

FEEDER INFORMATION HIGHLIGHTS

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Volume XXV Number 1 February 2017 R

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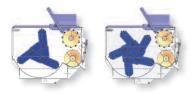


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Volume XXV Number 1 February 2017

FEATURES



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FEEDLOT FOCUS

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COW CALF CORNER

Winning the battle against lice

This pesky winter parasite and wreck havoc

This issue's cover is made up of our 25 years worth of covers. If you look closely you will notice the tan background. This color was used extensively in the brochure and newsletter work that Bob did over the years. It was used so much that around our office it was referred to as "Bob Tan." — Greg Strong

SPRING CALVING FOCUS

Prepare now for spring calving	
Winter is the time to plan ahead	
Calving season checklist	
Do you have everything you need?	
Which comes first? Calving or rebreeding?	
Don't leave rebreeding as an afterthought	

MANAGEMENT

New on OSHA's radar — Feedlots Be prepared with proper documentation

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EDITOR'S DESK

This issue marks the 25th year of production for *FEED*•*LOT* magazine. A lot has changed since that time. In 1992, the Dow Jones was at 3,413. A gallon of gas was \$1.13. A 700 pound feeder steer averaged \$83.15. Fed steers averaged \$75.31. *FEED*•*LOT's* first issue featured



topics like sorting for performance, factors contributing to death loss, measuring shrink, improving feed efficiency and an interview with Paul Engler. In 1992, I was

In 1992, I was a young adult,

fresh out of school and excited to find my way in the world. A few short years later, my husband's career in the livestock industry moved us to Kansas, and I saw my first copy of *FEED*•*LOT* magazine. Little did I know those connec-

tions would turn into a long term career with the publication. A move to Texas and three children later, I'm happy to still be involved with the magazine.

In some ways, things haven't changed all that much. Even with great technology, a good pen rider is one of a feedyard's most valuable assets. Cattle are still fed multiple times a day with equipment designed to deliver a balanced ration. And a lot of business is still solidified with a personal handshake and good word.

As far as *FEED*•*LOT* magazine goes, we continue to publish articles with ideas that will either make money for cattle operations, save money for cattlemen, or are news worthy and pertinent to the industry. And we hope to continue to do so for another 25 years.

This issue comes on the heels of the passing of Bob Strong, cofounder and former editor of *FEED*•*LOT*. Bob's vision still rings true in the magazine, keeping our information short and easy to read. We pay a special tribute to Bob on page 18-19 of this issue, looking back at how far we've come in this venture.

It will be interesting to see what the next 25 years will bring. The Internet and rapid information cycle has made a big impact on journalism and publishing, just like in the cattle business. We will continue to navigate those waters with you, and hopefully look back with fond memories of cattle prices from 2017.

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Seismic shift in 2016 beef cattle markets

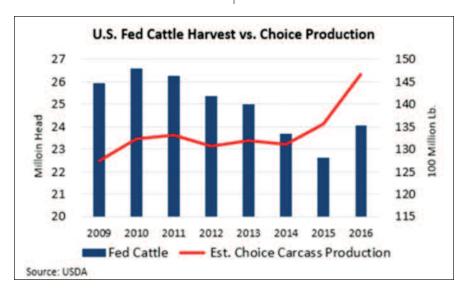
The shifting tide for beef markets in 2016 was pulled by the cattle cycle's return, with its economic tradeoffs always seeking equilibrium. The year opened with foreshadowing if not dread in view of the 31% plunge in fed-cattle prices from the January 2015 high to its December low. The only wild card was just how deep that expansioninduced gash would go as leverage shifted from producer to processor.

It went deep, the full impact coming home to roost. Cow-calf operators had responded swiftly to the price signals that begged for more calves as early as fall 2013. By the start of last year, USDA reported beef cow numbers restored to a pre-drought 30.3 million, matching the early 2012 estimate after gaining 4% in just two years. CattleFax said 58% of the growth went to restocking of the droughtaffected Southern Plains. Further expansion in the past year was expected to add another 850,000 cows (2.7%) in the January 2017 USDA report.

Declining capacity at the packing level over the past couple of years set the stage for a significant leverage shift as fed cattle supplies rebounded in 2016. Red ink was blamed for plant closures in Texas, Iowa, California and Minnesota, but the resulting bottleneck as cattle numbers grew meant full utilization of packing capacity in 2016. Packers achieved record profits near \$200 per head at their widest, with months of positive margins on the growing supply for a 6.1% increase in steer and heifer harvest, averaging 463,000 head per week.

The record-heavy carcass weights of 2015 continued through the 1st quarter of 2016, up another 16 lb. year-over-year and raising that bar still higher. But fed supplies became current through the 2nd quarter even as the previous year's expanded calf crop yielded an extra 24,000 head per week last spring, bringing carcass weights lower and in line with 2015.

Carcass weight trends in the second half of 2016 were kept in check by the declining fed cattle price from \$120/cwt. in early July to the low of \$97/cwt. in mid-October. Cattle feeders sold willingly and early throughout that slide, at consequentially lighter pay weights.



Although seasonal patterns expect the heaviest carcass weights each fall, the second half of 2016 finally produced an average 8 lb. decline from 2015. USDA reported steers ranging from 880 lb. to 914 lb. for the third and fourth-quarter averages, respectively. In the end, 2016 still recorded a 1 lb. increase in carcass weights and 6.12% more total beef from fed cattle.

BY PAUL DYKSTRA

Add that to a 4.7% increase in the cow harvest for a net per-capita increase of 1.7 lb., according to USDA and CattleFax. Fortunately, the per-capita net beef trade made an offsetting move, up 1.5 lb. on increased exports and decreased imports. Even so, the cattle feeder's share of the composite cutout declined to 53.8% compared to 57.6% in 2015. End-user beef prices may line up closer to cutout values in 2017, but with more cattle on feed expected, few expect any shift in favor of cattle feeders.

As the nation's production sectors have become adept at maximizing pounds per head, they continue to improve product eating quality as well. USDA quality grade measures have proven that what was once unthinkable is now the norm in terms of U.S. average quality grade levels.

