

FEED LOT[®]

FEEDER INFORMATION HIGHLIGHTS

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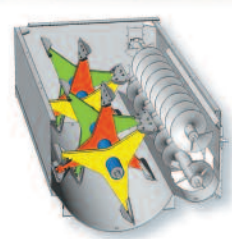
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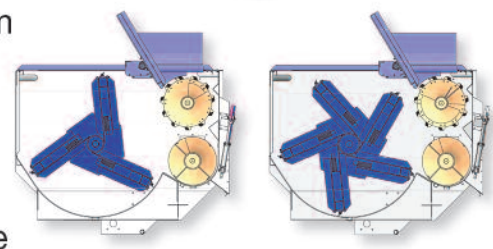
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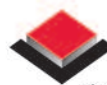
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Those are just a few of the comments from last year's Feeding Quality Forum evaluations. **FEED•LOT** magazine is proud to sponsor the event, along with Zoetis, Certified Angus Beef, Micronutrients and Roto-Mix. And this year we welcome IMI Global to the team.

In 2007, a group of forward thinkers developed the Feeding Quality Forum – a one-day meeting focusing on topics specific for cattle feeders. Today that goal still rings true.

This year's event will be August 29 in LaVista (Omaha), Nebraska, and August 31 in Garden City, Kansas.

The Feeding Quality Forum kicks off with Dan Basse of AgResource



Company. Dan offers a global perspective to ag markets and demand. His topic and speaking style will grab you from the beginning. Dan is continually one of the highest rated speakers we have and we are delighted he is joining us again in 2017.

The meeting then turns to value-added programs with Doug Stanton of IMI Global, who will discuss what opportunities are available and how to take advantage of these markets.

Next up is a discussion on price discovery with Ed Greiman of Superior Livestock Auction. Ed is heavily involved with the Fed Cattle Exchange.

At lunch, the focus shifts to honoring an individual who has made significant contributions to the cattle feeding industry. Lee Borck, president of Innovative Livestock Services will be presented with the Industry Achievement Award. Lunch also provides a great networking opportunity to visit with

fellow cattle feeders while enjoying a Certified Angus Beef meal.

The afternoon agenda features the topic of genetic value differences of feeder cattle. Justin Sexten with Certified Angus Beef will present this topic. The meeting wraps up with Richard Zinn of University of California-Davis relating feed intake to cattle performance.

Seating is limited, so those interested are encouraged to register soon. Prior to August 13, registration is \$50 per person, which includes lunch. Late registration is \$75 as space allows. Online registration is available at www.feedingqualityforum.com. If signing up online isn't your thing, give Marilyn Conley a call at 800-225-2333. She can take your registration over the phone.

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¹Rogers KC, Miles DG, Renter DG, et al. (2016). Effects of delayed respiratory viral vaccine and/or inclusion of an immunostimulant on feedlot health, performance, and carcass merits of auction-market derived feeder heifers. *Bovine Practitioner*. 50(2):154-162.
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GRIND IT RIGHT. MIX IT RIGHT. *Eat it all up.*

According to research conducted by North Dakota State University and South Dakota State University, using the right feed mixing equipment can make a difference in Daily Rate of Gain of up to .25 pounds per day.

"What matters is that every mouthful of ration is the same," says Karl Hoppe, NDSU Area Extension Livestock Specialist at the NDSU Carrington Research Extension Center. "It's all about making a meal and keeping them fed." The goal is a blend of feeds that creates a steady, even fermentation in the rumen. For some feeds like ensiled

high moisture corn mixed with dry rolled corn, blending can have a synergistic effect.

"First you start with a balanced ration, and everyone in the industry basically understands what that is. Now it's up to the feeder to deliver it to the feed bunk," says Hoppe.

In North Dakota, wheat middling, barley, beet pulp and distiller's grains can all find their way into the bunk, but corn is king. How fine to grind the corn depends on the size of the cattle. Whole corn is acceptable for finishing, when the ration is mostly grain. "However, you want the right ration to the

size of the animal," says Hoppe. "A 500-pound calf's metabolism is still designed for nursing, so a higher energy ration is needed at weaning. If the calf is larger, it can adapt to a higher roughage ration if your goal is to background the cattle at lower rates of gain."

Smaller calves benefit from a finer grind that increases digestibility and increases rapid rumen fermentation. Grinding disrupts the hull and exposes the starch granules. It also exposes more surface area to microbial and intestinal digestion and absorption.

Ground or flaked grains can also be easier to mix and store, but they don't come cheap. Grinding and mixing equipment is expensive.

Hoppe says it is up to the producer to determine the cost benefits of machinery investment, especially for backgrounders. "You may see lower performance in young calves on whole grains. But at \$20 a ton to process the grain, can you realize that value? If not, then is it worth it?" Along with pushing the pencil on the dollar investment, he cautions producers to factor in time. "Will you see a return on that hour a day it takes to grind?"

There are other factors to consider



as well. What's the rest of the ration? What does the manure tell you about how the grain is being digested? Does the size of the operation and number of cattle fed justify the equipment cost?

Hoppe says most find grinding hay beneficial to aid in mixing, though they will likely see only slightly higher dry matter intake and increased digestibility. If particle size is too large, mixing is problematic. If hay is ground too fine there is not enough fiber for cud chewing. And if cud chewing is reduced, acidosis can be a concern.

For both forage and grain, the type of mixer matters. Tub grinders are flexible in working with various forages and environments. Leasing and custom operators offer alternatives to machinery investment.

Vertical mixers are helpful for chopping hay prior to ration mixing and work well for rations of 40-60 percent roughage. "That makes

them a great piece of equipment for backgrounders or dairy, but not the best for finishing," says Hoppe. Most require a tractor with significant horsepower for operation.

Feed delivery wagons are designed to deliver silage, not mix feed. They work well for backgrounding operations where the ration is high in forage and when the feed is already mixed.

