the person doing the pregnancy testing. Palpation and arm-in ultrasound put a lot of wear and tear on practitioners who pregnancy check a large number of cows.

"Blood testing also has advantages (producers can draw the blood themselves), particularly for herds that are far from a veterinary service," says Hendrick. If the veterinarian has to drive 2 hours to get there, it will cost more for the farm call. For a small herd, it may also be more cost-effective to just draw the blood samples yourself and send them to the lab.

The disadvantage to the blood test is that you wait 2 or 3 days for results. This is the downside if you need to determine immediately which cows to keep or cull. It's not a problem if you'll be handling them again. Blood samples can be





drawn when bringing cattle in for pre-weaning vaccination of calves, for instance. Results would be available before the cattle are brought back in for weaning, and open cows could be sorted off.

The blood test detects a protein produced by the placenta, explains Hendrick. Blood tests have been available for more than a decade. Companies offering blood pregnancy tests are numerous and can be found with a simple Internet search.

The advantages of the blood test over palpation include being able to detect pregnancy a little sooner, with better accuracy, and less trauma to the animal. The blood sample can be easily collected by anyone, from a vein under the tail. The test is very accurate on heifers, and on cows that are 90 or more days past calving. If checked too soon after calving, there will still be some protein present in the bloodstream, which could result in a false positive.

The rancher can bleed the cows, using red-top tubes, then label and mail them. They don't need to be kept cool—just wrapped in bubble wrap to prevent breakage. This test works for anyone who has individual ID on their cows.

“The test is accurate as early as 28 days after conception. If you have a short breeding season on

heifers you could do this test 30 days after pulling the bull. With a synchronized AI program you can check them 30 days after insemination,” says Hendrick. Then you'd know which ones are open, early enough to sell them as open heifers to a feedlot market when the price for their age group is optimum.

Producers need to realize there's always a certain amount of early

pregnancy loss in every herd. “If you preg-check cows early, a few are no longer pregnant by calving time,” says Hendrick. “This is true with the blood test, as well. The pregnancy protein lingers in the bloodstream a couple months after calving, or after an abortion.” And if you took the blood sample just after a pregnancy loss it may show as positive. **FL**



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Both products are available in pouches holding 10,000 feedings at the food safety feeding rate for feedlot cattle. For more information, visit lallemandanimalnutrition.com. 

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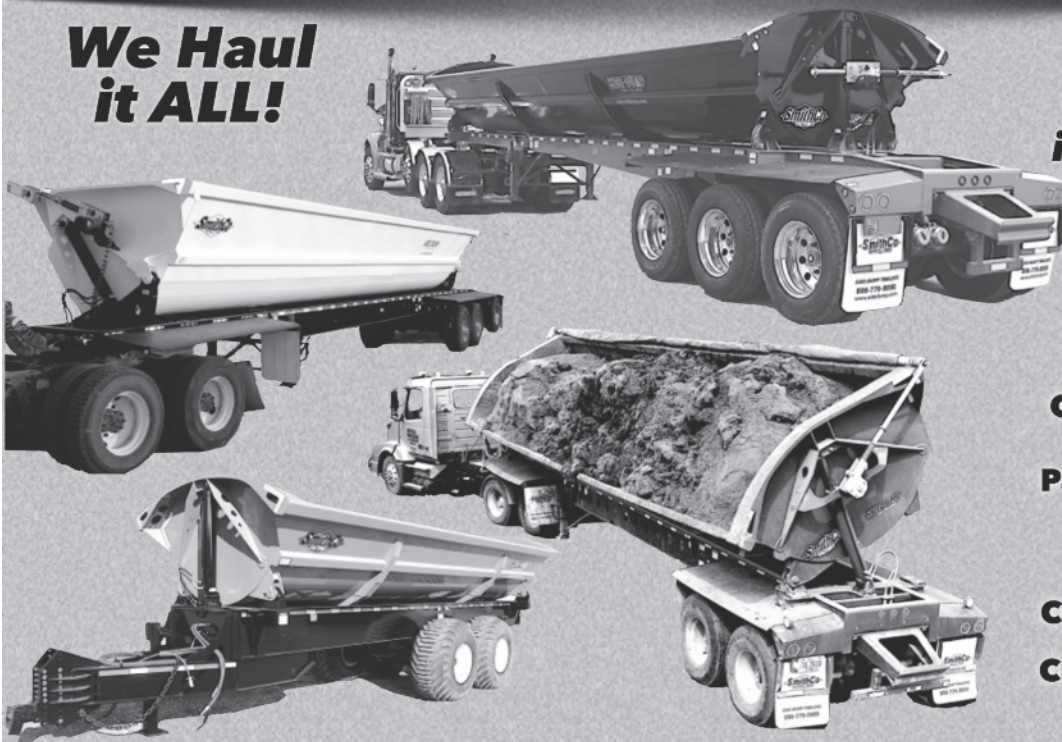
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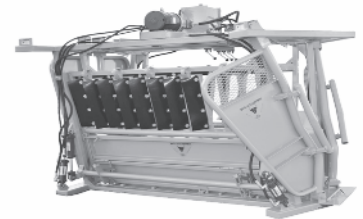
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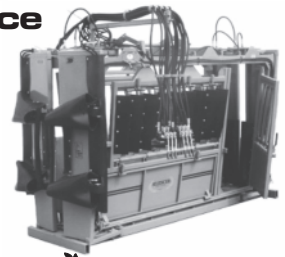
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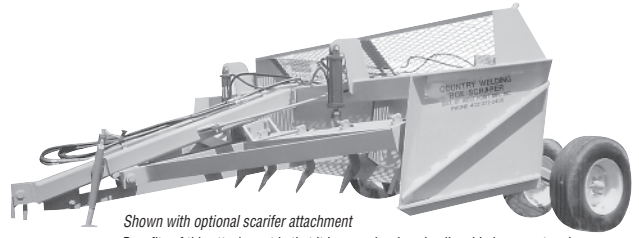
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FEED•LOT is published under ISSN 1083-5385

FEED•LOT (ISSN 1083-5385) is published eight times per year in February, March, April/May, June, August, September/October, November and December at no charge to qualified recipients, by FEED•LOT Magazine, Inc. 116 E. Long, Dighton, KS 67839. Periodicals postage paid at Dighton, KS 67839 and additional mailing offices. Non-qualifying subscription rates: \$45 per year within USA. \$60 per year for foreign, including Canada. Back issues \$10, including postage and handling. Please call FEED•LOT Magazine, Inc. for reprint and copy authorization, 620-397-2838. POSTMASTER: Send address changes to FEED•LOT Magazine, Inc. PO Box 850, Dighton, KS 67839.

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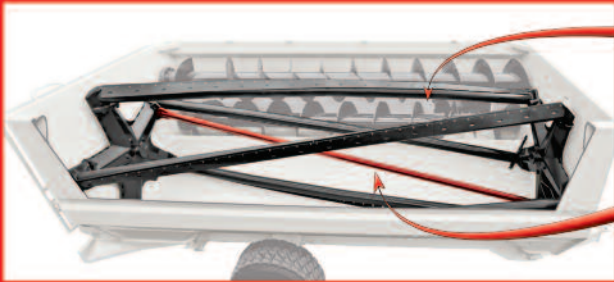
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