We have reported annually on the tremendous era of increases in U.S. Choice production since 2006, rising from that modern-day low of 51% Choice to the 2016 figure of 70% — up just a point but continuing the trend. The Prime grade also increased by half of a point to average 5.56% in 2016, a much larger proportional change in a much smaller grade category.

Heavier carcass weights, refined grading technology, grade-friendly

implants and use of distillers' byproducts helped those trends. They were enabled by seedstock producers who responded to demand with a greater focus on carcass traits and marbling.

The number of branded beef labels keeps growing as processors and end-users collaborate to extract value from all kinds of beef. The 203 USDA-certified programs in 2016 included 147 that specify Angus-type. First and largest, the Certified Angus Beef[®] brand (CAB[®]) marked 12% growth in annual fiscal sales on the year, surpassing 1 billion pounds with ten consecutive annual records.

Of course, the rapid expansion brought more CAB-eligible cattle. The identified portion of fed steers and heifers (predominantly blackhided) came in at the 5-year average of 62.5%, but up a little from 2015. Of those eligible, a record 28.9% were accepted under the

For all of the mostly negative drama that characterized the year, it ended on relatively solid footing with boxed beef cutout values and cash fed cattle prices much improved.

brand's 10 carcass standards, up from 27.3%. This high-water mark captured roughly 16% of all U.S. fed cattle, about 73,000 head per week.

Marbling remains the factor excluding most eligible carcasses in their CAB bid. The brand's carcass weight ceiling of 1,050 lb. and ribeye-area requirement between 10 and 16 square inches have grown in significance as finished weights crowded and spilled over the boundary. Consequently, noted quality grade improvements and lighter year-on-year finished weights in 2016's second half teamed up to boost the annual CAB acceptance rate.

While the pressure came off of

cattle supplies in 2016, this was still the 3rd smallest annual harvest since 2000 in terms of head count. The 23-million-head harvest of 2016 was 23.4% smaller than that of 2000. The emergence of record sales volume in premium branded product during historically low cattle supplies shifted the beef market reality.

Even so, the question of market demand has not always been clear, with producers in all sectors varied in their approach to commodity versus quality focus. That difference remains today, but market signals have become clearer in the face of a growing proportion of high-quality beef compared **>**

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BRIEF SUMMARY (For full Prescribing Information, see package insert.)

INDICATIONS: Norfenicol is indicated for treatment of bovine respiratory disease (BRD) associated with Mannheimia haemolytica, Pasteurella multocida, and Histophilus somni, and for the treatment of foot rot. Also, it is indicated for control of respiratory disease in cattle at high risk of developing BRD associated with M.haemolytica, P. multocida, and H. somni.

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

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

Can be irritating to skin and eyes. Avoid direct contact with skin, eyes, and clothing. In case of accidental eye exposure, flush with water for 15 minutes. In case of accidental skin exposure, wash with soap and water. Remove contaminated clothing. Consult physician if irritation persists. Accidental injection of this product may cause local irritation. Consult physician immediately. The risk information provided here is not comprehensive. To learn more, talk about Norfenicol with your veterinarian.

For customer service, adverse effects reporting, or to obtain a copy of the MSDS or FDA-approved package insert, call 1-866-591-5777.

PRECAUTIONS: Not for use in animals intended for breeding. Effects on bovine reproductive performance, pregnancy, and lactation have not been determined. Intramuscular injection may result in local tissue reaction which persists beyond 28 days. This may result in trim loss at slaughter. Tissue reaction at injection sites other than the neck is likely to be more severe.

RESIDUE WARNINGS: Animals intended for human consumption must not be slaughtered within 28 days of the last intramuscular treatment. Animals intended for human consumption must not be slaughtered within 33 days of subcutaneous treatment.

Not approved for use in female dairy cattle 20 months of age or older, including dry dairy cows as such use may cause drug residues in milk and/or in calves born to these cows. A withdrawal period has not been established in pre-ruminating calves. Do not use in calves to be processed for veal.

ADVERSE REACTIONS: Inappetence, decreased water consumption, or diarrhea may occur transiently.

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Seismic shift... from previous page to Select and "no-roll."

The Choice-Select production ratio reached a modern-era record of 3.5 to 1 last year, while the USDA-reported price spread between those grades increased \$1.80/cwt. above the 2015 average, topping the 5-year average by \$0.45/cwt. Urner Barry further quotes the CAB/Choice cutout spread at \$14.44/cwt. in the 2016 average weekly spot market, a 67% increase in the premium above low Choice compared to 2015.

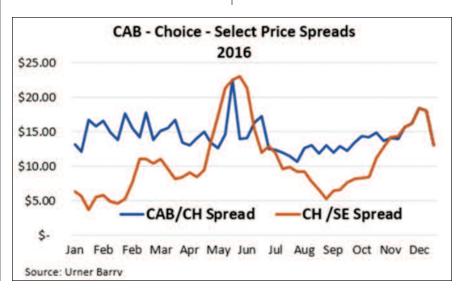
We're often asked, "How large a proportion of quality product will the market absorb at a premium?" The data continues to remit an ever-growing demand as we summarize price and quantity.

Another theme of 2016 was that of price discovery for fed cattle. The long-term decline in bid-andask "cash" trade volume caught a break with the internet-based Feeder Cattle Exchange's fixedtime bidding portal on Wednesdays. Primarily available from September on, it included as many as 12,000 head of fed cattle.

Formula-based sales remain the majority of the market, though often with some tie to carcass quality and yield. USDA reported higher premiums paid for cattle sold specifically on a carcass-value basis, in both quality and yield grade categories. The CAB premium for the year came in at \$4.50/cwt., up 38¢ and paid on top of any Choice premium. The top end of the range for CAB reached north of \$11/cwt. on one grid when supply and demand lined up perfectly in that market-sensitive pricing format. Yet greater availability of Prime carcasses pushed premiums for the richly-marbled product lower by a dollar, netting an average of \$15.02/cwt.

Cutability has become an issue on the heaviest, longest-fed cattle in the past two years with more Yield Grade (YG) 4s cropping up at times. Packers consequently turned the knob up on premiums for YG 1 and 2 carcasses to average \$5.71/cwt. and \$3.03/cwt., respectively. Those yield grades gained nearly a dollar of added focus back in August of 2015, which remained steady from there forward. A dollar and a half adjustment to the YG 4 discount coincided with those changes, increasing the 2016 average discount to \$9.79/cwt.