"It's not about product comparison," says Hoppe, "the issue is whether or not the equipment does an adequate job of mixing." He suggests performing a simple test. Sample feed from the first part of the bunk, then the middle, then the end of the row. If the feed analysis is the same, the mix is successful. If the profile is different, there's a problem. "That problem could be mixing time, settings, or the ration," says Hoppe. "It could be equipment or human error."

Mixing order matters. For

backgrounding, Hoppe recommends starting with grains, then adding pelleted supplements, silage, hay, then liquid supplement. Over or under mixing the ration can reduce effectiveness. Most mixers operate best at 60-90 percent capacity.

Hoppe says cattle will always do some sorting of feed, but the goal is to minimize it. Processing feeds improves utilization and digestion. Adding wet feeds and liquid supplements can improve palatability and decrease fines and dust.

Regularly scheduled feeding keeps feed fresh.

"Remember, cattle thrive on boredom," says Hoppe. "They don't like change. If you put a new feedstuff in front of them, it will take about three days for them to adapt. So for optimal performance, their ration needs to be consistent and well blended. The best delivery method is the one that fits the economics of the operation." **FL**

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INDICATIONS

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

CONTRAINDICATIONS

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

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

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

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

PRECAUTIONS

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

ADVERSE REACTIONS

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

EFFECTIVENESS

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

The effectiveness of ZACTRAN for the treatment of BRD associated with *M. bovis* was demonstrated independently at two U.S. study sites. A total of 502 cattle exhibiting clinical signs of BRD were enrolled in the studies. Cattle were administered ZACTRAN (6 mg/kg BW) or an equivalent volume of sterile saline as a subcutaneous injection once on Day 0. 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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The EYES Will Tell

A hands-on lesson at the North Dakota State University Feedlot School teaches producers how to use their powers of observation to assess cattle needs. Tim Schroeder, research assistant at NDSU's Carrington Research Extension Center, says he relies not only on his academic credentials, but on his personal experience as a cattle producer, when sharing tips with feedlot school attendees.

"We go out to the bunk and view the situation from the bunk side," says Schroeder. "It's very hands-on training."

The Carrington Research Center has more than 120 cows and approximately 300 calves on trial during the winter months, providing ample material for observation and discussion.

"When you come to work, the first thing you do is drive by the bunk and read the bunk," begins Schroeder. He then makes a simple mark with a good old pencil on a scrap of paper. "If there is some feed in the bunk, make a minus sign, a mark to take feed away that day. If the bunk is slick, make a plus sign, to increase the ration." If there is a small amount left, maybe 10-15 pounds, he says to "leave it alone." For a pen of 12, a Carrington Research Center standard, 10 lbs. of total ration is about 2 percent of the ration offered, an acceptable amount.

With that simple test in mind, Schroeder says the cattle feeder then needs to turn his attention to what he is feeding.

"When mixing, always add grains – whether corn, barley, peas, or another grain of choice – first. Then add supplements, your mineral and nutrition additives."

He says it is best to roll grains as course as possible, again, relying on visual assessment. "Corn needs to be barely broken open for calves to get what they need. There is no need to pulverize it. Just crack it open."

Schroeder cites studies of rolled vs. ground grains that show little difference in performance results between the two options.

The daily bunk check should also come with a bunk brush near by. "Keep bunks clean of cobs, manure, and rocks picked up from your straw pile. If you're finding those things every day, get on top of it." And be sure to clean old feed wet by rain before it settles in the bottom of the bunk to rot and mold. "Cattle will eat less if they taste and smell it," says Schroeder.

In winter, be sure to watch for a build-up of frozen manure near the bunk that can restrict access. Check for frozen water tanks, too. And make sure water is clean and fresh by looking for, and removing, dirt, feed and manure settled in the bottom of the tank.

He also teaches cattle feeders how to use their perception skills to monitor cattle health. "At feeding is the best time to check for sick animals," he says. "They're focused on the bunk and not watching you. They're less likely to try to hide." He says always look a pen ahead, and feed the same time every day. "Some should be waiting at the bunk, because that's their spot. And some should be getting up." About 10 percent of the cattle should be casually walking to the bunk.

"It's all about being hands-on, and observant," says Schroeder. "Take time to investigate anything out of the ordinary."

FL

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THE SMART CHOICE

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- 4 Staying power
- 5 Safety
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Brush Up on Silage Safety

Feeding silage is a routine part of cattle feeding, and silage safety should be a big part of that routine. As farmers and feedyards restock silage pits, early fall is a great time for a silage safety refresher.


Although most people consider a silage avalanche the biggest risk around silage piles – and it is a very important one – other risks abound and should not be ignored. Dangers like tractor or truck rollovers, machinery entanglement and falls are also possible. Establishing a silage safety plan should be included in a general feed yard safety program. Dr. Keith Bolson, Professor Emeritus, Kansas State University, has campaigned for silage safety alongside his wife for over a decade. They are proponents of regular safety meetings at feed yards.

“We cannot stop avalanches from happening, and they are impossible to predict, but we can prevent people from being under them,” said Dr. Keith Bolson. Lallemand Animal Nutrition has developed a silage safety basics video that is available on YouTube to assist in training programs. **FL**

Silage Safety Guidelines

1. Never allow people to approach the feedout face. No exceptions!
2. A rule-of-thumb is never stand closer to the silage face than three times its height.
3. Suffocation is a primary concern and a likely cause of death in any silage avalanche. Follow the “buddy rule” and never work in or near a bunker or pile alone.
4. Bunker silos and drive-over piles should not be filled higher than the unloading equipment can reach safely, and typically, a large unloader can reach a height of 12 to 14 feet.
5. Use caution when removing plastic or oxygen-barrier film, tires, tire sidewalls or gravel bags near the edge of the feedout face.
6. Do not remove surface spoiled silage from bunkers and piles that are filled to an unsafe height.
7. Use proper unloading technique, which includes shaving silage down the feedout face.
8. Never dig the bucket into the bottom of the silage. Undercutting creates an overhang of silage that can loosen and tumble to the floor.
8. Never drive the unloader parallel to and in close proximity of the feedout face in an over-filled bunker or pile.
9. When sampling silage, take samples from a front-end loader bucket after it is moved to a safe distance from the feedout face.
10. Never ride in a front-end loader bucket.
11. Never park vehicles or equipment near the feedout face.
12. A warning sign ‘Danger! Silage Face Might Collapse’ should be posted around the perimeter of bunker silos and drive-over piles.
13. Avoid being complacent! Always pay attention to your surroundings and never think that an avalanche cannot happen!
14. Every farm, feedlot, and beef cattle operation should have safety policies and procedures for their silage program, and they should schedule regular meetings with all their employees to discuss safety.