For all of the mostly negative drama that characterized the year, it ended on relatively solid footing with boxed beef cutout values and cash fed cattle prices much improved. There will be highs and lows in the new year but the beef business remains an exciting and worthwhile endeavor, winning favor with flavor and higher quality each year.



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FEEDLOT FOCUS

BY TERRI QUECK-MATZIE

Getting the "right mix" this winter

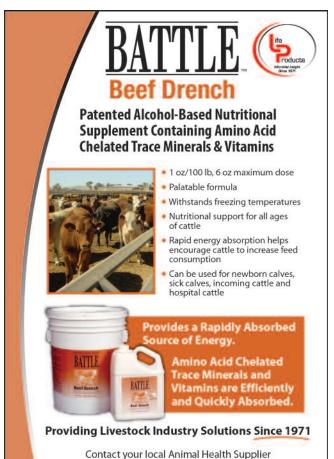
Feeding cattle in the winter can be a challenge. Subzero temps, biting winds, flying snow – none of these make for stress-free circumstances.

Add equipment breakdowns to the mix, and its enough to make even the most dedicated cattle feeder head to the Internet to research new careers.

"The last thing you want to do is be out there dealing with equipment failure when the problem is something that could have been taken care of ahead of time," says Kelly Smith, product specialist for PMR Mixers with Kuhn North America, Inc.

Smith joins a host of feeding equipment experts who cite pre-season equipment maintenance as the single most effective way to reduce winter feeding problems.

"We encourage all our customers to check both the truck and mixer before winter starts," says Mark Cooksey, President and COO of Roto-Mix in Dodge City, Kansas. "And we still see a spike in service calls with the first blizzard." He says, oddly enough, it is often feeders in the southern states that are caught off guard. Those in northern regions have already learned their



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lessons the hard way.

Along with making sure moving parts are greased and oil baths are sufficient, Cooksey says to be sure to check battery connections, fuel filters, and general engine condition.

Smith says to also check those tires, an item that is often overlooked.

Verlyn Rozeboom, Senior Vice President of Sioux Automation Center, Inc., located in Sioux Center, Iowa, adds making sure the PTO shaft is well lubricated to the list. "Even when amply greased in the summer, in the winter that grease gets gummy," he says. "It's best to put some light oil or Never Seez on it to make sure it telescopes in and out." He also says to keep the discharge apparatus well maintained. "Don't just check the oil bath, make sure the chains are properly adjusted."

Smith says to check with your regular dealer on preseason maintenance packages that offer a special price for winter-related preventative maintenance. The professionals are trained to think of details the operator may overlook.

Because, well, because it's cold

Obviously, those who are able to store equipment inside have an edge in fighting frigid temps. But for those who don't have the option, there are still precautions that can help. Block heaters will help trucks and tractors start on cold mornings and reduce the risk of gelled fuel. Feeders will also want to check their fuel supply to make sure their winter blend is sufficient.

"You'll want to watch your fuel and your hydraulics," says Cooksey. "And beware water in the oil bath. If it freezes it will cause bearing failure." Extreme cold brings its own headaches. "When it gets to 20 below zero, then you see metal fatigue and metal breaks easier."

Rozeboom suggests always starting the mixer before filling it to make sure it is in working condition. "Giving it a test run is good practice in winter and summer," says Rozeboom.

Albert Posthumus with Mixer Center in Stephenville, Texas, says a pre-start is especially essential with stationary mixers. "When it's real cold, let the mixer



run slow for a bit to warm up the oil," says Posthumus. "Otherwise you can blow filters and pump the oil dry."

Keeping the mixer running smoothly is often a matter of keeping it clean. "Any rations with moisture in them will freeze," says Cooksey. "If you leave it in the mixer, it will freeze in the mixer."

Smith adds feed additives are often sticky and that accentuates the problem. "Clean the mixer at the end of every day, or even more often if it needs it. If it freezes overnight it can be a challenge to start and moving parts can break."

Keeping equipment clean helps with efficient operation not just in winter's cold, but year-round. "Feed and feed additives are acidic and corrosive," adds Rozeboom. "If you leave it in the mixer, it creates a thin layer of rust, and that adds to equipment wear and tear."

Smith says general cleanliness and upkeep around the feedyard is helpful. Keeping bunks swept clean of uneaten feed prevents it from freezing down and spoiling. Taking care to cover commodities and other feedstuffs can prevent frozen chunks that can damage the mixer.

"Frozen chunks can come from around the edges in upright silos, too," says Cooksey. "When they get in the mixer they can really tear things up."

Smith says also keep an eye on water tanks: "If the water source is frozen, feed intake will go down."

All of these extras may be the last thing feeders want to do when the snow is flying, but the extra time spent out in the yard will likely pay off in preventing crises.

"The feed wagon gets used 365 days a year and it's probably the most under maintained piece of equipment in the yard," says Rozeboom. "Everybody's in a hurry to get chores done. Their mind's on what

to do that day. It's easy to put issues off until tomorrow or next week.

But winter is not the time to put off even the slightest of problems. Instead, it is the time to tend to every detail before problems are accentuated by the weather.

"Pay extra close attention to those service schedules," says Cooksey, "and keep your equipment dealer's phone number handy."



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INDICATIONS

ACTRAN is indicated for the treatment of bovine respiratory disease (BRD) associated with Mannheimia hoemolytica, Pasteurella multocida, Histophilus sonni 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 data sneet (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 Monnheimia haemolytica, Pasteurella multocida and Histophilus somin 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 MW) 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 61.4% vs. 62.5% [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 Mannheimin haemolytica and Pasteurelan multitocida 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 subcurateous 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 saline (36% and 78%) was statistically significantly higher (p = 0.0019 and p = 0.0016) than the sad S8%.

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New on OSHA's Radar — Feedlots

Over the last 30 years, OSHA has put a microscopic focus on the chemical, manufacturing and construction industries and feel that they now have them well-regulated with clear protocols and robust monitoring. With agriculture being the last high-risk industry that they haven't targeted for significant improvements, and the fact that it is seven times more hazardous than all other industries, it's only logical that they would target us next.

Now is not the time to take chances with compliance. OSHA increased their fines last year by 80% for most infractions, so the price could be even higher, perhaps into six figures, for feedlots who fail to follow all regulations. Worse yet, along with these violations comes an unwanted spotlight.

And new rules are coming, even if you feel a new administration in Washington is going to dial things back a bit. A new Worker Protection Standard is in place that requires all workers exposed to or using pesticides—including those used in feedlots—to be trained with very specific protocols on an annual basis. OSHA reporting that was once required to simply be kept on file will soon have to be reported directly to OSHA on a regular basis.

Training requirements are clearly established by OSHA and you must be able to confirm that all employees have had specific training on all hazards. During an inspection, OSHA will ask to see your training records to confirm compliance in this area, and will also interview some of your employees.

Aside from staying compliant, safety training is a great investment. In fact, the Ag Safety and Health Council of America found that, for every \$1.00 spent on safety training, we get between \$4.00 and \$6.00 back through significant reductions in injuries, worker's comp premiums, lost labor and OSHA fines while also gaining higher employee productivity. With today's tight feeder margins, we need every protection we can get.

Safety training is great insurance and it provides a sense of security and personal value to your employees. Young employees have shown that they very much appreciate safety training, and see it as a way that their employer cares.

Experience plays a huge role in safety. New hires are two times more likely to be hurt on a horse than someone with more than six months of experience. Head injuries account for 60% of horse riding deaths, and there are few "minor" head injuries. In a broader sense, an average of 247 agricultural employees experience a lostwork accident every day in the US.

Here are some crucial safety objectives for your operation in 2017:

- Adopt as your motto that everyone "Gets Home Safe" every night.
- Fulfill your moral obligation to keep people safe when at work, and do all you can to keep them safe in their personal lives as well.
- Reduce your financial, liability and personal risks, especially in these difficult financial times.
- Build your safety culture. Do your employees strive to keep each other safe and look out for each other? Do your longterm employees share closecalls and personal experiences with younger workers? If you can answer "Yes" to these questions, you are on your way to a good safety culture.

If you've struggled to find training and compliance information that's specific to agriculture, I encourage you to check out our agspecific videos and cloud-based system at www.gooddayswork.ag. the answer is ZACTRAN® (gamithromycin).

WHEN QUEST



When you see lightweight, long-haul new arrivals come off the truck, there's no time to waste.

ZACTRAN delivers rapid onset¹ and 10-day duration² against the most prevalent causes of BRD in a single dose.^{3,4} And most cattle stayed healthy with ZACTRAN, which can

mean fewer retreatments⁵ - and healthier margins. Talk to your veterinarian about prescription ZACTRAN. It's exZACTly right for lightweight, long-haul calves on arrival.

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

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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):171-180.
³ Med. 2011;9(2):189-197.
³ ACTRMN product label



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

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

Give subcutaneously at 2 mL/110 lbs.



COW/CALF CORNER

Winning the Battle Against Lice

Lice are a common winter problem. All lice cause discomfort and itching, and sucking lice rob essential nutrients when cattle need it most—in cold weather. Animals carrying a heavy population of sucking lice may become anemic, suffer weight loss and become susceptible to disease. Cattle that are continually rubbing can damage facilities.

Dr. Larry Hawkins, Technical Services Veterinarian at Bayer, says there are many species of lice but only three species of sucking lice and two species of biting lice commonly seen in the U.S. Many producers feel that some delousing products control sucking lice more effectively than biting lice. "We often hear about this problem. Injectable products are usually thought to be better at killing sucking lice," he says. "With pour-on products there is usually a fairly good kill of adults and nymphs because all lice are on the body surface, but our data shows it takes a little longer to control sucking lice than biting liceprobably due to their location on the body."

In winter, life cycle of all lice takes about 21 days from egg to egg-laying adult. "Eggs hatch in seven days, and 14 days later they have matured and are ready to lay eggs again. If you start with just two lice in September, laying 40 eggs every three weeks (eggs that keep hatching and maturing to lay more eggs) by mid-January you could theoretically have a million lice on the animal," says Hawkins.

Many products kill adult lice but not the eggs. They go ahead and hatch, and three weeks later the

A Hot Item for Feedyards This Year

Add Fat or Molasses to the Ration

This year the price of grain and hay have shown the benefits of fat and molasses in feedlot rations. But a critical factor in their use is the storage for fat or molasses. Palmer has been building a heated, sloped bottom, all welded steel tank for fat and molasses storage for over 25 years. The heaters, gas or electric, are in a heating chamber below the storage area. This prevents the products from scorching. The top of the heat



chamber is the bottom of the storage tank, it is sloped so all fine solids flow with gravity out the bottom with the liquid ingredients.

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cattle have lice again. Producers often think the product didn't work very well, but label directions recommend retreatment in two to three weeks to kill young lice that hatched after the first treatment.

Another problem is inadequate treatment. "Lice are found on the nose, dewlap, in the armpits and in the groin area where a pour-on may not reach very well. Lice move around, however, and are likely to come into contact with the pouron if it was applied all along the back and on the poll. If we just put the dosage in the middle of the cow's back, it's a long ways to the nose, brisket or armpits from that one spot, so some lice may not contact the product. It's best to spread it out and put a little on the poll and from withers to tail-head with the rest of it, to get better control," says Hawkins.

All products must be applied properly, for best affect. "And with many products you have to repeat the treatment within two to three weeks to get the lice that hatched since the first treatment. This is the only way to ensure that the cattle won't have another outbreak of lice in mid to late winter."

One product called Clean-Up kills eggs as well as adults. "It contains an insect growth regulator proven to stop eggs from maturing and hatching, and a pyrethroid that kills adult lice. One treatment gives control," says Hawkins. If a producer won't have opportunity to run cattle through and treat again, this would be the best product to use.

After a pour-on application of Clean-Up, it takes about two weeks for sucking lice to die. By contrast, an injectable product that treats systemically kills sucking lice quicker because they encounter the product via blood they are sucking, but chewing lice do not feed on blood. With a pour-on placed along the back, it may take some time for the product to spread down through the hair in the oil layer on the skin surface to kill the lice.