Courtesy of Dr. Keith Bolson



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NCBA supports FMD vaccine bank

The National Cattlemen's Beef Association (NCBA) 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 long-lasting 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."

As the letter was delivered to Capitol Hill, NCBA President Craig Uden stressed the importance of investing in a FMD vaccine bank, rather than trying to contain an outbreak after the fact.

"Simply put, we cannot afford to be locked out of valuable foreign markets again," Uden said. "It's taken us well over a decade to get back up to speed in Asia after the 2003 BSE scare, and we must have support and full funding for this FMD vaccine bank to protect for our vital industry. The consequences would be catastrophic."



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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More Cattle In and Outside Feedlots

Feedlots surprised the industry with sharply higher than expected June placements. Feeder cattle demand has been extremely strong based on very good feedlot profitability recently. 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 where 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 may be slowing down. The ratio of July beef replacement heifers to the January estimate is the lowest in the data series, 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. **FL**



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Using Earlage for Growing and Finishing Cattle

I am often asked about earlage, including the value of it as a feedstuff (which I can answer easily, it's great), the expected yield (which I cannot predict), and the mechanical aspects of harvesting (of which I have a reasonable understanding). Therefore, my research for this article is a compilation of field experience, many lab analyses and more than a few interviews with clients whom harvest earlage and have the practical knowledge. We'll begin with the easy topic, nutritional quality and use. Earlage is most accurately defined as the chopped and ensiled ear of corn, including a portion of the husk and all the cob and kernels of corn.

The table below is an average of 20 earlage samples from the past year taken between eastern South

Dakota and western Illinois.

The samples in the table represent a nearly ideal average product, about 40% moisture, with adequate starch and low fiber (NDF) content. Based on this analysis, dietary inclusion of earlage will be about 60-65% of the as-fed diet for growing cattle and 40-45% of the as-fed diet for finishing cattle, assuming 65% dry matter of the total diet. I utilize earlage as the sole source of corn for growing cattle and a major source of the corn, with additional shelled corn, for finishing cattle.

We have also been experimenting with using earlage as the sole source of roughage in finishing diets, pushing earlage inclusion closer to 50-55% of the as fed diet, and the results appear very promising.

When balanced correctly, earlage is a highly palatable feedstuff for starting, growing and finishing both beef and dairy/beef types of feedlot cattle. Not only is the kernel highly energetic, but the ensiling process also makes the cob somewhat digestible and a good source of rumen starch. Earlage is especially useful for finishing dairy/beef cattle, as it

appears to improve palatability of the total mixed ration, without making the diet too high in moisture.

Earlage as a feedstuff is gaining in popularity throughout the Corn Belt; however, questions about earlage production are abundant. The major questions appear to be when to harvest, how to harvest appropriately, what is the expected yield and is it cost effective compared to high moisture corn or corn silage.

Essentially, earlage should be harvested at black layer, similar to high moisture corn. At this stage, the kernel is about 30-35% moisture, with the plant matter being comparable, to slightly higher. There should be some green left in the bottom of the stalk when earlage is harvested, to help ensure the 35-40% moisture earlage product. Data from Pioneer suggest that earlage is roughly 20% cob/husk and 80% corn on a dry matter basis. The numbers summarized above indicate this is a bit low; it appears earlage is closer to 85% corn and 15% roughage. Thus if earlage is made from 150 bushel yield corn, the expected dry matter yield per acre will be about 4.5 tons per acre. If the earlage is harvested at 40% moisture, the total as fed yield per acre will be

Measure	Value
Moisture	40.0%
Crude Protein	7.8%
NDF	17.4%
Starch	60.8%
NEg	69 Mcal/cwt
FNDF	57.5%



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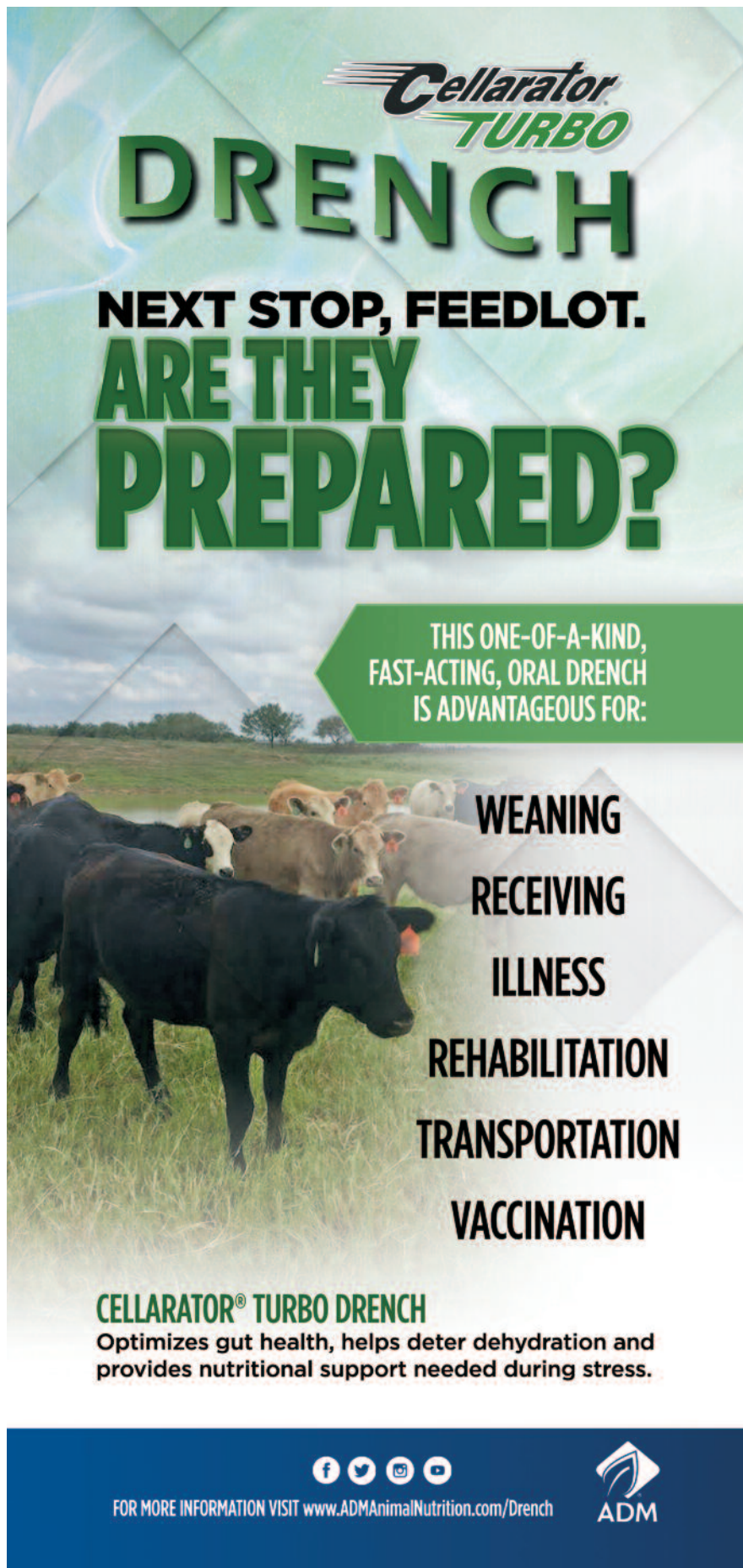


about 7.6 tons per acre. In order to calculate space requirements for storage, the estimate is about 32 lb of dry matter earlage per cubic foot. Therefore, if the yield is 4.5 tons of dry matter per acre, each acre of earlage will require 281 cubic feet of storage space. For a customized evaluation of your earlage crop, consult with your GPLC nutritionist. Pricing earlage is perhaps less straightforward and open to interpretation. An accurate price of earlage needs to be based off corn. If we began with \$4/bushel corn at 14% moisture (\$166/ton of dry matter), and assume that our earlage is 85% corn, then the earlage, based on corn, is worth \$141/ton of dry matter. Then we deflate the value of the earlage for its inherent moisture content (40%), the earlage is worth \$84.70/ton as-fed. This method is based off the value of the corn, and may not figure in any added cost of harvesting earlage over the cost of harvesting corn and each producer will need to figure that cost differential for themselves.

The final part of the story is harvesting and storing earlage. Typically, earlage is harvested with a snapping or picking head on a chopper. It is very important for the chopper to be equipped with a kernel processor and the ability to apply an inoculant to help ensure full and rapid fermentation. As with any ensilage, covering the bunker with a PLASTIC cover is essential. An oxygen barrier film is also very beneficial to ensure appropriate and complete fermentation.

Eralage is a high energy, palatable feedstuff with diverse applications in the cattle feeding industry. For those of you growing or finishing cattle, it deserves serious consideration in your production scheme. If you want a customized evaluation of earlage in your operation, please contact your GPLC nutritionist.

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PRODUCT INFORMATION
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ZUPREVO[®] 18%
(tildipirosin)

Injectable Solution for Cattle

ANTIMICROBIAL DRUG

180 mg of tildipirosin/ml. 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.

BRIEF SUMMARY: for full prescribing information use package insert.

INDICATIONS: Zuprevo[®] 18% is indicated for the treatment of bovine respiratory disease (BRD) associated with *Mannheimia haemolytica*, *Pasteurella multocida*, and *Histophilus somni* in beef and non-lactating dairy cattle, and for the control of respiratory disease in beef and non-lactating dairy cattle at high risk of developing BRD associated with *M. haemolytica*, *P. multocida*, and *H. somni*.

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: 1-800-219-3288.

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.

For a complete listing of adverse reactions for Zuprevo 18% reported to CVM see: <http://www.fda.gov/AnimalVeterinary/SafetyHealth>.

DO NOT USE ZUPREVO 18% IN SWINE.

Fatal adverse events have been reported following the use of tildipirosin in swine. NOT FOR USE IN CHICKENS OR TURKEYS.

RESIDUE WARNING: Cattle intended for human consumption must not be slaughtered within 21 days of the last treatment. Do not use in female dairy cattle 20 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.

PRECAUTIONS: 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 the slaughter withdrawal period. This may result in trim loss of edible tissue at slaughter.

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Cattle Feeders Hall of Fame Banquet Honors Four

On July 11, nearly 500 members of the beef industry gathered in Denver to honor four individuals for their dedication to the cattle-feeding business.

Jeff L. Biegert, founder of Midwest PMS / Biegert Feeds of Shickley, Nebraska and **Earl Brookover**, founder of Brookover Feed Yards in Garden City, Kansas were inducted into the *Cattle Feeders Hall of Fame*, which annually honors two leaders who have made lasting contributions to the cattle-feeding industry.

Biegert grew up under the Midwest motto of "hard work never killed anybody." He attended Texas Christian University, majoring in business. In 1976, Biegert moved back to Nebraska where he started a liquid feed manufacturing and cattle-feeding company called Biegert Feeds. Now known as Midwest PMS, the business has grown into 10 manufacturing sites and employs more than 150 people across six states

Brookover had a vision to develop what some considered wasteland into prime irrigated cropland. The grain surplus, combined with the moderate climate, inspired him to build the state's first commercial feedyard in 1951. For more than 65 years, Brookover Feed Yards has been feeding cattle. After Brookover's death in 1985, the management of the feedyard was passed to his son, E.C., and grandson, Ty.