"Another option after treatment in late fall (when preg-checking and vaccinating in a cow-calf herd) is supplemental treatments for later control. If cows are wintered on range and won't be handled again, producers can hang dust bags or use other self-treating methods that cattle can rub on and be treated," he says. These delousing devices must be located where cattle frequently congregate, so they have an opportunity to use them but some animals never use them.

"Some producers think that after a treatment all lice are instantly dead, but it takes a couple weeks, in some cases, for those lice to all die. They may be impaired and not reproducing, but still on the animal; it takes some time for them to die," says Hawkins.

If we put the dosage in the middle of the back, it's a long ways to the nose, brisket or armpits, so some lice may not contact the product. It's best to spread it out and put a little on the poll and from withers to tailhead to get better control.

-Larry Hawkins, DVM

People need to understand the importance of not mixing untreated cattle with the treated ones or lice will spread again to the treated cattle. "Also, if you mix cattle that you treated 30 days ago with a group of newly treated cattle, lice may be all gone from the animals you treated first but they could be re-infested from the recently-treated cattle that still have lice." Some of the lice on the newly-treated animals have not yet traveled around enough to encounter the insecticide product and may transmit to other cattle if they have close contact.

"They don't even have to be in the same group; nose-to-nose contact through the fence or at fenceline water tanks can be enough to spread lice. I was at a feedyard once time that had treated cattle on one side of the fence. The other side was the alley to the processing chute. Treated cattle were being exposed to animals that came past, and the treated herd was immediately re-infested. As soon as the insecticide wore off, those animals had lice again, from newly arrived animals," explains Hawkins.



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1 Production Best Practices (PBP) to Alci in the Control of Foodborne Pathogens in Groups of Cattle. Beef Industry Food Safety Council Subcommittee on Pre-Harvest. Spring 2015. Accessed March 19, 2015. 2 Table ES, Oloya J, Doerkot DK, Bauer ML, Globs PS, Khaitsa ML. Comparative effect of direct-fed microbials on fecal shedding of Escherichic coll 0124/PT and Solmonello in naturally infected feedlot cattle. J. Food Prot. May 2008; 3(71): 539-544, 3 Jalemand Animal Nutrition. Unpublished. United Sates; 1996. 3 Jalemand Animal Nutrition. Unpublished. 1996.

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PRODUCT INFORMATION NADA 141-334, Approved by FDA.

Injectable Solution for Cattle

ANTIMICROBIAL DRUG 180 mg of tildipirosin/mL For subcutaneous injection in beef and non-lactating dairy pattle

only. Not for use in female dairy cattle 20 months of age or older or in calves to be processed for yeal.

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

BRIEF SUMMARY: for full prescribing information use package insert.

INDICATIONS: Zuprevo* 18% is indicated for the treatment of bovine respiratory disease (BRC) associated with Macmhetimia haemolytica, Pasteurella multocida, and Histophilus assori 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. heamolytica, P. multocida, and H. sormi.

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: 1-800-219-9286.

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.

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Prepare now for the spring calving season

Someone once said that "Success occurs when Opportunity meets with Preparation." Planning and preparing ahead for next spring's calving season can help increase the chances of success. There are several key preparation steps that would be good to conduct in December to insure success in February, March, and April.

Before calving season starts do a walk-through of pens, chutes, and calving stalls. Make sure that all are clean, dry, strong, safe, and functioning correctly. Check the gates and the squeeze panels to make certain that they are ready for use.

Many calving sheds are storage facilities during the off season. Do you have the extra barbed wire and steel posts, as well as grass seed and motor oil stored in the calving shed? Now would be a good time make certain that these items are placed in another facility or at least out of the way. This is a lot easier to do on a sunny afternoon than on a cold dark night when you need to have the calving area ready in a short time.

If calf diarrhea has been a significant issue in your herd in the past, now is a good time to visit with your large animal veterinarian. Ask about a scours vaccine given to the cows before calving, and about other management strategies that help reduce the pathogen exposure to baby calves when they are most vulnerable.

BY GLENN SELK

OKLAHOMA STATE UNIVERSITY

Larger cow calf operations may want to learn about the Sandhills Calving System. This is a calving time strategy that is meant to reduce the incidence of calf diarrhea by keeping cow/calf pairs pastured together by calving date. This system requires several pastures and weekly movement of cows that are yet to calve. The goal is to prevent newborn calves from being exposed to disease-causing organisms being shed by older calves. Several articles have been written about the Sandhills Calving System. Here is a link to one from the University of Nebraska: http://beef.unl.edu/beefreports/ FL symp-2007-17-xx.shtml.



FEED•LOT February 2017



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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.



HIS LEGACY WILL LIVE ON

On December 14th at 2:00 a.m. Robert A. "Bob" Strong, one of the two founding partners of *FEED*•*LOT* magazine passed away in his sleep. I was extremely lucky to work with my father for 21 years. When we started



the magazine, neither of us had ever worked for a magazine and literally learned "on the job." We worked hard and over the years built *FEED*•*LOT* magazine into

what it is today.

Bob and I talked at least two hours a day, vacationed together, fished and hunted together, hunted arrowheads together, installed extensive drip irrigation systems, edited each other's copy, and took thousands of photos of cattle. He was my father, my mentor, and my best friend and I will be miss him very much.

Robert was born in Morland, Kans., on October 16, 1930, to Arthur and Folsom Strong. He was a loving and devoted son to Folsom until she died. From her, and no doubt due to his dust bowl, depression era childhood, he inherited a combination of iron strength and unstoppable work ethic that would serve him his whole life.

He grew up in Morland and Hill City, Kans., where he graduated from high school in 1948. He spent several years working on area farms and ranches, eventually working on oil rigs for Shell Oil Company throughout Kansas and Colorado before signing up for the Marines and serving for two years in Korea. He was honored with the Purple Heart Medal, Korean Service Medal, United Nations Service Medal, and National Defense Service Medal.