Dee Griffin, D.V.M., M.S., clinical professor at Texas A&M University College of Veterinary Medicine was presented with the *Industry Leadership Award*, recognizing individuals who have demonstrated outstanding



(Top) **Mary Baldwin** accepts the award for the 2017 Cattle Feeders Hall of Fame Inductee for her father, **Earl Brookover**. Baldwin is pictured with **Keith Downer**.

(Bottom) **Jeff L. Biegert** (left) accepts the award for the 2017 Cattle Feeders Hall of Fame Inductee. Biegert is pictured with **Brett Gottsch** (center) and his wife, **Sally Biegert** (right).

leadership and provided exemplary service to the industry.

Dr. Griffin spent 25 years at the University of Nebraska Great Plains Veterinary Educational Center. He retired from the university in 2016 and began his current venture of developing veterinary student training in the Texas Panhandle.

Eulogio "Lohill" Dimas, feedyard manager at Southwest Feeders in Hayes Center, Nebraska received the *Arturo Armendariz Distinguished Service Award*.

Dimas has worked in the cattle industry for nearly 38 years. He works hard to facilitate his connections for the progress of the industry and the people who serve it. **FL**



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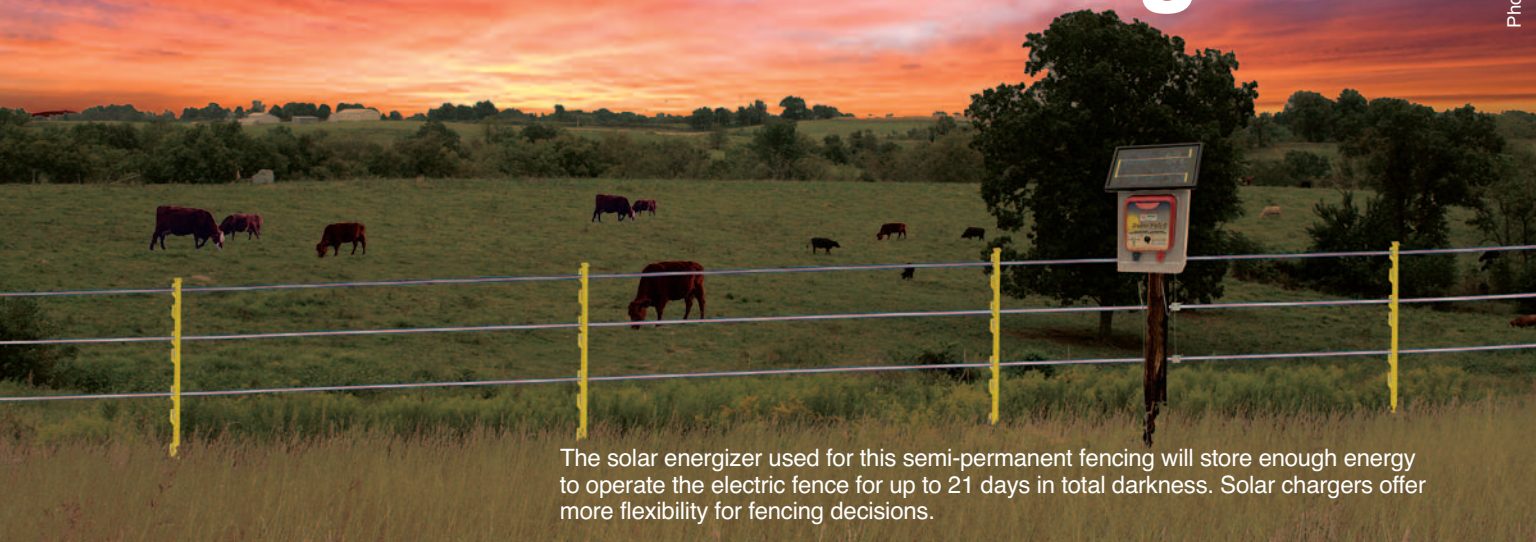
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months of age or older. Use of this drug product in these cattle may cause milk residues. A withdrawal period has not been established in pre-ruminating calves. Do not use in calves to be processed for veal. The effects of Zuprevo® 18% on bovine reproductive 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.



Portable Fencing for Rotational Grazing



The solar energizer used for this semi-permanent fencing will store enough energy to operate the electric fence for up to 21 days in total darkness. Solar chargers offer more flexibility for fencing decisions.

Rotational grazing makes better use of pastures than season-long grazing, and allows plants time to recover and produce more forage. Marginal pastures are improved in yield and stocking rate by conscientious rotation. However, there is no “set in stone” time per pasture or size of grazing cell. Decisions

should be made based on the land, soil health, rainfall and other environmental factors, as well as the type of cattle and marketing plans. Dividing a pasture into many segments allows for more time for re-growth/recovery.

The ultimate form of rotational grazing is mob grazing, making cattle graze in small areas and moving them daily or several times a day. This adds a lot of manure and organic matter (litter from trampling the uneaten portions of the plants), and facilitates greater forage production. With mob grazing, as many as 500 head on a single acre for a few hours at a time.

No matter what type of grazing system you choose, temporary electric fencing makes rotation easy.

Many people create permanent paddocks using traditional fencing or electric hard wire, then divide those paddocks with portable hot wire that can be moved as often as needed to strip graze or mob graze. Portable fencing is handy for strip grazing in winter—for stockpiled pastures, windrows or bale grazing. Portable fence is also useful on rented pastures where a person can’t

afford to invest in permanent fences.

Some producers use semi-permanent fence for paddocks that may be only 500 feet wide by 1 or 2 miles long, and put short, temporary fence across those long strips. Chad Peterson in north central Nebraska has 5000 acres and pastures all of it with 1000 cattle. He uses hill ground during winter when grass is dormant, letting it recover through the growing season. He mob grazes all the meadows, dividing them into long narrow strips, and further divides them with temporary electric fence into paddocks less than an acre in size. He moves the cattle 5 or more times each day and only grazes each small piece once during the growing season, then gives it a year to recover.