Upon his return to the states, he attended Wichita State University on the GI Bill and got a degree in Graphic Arts. After graduation he started the first of a long series of companies that grew to include Strong Art Service, Ideas Incorporated, Central Graphics, Industrial Communications, Parkinson, Strong, Prisock, Campaign Associates and many others. His long career included stints as graphic artist, advertising man, book illustrator, political consultant, and ultimately publisher.

At the age of 62, when most of his contemporaries were thinking of retirement, he started a yet another new venture, *FEED*•*LOT* magazine. He and son Greg partnered on the magazine for the next 21 years, growing it into a thriving publication is still operating today.

He was lucky enough to marry Virginia (Stramel) Strong in 2001, a woman as tough and hardworking as he was, and they enjoyed 15 years of happiness together.

Bob Strong was not a man who particularly enjoyed leisure, not as many of us know it. He was not one to relax when there were things to be done. In his "spare time," he pursued many passions, a renaissance man in the truest sense.

He was a lifelong fisherman, from his early days at fishing holes in the country surrounding Hill City, then fishing favorite spots along Fall River and the Little Walnut River with his brother and son. He expanded his reach in later years to fishing trips with Virginia to Lake Michigan, the Salmon River in Idaho, Lake Texoma, and the Blue Mesa Reservoir in Colorado.

He was an accomplished artist, producing oils and watercolors in his studio and out on his travels. He also crafted many etchings and engravings during his time in school. He was willing to share his talent with his young children, creating dragons, dinosaurs and cowboys on demand according to their specifications.

He enjoyed dancing, often traveling for miles to events in surrounding towns. In fact, he met his wife Virginia at a dance in Dodge City.

He labored long and hard to perfect his recipe for biscuits, practicing on a grateful family each morning until their collective weight gain forced him into retirement. Other







culinary pursuits included pickles, jellies and jams from his homegrown berries, trail mix, and his signature peanut brittle.

He was a self-trained carpenter, a maker of things. Anything really. Never one to hire out what he knew he could do himself, he would eventually find a solution to any problem, even if he might create a few new problems in the meantime. He never met a tool he didn't need, and didn't ultimately use. The workshop he built in Dighton was the culmination of a life's work, with a custom ventilation system, every power tool known to man, and at least three versions of most hand tools.

He was a curious, tireless seeker of knowledge, collecting and

devouring books and magazines on cattle, archeology, art and history, while staying current on the news of the world. He was a seeker of artifacts, spending countless hours scouring the plains of Kansas, Oklahoma and Colorado in search of arrowheads, pottery and grinding stones, ultimately accumulating a museum-worthy collection of thousands of pieces.

He was a lover of dogs from his boyhood on. From his first dog Brownie, to his last dog JR, they were each spoiled and devoted companions.

Perhaps most of all, he was a planter, a gardener, a cultivator and a conservationist. No matter where he lived, one of his first priorities was staking out the garden, often overtaking whatever lawn there might have been before. And he grew trees. Hundreds of trees. Pecan, walnut, cherry, plum, apple, oak, locust, peach, apricot, cedar, redbud, almond, mulberry, pear, persimmon, hazelnut, nectarine, chestnut, maple, weeping willow. When he couldn't fill he and Virginia's own yard in Dighton any fuller, he partnered with son Greg to plant hundreds more on Greg's property outside of town. He loved growing things. And gardens and trees thrived under his attention.

Bob Strong will be dearly missed by those he left behind. His **legacy** will live on in his children, his wife, his friends, his magazine and of course, his trees.

CELEBRATING 25 YEARS

When Bob and I started FEED•LOT magazine, we were unsure what format it should be. Our prepublication research suggested a newsletter that came out weekly or monthly, or a magazine that came out weekly, monthly, or bi-monthly. We de-



Greg and Bob Strong, CY Cattle Company, 1996

1966

cided on a magazine that would come out quarterly. We developed a "dummy" issue to help us sell advertising for the first issue. Most of the advertisers in the "dummy" issue ended up being paid advertisers. Our big break with the first issue was provided by Elanco, who purchased the center spread.

Bob and I decided on several principals to build and run our business that are still in effect today.

- 1. It may not be what either of wanted to do, but what was best for the publication is what we would do.
- 2. Never get up from the meeting table, mad. Always try to solve issues between us before we got up.
- 3. Editorial would be guided by three simple directives.
 - A. Is the information going to help the reader make money?
 - B. Is the information going to help the reader save money?
 - C. Is the information something that the reader should be aware of because it could affect their business?

We have always stayed away from people profiles, gossip articles, historical articles and fluff pieces. We have maintained information is the important thing, not pictures of us. So, in 25 years, and other than the features page, there have only been three of four photos of either Bob or myself in our publication.

In 1995 we made three excellent choices in the hiring of our graphics designer, Steve Philip, our general manager, Annita Lorimor, and our then assistant editor, now editor, Jill Dunkel. All three have been with us for over 22 years, making the magazine a collaborative effort between the four of us. Five years ago we were also blessed with the hiring of Annita's daughter Amy Marsh as our digital and social media director.

At my insistence we built our website Feedlot-Magazine.com in 1999. In 2008 we came out with our weekly digital newsletter, FEED•LOT eNews, as well as the digital edition of FEED•LOT magazine that is now sent out as each issue is printed. We built our second website, Yourcattle.com in 2009 and came out with second digital newsletter, the bi-weekly Your Cattle eNews.

To be honest, when my Father contacted me in 1992, telling me that he had finally rounded up the capital to start the magazine and needed someone to sell advertising for him, I thought it would be a good job. Little did I know that it would turn into a 25 year career. My father was an extremely hard worker. What he enjoyed most as a "day off" was a hard day of work outdoors. That could be in the form of working in his garden, working on his trees, hunting arrowheads, fishing, phesant and duck hunting and photography.

hunting and photography. Robert A. "Bob" Strong is missed greatly. There isn't a day that goes by that I don't have the instinct to reach for the phone and call to ask him a question. But he lives on with *FEED*•LOT magazine and its *legacy*. Calving Season Checklist

Before calving, you want everything on hand that might be needed, and all facilities and equipment functional and ready for use. A few calves may arrive early, so don't wait till the last minute to get machinery or other equipment out of the calving barn or maternity pen if that's where you stored/parked it.