With portable fencing, you can let cattle eat a segment of the pasture, then move them to the next piece and move the fence along with them, says Ken Turner, who works for Parker McCrory, a manufacturer of temporary fencing materials. “We have steel pigtail post as well as plastic poly posts, fiberglass and rod posts. Each kind has an advantage, so it’s the customer’s



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choice," says Turner.

There are also many kinds of electric wire. Ian Gerrish of Cobb Creek Farm, in Hillsboro, Texas, prefers braided poly wire. "It's more durable than tapes, and easy to handle," he says.

He uses a geared reel for un-rolling/rolling up. Most reels come with guides (to keep the wire from spinning off the sides), and this helps prevent snarls. I also like the step-in posts," says Gerrish.

Those posts are easy to put in without having to pound them. "If ground gets really hard in summer, it may be a challenge, but some posts have hooks on both sides and it's easy to put them in and out if the ground is not too hard."

When moving a fence he takes the posts out first, unhooks the wire, then reels it in like fishing line. "This is not recommended; they say it will shorten the life of the poly wire, but I have some I've been using 5 years and it's still not

showing wear. By contrast, I've used other types of wire that would completely fray out if you did this. Reeling it in saves a lot of time," says Gerrish.

For successful rotational grazing, you need your cattle well trained to a hot wire, and have a good fence charger. "We manufacture both battery and solar powered fence chargers," says Turner. "We also sell a/c chargers, and if you have a power source, that's a good option. These units work best for a fence that's close to a barn, or wherever there is readily available electricity," he says.

Many pastures are in remote areas, however, and a battery or solar power are the only options. "A 6 or 12-volt battery works, though the 12-volt has more power/output. What you need depends on length of fence, whether vegetation is growing in the fence, etc. Weeds or grass can short it out if there's not enough power. The 12-volt is more expensive, but has more power

and is designed for longer fences and vegetation against the fence," explains Turner.

There are many good solar energizers today, and some contained units with a battery that's easy to move around. "It fits on top of a T-post and all you need to do is ground it," says Gerrish. "I prefer solar over any other power source. The systems today are very reliable, and you don't need to worry about your power going out or a battery running down," he says.

Check it now and then, to make sure it's working. Carry a tester, and every time you go out to the field, check the fence. Solar chargers are dependable even during long periods of cloudy weather, with the right size battery. "Most of the recommended sizes have a 10-day to 2-week window. It would take that long without sunshine to kill the battery," Gerrish says. Most of the time you have intermittent sunshine to keep it going. **FL**

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Early Pregnancy Testing Heifers Has Value

When raising heifers, it pays to have a short breeding season—if breeding by natural service—and to pregnancy test as soon as possible after the breeding season or an AI protocol. Yearling heifers should have a short breeding season (45 days at most—the equivalent of 2 heat cycles—and some producers only give heifers 30 days to breed). This is the best age to cull, regarding fertility and efficiency. You should never keep a yearling that's a slow breeder.

Rectal palpation is the traditional method of pregnancy testing. Pregnancy can sometimes be detected as early as 30 days and definitely by 45 days of gestation, feeling the uterus, ovaries, and uterine arteries through the rectal wall. For checking early, however, many producers prefer ultrasound. An experienced technician using ultrasound can detect pregnancy earlier than palpation, at about 21 days.

A blood test is also useful for early pregnancy detection. There have been several tests developed using hormone measurements in blood and milk to confirm pregnancy. A commonly used blood test was developed by Dr. Garth Sasser, University of Idaho. He discovered a protein produced by the placenta of ruminant

animals, detectable in their blood, and founded a company called BioTracking. His blood test called BioPRYN (Pregnant Ruminant Yes/No) for cattle, sheep, goats, and other ruminants became commercially available in 2002 and today there are more than 50 labs in North America that process blood samples.

There are now two other blood tests besides the BioPRYN test. One test is from IDEXX Laboratories, with headquarters in Westbrook, Maine. According to Frank Winslow, Director of Worldwide Marketing for IDEXX, this test was launched in August 2011, using ELISA assays to check for pregnancy-associated glycoproteins (PAG). The IDEXX test is accurate 28 days after breeding. "This test delivers 99.3% sensitivity and up to 95.1% specificity after breeding, so clients can know with more than 99% certainty that a cow is open," says Winslow. In 2016 IDEXX launched a rapid visual pregnancy test—a 21-minute assay that can be read by a veterinarian without laboratory equipment—utilizing blood samples previously collected.

The other blood test is by Genex, called DG29. This test targets a different protein in the blood, but works on the same principle. According to Laurie Lancaster of AgSource Laboratory (Jerome, Idaho), the DG29 test is accurate as early as 29 days post breeding. "There are two labs that process the blood samples: the AgSource Laboratories located in Menomonie, Wisconsin, and our lab here in Jerome. We also have a milk test—which is probably more practical for dairy cows, but can be used in beef cattle. With a milk sample we can determine pregnancy with accuracy any time after 35 days post-breeding," says Lancaster.

Two years ago, BioTracking introduced a new tool for checking heifers, called the BioPRYNhfr-25 blood pregnancy test. At 25 days post-breeding, BioPRYNhfr-25 is an early, accurate open detection for heifers. Research in commercial settings confirms BioPRYN is 99.9% accurate when a heifer is identified as open 25 days post-breeding.

Dr. Fred Muller's Ag Health Laboratories in Sunny-side, Washington, handles many BioPRYN blood tests. He says this is a great tool to determine if heifers settled to an AI breeding or bred later to a cleanup bull—if you wait two weeks after a synchronized AI breeding before putting a cleanup bull with the heifers. "If you AI the heifers, you can still put them with a bull in a couple weeks, but 25 days after they've been AI'd you can pull a blood sample and see if they were AI bred," explains Muller. Any heifer that settled to the AI breeding will be confirmed at that time by the blood test, whereas any that settled two weeks later to the cleanup bull wouldn't show positive yet.

Many producers want to know if they settled to AI or the cleanup bull, and an early test allows you to cull



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A blood test is the fastest way to determine pregnancy in cattle. Early detection can help make quicker decisions on keeping or culling animals, and in turn, gives more opportunities for marketing decisions.

the late or open ones earlier, if you wish, and sell them at the peak of the market.