If you haven't used your calf puller for a few years, or other items that might be needed, remember where you left these. It's frustrating to be searching in the middle of the night trying to find something when a heifer decides to calve ahead of schedule and needs help, or you discover that the item you need is broken.

Dr. Robert Callan, Colorado State University, says you'll need disinfectant for cleaning up a cow to check her or assist a birth, or for dipping a calf's navel. "Povidone iodine (Betadine) or chlorhexadine (Nolvasan) both work. Nolvasan is more expensive but not necessarily better," says Callan.

It's nice to have both the scrub and the solution. The scrub contains a detergent and can be used when cleaning the back end of the cow. "The disinfectant solution is something you'd dilute with water as a rinse," he says.

Have a bucket for warm water mixed with disinfectant solution, a scoop for pouring the water/disinfectant over the back end of the cow to clean her up, or squeeze bottles (like empty dish soap bottles) for squirting warm water/disinfectant onto the cow. "Roll cotton works well for scrubbing and cleaning. It holds a lot of fluid when you pull it out of the bucket. It works better than paper towels or clean rags," Callan says

You need a good OB lubricant when assisting a dystocia. "There are two kinds. One is carboxy methylcellulose–which works best if you add half a gallon of hot water to the gallon of lube. You can use a stomach pump and stomach tube to put the lube directly into the vaginal canal and uterus. Diluting it with hot water makes it easier to pump in, and warms it to body temperature," says Callan.

"The other type (J-lube, a polyethylene polymer), is less expensive and comes as a powder. Just add warm water. But this lube can be fatal if it gets into the cow's abdomen. If there's any chance she'll need a C-section, don't use J-Lube," he says.

Callan recommends giving newborn calves vitamins A, D & E, if cows were on dry forage before calving, or if pasture quality is poor due to drought. "Don't use last year's bottle with dust on top that already had multiple needles going into it. If the product was contaminated with bacteria, this could result in injection-site infections. Vitamin E preparations have short expiration date. Start with new bottles."

Have colostrum for emergencies. A colostrum product should have a minimum of 100 g of IgG per dose. "Frozen colostrum from one of your own cows is better than any commercial product," says Callan. "For freezing colostrum, use 1-gallon Ziploc bags. Collect 1 to 2 quarts of colostrum from a mature cow right after her calf has nursed and put 1 quart of colostrum in the gallon bag to freeze. The gallon bag has a large surface area when frozen flat, and can be thawed quickly in warm water," he says. FL

- Sedding for calving barn or maternity pens
- Halter and rope, or a headcatch and swing-away gate that's safe for pulling a calf when the cow is down
- Disposable long-sleeve OB gloves
- **V** Obstetrical lubricant in squeeze bottle
- Plastic bucket for wash water
- Rags or roll cotton for washing the cow
- Clean OB chains or straps, and handles
- ✓ Long soft cotton rope for laying down (casting) a cow for easier calf delivery (after correcting a malpresentation
- 🗸 Calf-puller
- Oxytocin for stimulating milk let-down and uterine contractions (to help a cow clean)
- Epinephrine to relax the uterus so you can push a calf back in to correct a malpresentation
- Suction bulb for suctioning fluid from nostrils of newborn calf that's not breathing
- Iodine or chlorhexadine for disinfecting navel stump of newborns

- Flashlight (with batteries that work!)
- Bottle and lamb nipple for feeding calf
- Stomach tube (nasogastric tube) or esophageal feeder for feeding calves that can't nurse
- Frozen colostrum from last year, or packages of commercial colostrum replacer
- Calf sled/cart to bring newborn calf from field to barn
- Injectables like vitamins A, D & E, selenium, etc.
- Vaccines for newborns if your vet recommends them
- Ear tags for calf identification
- Electrolytes or use homemade mix (1/2 teaspoon salt, 1/4 teaspoon "lite" salt, 1/4 teaspoon baking soda) dissolved in 2 quarts of warm water
- Warm box for warming a chilled newborn
- Towels for drying chilled calf
- ✓ Two thermometers—one for sick calves and one for checking newborn or young calves that get hypothermic



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Which comes first, calving or rebreeding?

Preparation for calving is often first priority, but don't leave rebreeding as an afterthought.

You've heard the dilemma, "which came first, the chicken or the egg?" A similar dilemma plays out in the cattle industry each year as we start preparing for calving season.

Which comes first, calving or rebreeding? You might put all of your eggs in the calving "basket," since a live, healthy calf is often first priority. But a calf is ultimately the result of a successful breeding period, and preparation for calving and rebreeding should occur simultaneously.

"Calving and rebreeding ideally occur within a relatively short, but very critical, 85-day window," says Chad Zehnder, Ph.D. and cattle consultant with Purina Animal Nutrition. "How a heifer or cow calves out at the beginning of the window will impact her ability to get bred at the end of the window, and how quickly rebreeding occurs will impact a cow's ability to stay on a 365day calving cycle."

Here are four strategies you can implement now to prepare for spring calving and rebreeding:

1. Monitor body condition score

The body condition score (BCS) of a cow at calving not only affects colostrum quality, cow stamina (to get through birthing) and calf vigor, it also impacts the time until that cow starts cycling again.

"We want cows cycling prior to the breeding season so that when they come into heat during breeding season we have a better chance of getting them bred in the first 21 days. Cows bred early in the breeding season will result in calves born early in calving season," says Zehnder.

Calf age has the biggest impact on weaning weight. Therefore, calves born in the first 21 days of the season are likely heavier at weaning. If you estimate that a calf gains between 2.25 to 2.5 pounds per day, every heat cycle is worth roughly 50 pounds. That's why it's so critical to get cows rebred on the first cycle.

Mature cows should calve in at a minimum of 5.5 BCS, but preferably at a score of 6. Heifers should calve at a minimum score of 6. Supplementation can help maintain a consistent BCS which can lead to cows breeding back quickly, optimized conception rates and heavier calf weaning weights.

2. Evaluate your mineral program

Mineral nutrition is one of the most commonly overlooked items on the calving and rebreeding preparation list.

"We tend to think about the importance of minerals either right at calving or before breeding, but we need to make sure we're providing an adequate mineral program yearround," says Zehnder. "Minerals are especially important 60 to 90 days before calving, since they impact colostrum quality, calf trace mineral status and calf health."

Minerals also play a role in tissue repair, helping the cow's reproductive tract repair from calving and prepare for breeding. If the tract is not fully repaired, a cow may have challenges being rebred or she may not breed back at all.





A program with highly bioavailable trace mineral sources can be of benefit, especially leading up to calving season and through breeding. The bioavailability of a mineral source alters the absorptive ability of the trace minerals eliciting their full benefit.

3. Discuss herd health with your veterinarian

If you don't have a comprehensive herd health program, now is the time to talk with your veterinarian or animal health supplier to develop one. If you have a program, it can be beneficial to reevaluate and ensure the protocols still make sense.

"Make sure you have a vaccination program in place for both cows and calves," says Zehnder. "Since every operation has a different risk level in how and when they calve, the program should be specific to your operation and region."

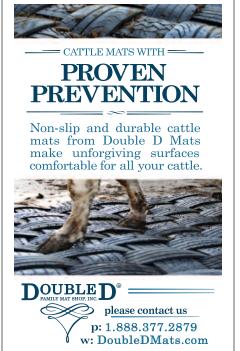
For operations with multiple employees, make sure everyone is familiar and comfortable with the program ahead of time. Getting everyone on the same page before calving begins can help ensure protocols are followed correctly and consistently.

4. Take time to troubleshoot

Calving and rebreeding are two of the most important events for an operation's bottom line which makes it stressful when things don't go as planned. However, an overreaction may make things even worse.

"It's easy to get frustrated when there's a bump in the road, but it's important to take an objective approach when a challenge arises," Zehnder says. "Troubleshoot and try to figure out what the true cause is versus making a kneejerk decision."

Involve your nutritionist, veterinarian, suppliers, employees and



other key personnel to help work through a cause and solution. A team discussion can help identify the diagnostic work needed to find a solution.

Regardless of which takes priority in your mind, calving and rebreeding success is always in season.

"We need to think about that critical 85-day window year-round. Every management decision we make throughout the year should focus on a cow delivering a live, healthy calf and being bred back in that timeframe," says Zehnder.



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Five Tips to Ensure Immunization

Vaccinating calves against disease is one management practice that can improve calf health and help avoid financial losses in the future. However, simply vaccinating your calves is not enough to ensure immunization. Follow correct storage, handling and administration practices in order to provide an opportunity for the animal to respond with an adequate immune response.

Dr. Doug Ensley, professional services veterinarian for Boehringer Ingelheim Vetmedica, Inc. (BIVI), recommends following these five tips to receive the full benefit from your vaccinations:

- Store vaccines according to the label, generally 35°F to 45°F. Follow label directions.
- Protect vaccines and filled syringes from sunlight and heat.
- Use modified-live virus (MLV) vaccines within an hour of mixing it.
- Change needles often (about every 10 animals).
- Discard bent, burred or broken needles.

Clean syringes with hot, distilled water (at least 212°F). Use care not to burn your skin with hot water. Do not use soap or disinfectant because they can kill the MLV.

In addition to correct handling and administration of the vaccine, Ensley also recommends ensuring

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the calves are properly prepared to respond. "We know that many animals today are transported over long distances," he said. "Once the animal is on your operation, it's important to do everything you can to help them adjust. Let them get a good night's rest in a dry area, and provide plenty of high quality water and feed."

He explained the importance water intake and proper nutrition have on achieving an immune response.

"It is imperative that we handle vaccines properly, we administer them with the best techniques possible and prepare our animals so that we can achieve the kind of response from those vaccines to reduce disease. Don't just vaccinate, immunize," Ensley stressed.

To develop a vaccination plan that works best for your operation, work with your local veterinarian.





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With this new technology, cattle feeders can have more precise control of their feed mixing, ingredients and rations. Central City Scale, Inc. of Central City, Nebraska is introducing the new Libra TMR which is a feed and ration management system that is iPad-based and connected to load cells on the feed mixer using Bluetooth electronics.

The operator enters the feed ingredient information into the app. along with rations with all the ingredients. Information is assigned to what ration gets fed to which pen and how many head are in each pen. This technology saves time and makes it simple to execute a ration and feed it properly. FL

INFORCE 3 New Approval

INFORCE 3, the top selling cattle vaccine on the market, has earned a single nostril administration claim to make it more convenient to administer.

Studies demonstrated that when the full 2-mL dose was administered into a single nostril in neonatal calves, INFORCE 3 protected against respiratory disease caused by infectious bovine rhinotracheitis (IBR) virus, bovine respiratory syncytial virus (BRSV) and parainfluenza 3 (PI3) virus.

In additional studies, INFORCE 3 also demonstrated the ability to override maternal antibodies to moderate IBR respiratory disease for at least 15 weeks and provided IBR respiratory protection for more than six months in IBR-naïve neonatal calves.

The vaccine contains proprietary temperature-sensitive IBR and PI3 viral strains, as well as naturally temperature-sensitive BRSV. This formulation stimulates protective immunity in the nasal passages, while also priming the immune system for a rapid memory response to subsequent vaccination or disease challenge. INFORCE 3 is safe FL for use in all calves.

Large Rectangular Bale Sqeeze

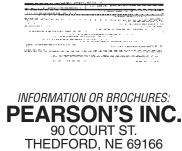
Worksaver, Inc. offers two new large rectangular bale squeeze models for handling large wrapped or unwrapped rectangular bales, the SSBS-48D and GLBS-48D. The bale squeeze arms open to handle bales from 48" to 96" in width and up to 3,400 lbs. Both models can also handle round bales.

The SSBS-48D mounts to skid steer loaders and tractor front loaders that use the industry standard "universal" skid steer quick attach system, while model GLBS-48D is designed for tractor loaders with the Euro / Global tool carrier. These units are shipped with cylinders and hoses.





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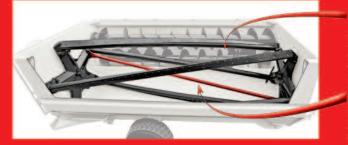
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