"There is a lot of data on how much better the early-bred heifers will be as cows, and how much better they are at getting pregnant in subsequent years if they get pregnant early in their first breeding season. Heifers that conceive in their first cycle with the bull or first AI breeding tend to get pregnant again in their 2nd and 3rd (and subsequent) years at an earlier date and are more productive throughout their lives. The ones that are late continue to be late," says Muller.

Data shows that heifers that get pregnant early produce about 700 pounds more calf in their first 6 calves than heifers that breed late. "Give them an early window in which to become pregnant, and don't keep breeding them. Check them soon, and sell the open ones in July when they are very valuable. This could make more money than waiting until fall when they are bigger and their value has gone down. If you have grass and want to treat them as a stocker you might keep them, but sometimes people get to August or September and are running out of grass. It would be better to pull those open ones off right away and sell them," he says. **FL**



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Managing Difficult Employees

Managing people is commonly listed as one of the toughest responsibilities of managers. They can handle production issues, weather, animal health, facility and other challenges as a regular part of their day, but when it comes to people, their frustration level seems to hit the red zone.

Difficult people in particular consume tremendous amounts of time that could be used more effectively in other areas. They are a distraction to other managerial duties and other employees, and a disruption to many areas of production. These people may also be more prone to poor treatment of animals and equipment.

Some Considerations:

Your employees need to know the behavioral expectations for

your company's culture and have a clear understanding of appropriate and inappropriate behaviors. These expectations must be consistently and constantly reinforced.

Difficult employees have an effect on the entire operation. One of my clients had a difficult employee that was having a negative effect on everything, and everyone. He finally terminated that employee, and he could not believe how well everyone got along for the next three months! Termination is not the solution for every situation, but it may be necessary.

Your Action Steps:

The key to dealing with difficult people is—don't put it off. When you see inappropriate behavior, mediocre performance or conflicts being created by an employee's

attitude, take care of it. As my pastor likes to say, "You can deal with the two guppies you have today, or the 500 you will have next week." You can fix small problems or big problems. If you delay, your problem just gets bigger and bigger.

You can initially talk to the employee about appropriate vs. inappropriate behaviors and attitudes and the effect that it has on their coworkers. Be sure that if you are pointing out their inappropriate behaviors be sure to give an example of a more appropriate response or action. Some people simply don't know how to behave in certain workplace situations.

If your initial actions don't get the desired results, plan your discussion and document your key points in writing. Use examples you have seen personally so there can ►



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6 REASONS WHY **ZACTRAN**[®] (gamithromycin) IS THE SMART CHOICE.

1 PATHOGEN SUSCEPTIBILITY.

Bovine Respiratory Disease (BRD) often involves more than one bacterial pathogen, including *Mannheimia haemolytica*, *Pasteurella multocida*, *Histophilus somni* and *Mycoplasma bovis*. These pathogens are sensitive to gamithromycin, the active ingredient in ZACTRAN.

And unlike some antimicrobials, ZACTRAN is labeled to treat all four of these major BRD pathogens.

2 SPEED TO ACTION IS IMPORTANT.

When it's BRD, you want antimicrobials to get to work quickly to minimize lung damage. With ZACTRAN, you should start to see improvement in sick cattle the next day.¹

Cattle treated with ZACTRAN responded within 24 hours, they had lower temperatures, were more alert and breathing easier.¹



3 GETS TO THE SITE OF INFECTION.

The pulmonary epithelial lining fluid (PELF) covers the surfaces in the lung and is the primary site of bovine respiratory disease infection (BRD).² ZACTRAN travels with immune cells to the site of infection – the PELF.³ And it gets there in just 30 minutes.^{3*}

*Clinical relevance has not been determined.

4 STAYING POWER IN A SINGLE DOSE.

The animal's immune system needs time to fight off BRD. ZACTRAN gives them that time with 10 days above MIC₉₀ in the lung and BAL cells.^{*3}

*Clinical relevance has not been determined.



5 SAFETY AND EASE OF USE MATTERS TO YOU AND YOUR FAMILY.

Accidental needle sticks can and do happen. So you want a product that offers minimal risk while also minimizing the need to break up doses among multiple sites. ZACTRAN can be used with automatic syringes and offers a low dose volume. Bonus! It has excellent syringeability even in freezing temperatures⁴ – because it seems like calves pick the coldest days to get sick.

6 SAVES YOU MONEY.

Last but certainly not least, economically managing BRD is critical to maintaining a profitable herd. When you compare costs per dose and add in all the other benefits, you'll find ZACTRAN is a great value. Compare and see for yourself at ZACTRAN.com/calculator.

BRD is a serious condition in calves. That's why choosing an antimicrobial is an important decision. When you look at all of the above, you can see it's a potent combination – and why ZACTRAN is the smart choice.

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¹Sifferman 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. ²Giguere S, Tessman RK. Rational Dosing of Antimicrobial Agents for Bovine Respiratory Disease: The Use of Plasma Versus Tissue Concentrations in Predicting Efficacy. *Intern J Appl Res Vet Med*. 2011;9(4):342-355. ³Giguere S, Huang R, Malinski TJ, et al. Disposition of gamithromycin in plasma, pulmonary epithelial lining fluid, bronchoalveolar cells and lung tissue in cattle. *Am J Vet Res*. 2011;72(3):326-330. ⁴Data on file at Merial.



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IMPORTANT SAFETY INFORMATION: For use in cattle only. Do not treat within 35 days of slaughter. Because a discard time in milk has not been established, do not use in female dairy cattle 20 months of age or older or in calves to be processed for veal. The effects of ZACTRAN on bovine reproductive performance, pregnancy and lactation have not been determined.

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August 31, 2017 - Clarion Inn - Garden City, KS

9:30 a.m. Protein and Feedstuff Market Outlook
Dan Basse, President, AgResource Company

10:45 a.m. Value-Added Programs: Feeding for Market Opportunities
Doug Stanton, Vice President, Sales and Customer Development, IMI Global

11:30 a.m. The Importance of Price Discovery
Ed Greiman, Superior Livestock Auction

12:15 p.m. Presentation of the 2017 Industry Achievement Award to: Lee Borck, President, Innovative Livestock Services

12:30 p.m. Lunch featuring Certified Angus Beef® brand cuts

1:45 p.m. Genetic Value Differences of Feeder Cattle: Illustration and Opportunities
Justin Sexten, Ph.D., Director, Supply Development, Certified Angus Beef LLC

2:30 p.m. Feed Intake and Feedlot Cattle Performance
Richard Zinn, Ph.D., Professor, UC Davis Department of Animal Science

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Difficult Employees... from previous page

be no argument as to what actually happened. Give brief and concise details of what they did and how they should have done it differently. Make it a short conversation that is focused solely on this situation, their need for change, the effect that it has on their coworkers, your time, your priorities and the overall productivity of the operation. Don't accept any blame they try to place on anyone else. Let them know you will hold those people accountable as well, but they must accept full responsibility for their actions, attitudes and behaviors.

If this initial documented conversation does not get the desired results, take it to the next level with clear expectations for change—i.e. the specific behaviors or actions they need to modify. Detail the steps they must take, and let them know that you will be monitoring their behavior for the next seven days. At the end of those seven days you will have another very brief conversation about their progress. If at any time they do not meet expectations, follow your Employee Handbook Policies to the letter. If they meet expectations, then plan another meeting for 7 days later. If during that week they meet expectations, then plan one more week for a follow up. It is essential to monitor their behavior for a total of 21 days in a row because that is how long it takes to re-wire the brain with a new behavior. Throughout this monitoring, use the phrase, "...you're under the microscope on this..." as a way to help them understand the

significance of this process.

Difficult people frustrate managers, discourage coworkers, make the workplace more hazardous and increase production costs. The more effectively we deal with them in a timely manner, the


more we reduce these negative impacts on everyone involved. **FL**

Don Tyler is founder of Tyler & Associates Management Coaching and President of Good Day's Work LLC, which provides ag-specific safety training. He can be reached at don@gooddayswork.ag or by calling 765-490-0353.



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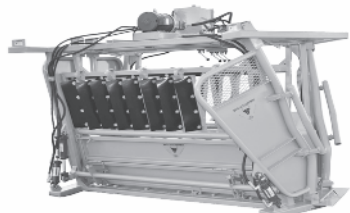
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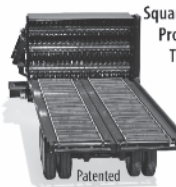
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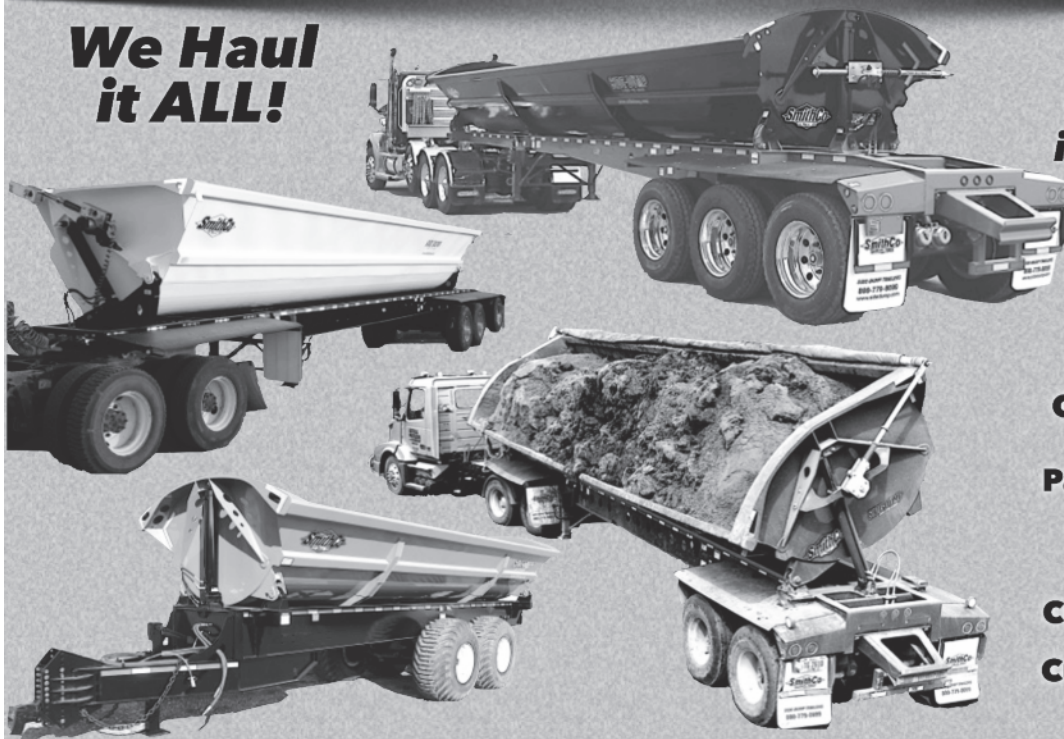


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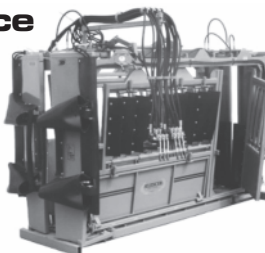


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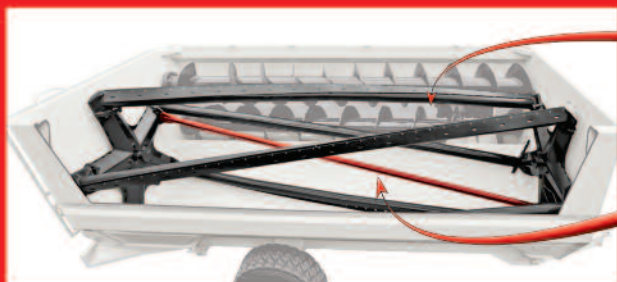
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