LIVESTOCK EDITION • WINTER 2017 VOL 7 • ISSUE 3 • WWW.VET-ADVANTAGE.COM

Promoting Excellence in Animal Health Sales

Veterinary adVantage

An Official Publication of the NAVC



Keeping It Clean

Properly selecting, using disinfectants is critical to maintain herd health

INSIDE:

Building a Loyal Customer Base » p.6
Brands: Making the Switch » p.12
FFA: Living to Serve » p.26

NAVC® The North American Veterinary Community

ZACTRAN® (gamithromycin) a Merial product

ZACTRAN®
(gamithromycin)

YOU CAN'T STOP BAD WEATHER.

YOU CAN OUTSMART IT.

Protect your clients' calves against bovine respiratory disease (BRD) with ZACTRAN.

Stress can leave your clients' cattle susceptible to performance-robbing pneumonia. With ZACTRAN you get a potent combination of six factors that helps you protect the genetic potential of your clients' calves – and their profitability. Get the facts to see what makes ZACTRAN the smart choice. **ZACTRAN.com**

IMPORTANT SAFETY INFORMATION FOR ZACTRAN: CAUTION: *Federal law restricts this drug to use by or on the order of a licensed veterinarian.* ***WARNINGS AND PRECAUTIONS:*** *Not for use in humans, Keep out of reach of children. 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.*

Merial is now part of Boehringer Ingelheim.

®ZACTRAN is a registered trademark of Merial. ©2017 Merial, Inc., Duluth, GA. All rights reserved. RUMIOTD1706-B (02/17)

THE SMART CHOICE

1. Susceptibility
2. Speed
3. Site of infection
4. Staying power
5. Safety
6. Saves money

Boehringer Ingelheim



Editor
Jennifer Ryan
jryan@NAVC.com

Managing Editor
Graham Garrison
ggarrison@NAVC.com

Art Director
Brent Cashman
bcashman@NAVC.com

Vice President of Sales & Marketing
Rick Boggess
rboggess@NAVC.com

Senior Account Executive
Kim Long
klong@NAVC.com

Director of Sales
Doreen Carpenter
dcarpenter@NAVC.com

Account Executive
Paige Ellington
pellington@NAVC.com

Digital Strategy and Content Coordinator
Angelina Varagona
avaragona@NAVC.com

Director of Training and Channel Relationships
Rachel Bailey
rbailey@NAVC.com

Circulation
Laura Gantert
lgantert@NAVC.com

Group Publisher
Chris Kelly
ckelly@NAVC.com

Veterinary Advantage
622 East Washington St., Ste. 300
Orlando, FL 32801

2017 editorial board

Kim Allen, Henry Schein Animal Health
Spencer Breithaupt, MWI Animal Health
Clay Cass, Henry Schein Animal Health
Jeannie Jeffery, Henry Schein Animal Health
Jackie King, American Veterinarian Distribution Association
Jesse Larios, Foster Feedyard
Karen Miller, Midwest Veterinary Supply
Rod Taylor, Midwest Veterinary Supply
Kevin Pohlman, Patterson Veterinary
George Rasi, NEVSCo
Buddy Ray, DVM, Bovine Consulting Assoc., LLC.
John Ryan, MWI Animal Health

NAVC The North American Veterinary Community
An Official Publication of the NAVC

Editor's Note Jennifer Ryan
Keeping up with change is challenging for customers, producers, DSRs **2**

Sales Patrick T. Malone
Evaluating Your Sales Leadership Mindset **4**

Inside Sales Dawn Singleton-Olson
Building A Loyal Customer Base **6**

Dairy
Addressing Dairy Cattle Reproduction Challenges **10**

Brands Jennifer Ryan
Making the Switch
Helping customers switch products is an opportunity to build trust **12**

Biosecurity Jennifer Ryan
Keeping It Clean
Properly selecting, using disinfectants is critical to maintain herd health **16**

Changes Jim Whitt
The Future is a Foreign Country **24**

FFA Jessica Mozo
Living to Serve
Ohio FFA members pay tribute to fallen heroes at Arlington National Cemetery **26**

Community
News **28**

Veterinary Advantage magazine Livestock Edition, NAVC 5003 SW 41st Blvd. Gainesville, FL 32608. Copyright 2017 All rights reserved. Subscriptions: $49.00 per year for individuals; issues are sent free of charge to dealer representatives. If you would like to subscribe or notify us of address changes, please contact us at the above numbers or address. **POSTMASTER:** Send address changes to Veterinary Advantage, PO Box 862151, Marietta, GA 30062. **Please note:** The acceptance of advertising or products mentioned by contributing authors does not constitute endorsement by the publisher. Publisher cannot accept responsibility for the correctness of an opinion expressed by contributing authors. Periodicals Postage Paid at Marietta, GA and at additional mailing offices.

Keeping up with change is challenging for customers, producers, DSRs



BY JENNIFER RYAN

Share your successes. Drop me a line at jryan@NAVC.com.

In this issue, our feature articles address what happens when producers wipe the slate clean and start fresh.

In "Keeping It Clean" (page 16), we've taken the saying literally. In confinement operations it's a requirement to clean up and get rid of dust and debris before the next shipment of animals arrive. It's one of the fundamental principles to biosecurity protocols, which are critical to ensuring animal health and production.

DSRs can help their customers choose the right cleaning and disinfecting products that match their pathogen challenges, facilities and employee needs.

DSRs can help their customers choose the right cleaning and disinfecting products that match their pathogen challenges, facilities and employee needs.

Sometimes customers will want to start clean with a new brand of product. In "Making the Switch" (page 12), we talk to experienced professionals at MWI about the many reasons customers may want to make a brand switch and how they handle the conversation. It's a key time in the customer-DSR relationship, and it's a chance to be a partner.

Change can be an exciting opportunity. We hope you enjoy these articles and are inspired to make your own changes this year.

Jennifer Ryan

Visit **NAVC.com** to learn more about its journals, conferences and educational offerings.



40 YEARS



Treat mastitis at dry-off with powerful, proven Quartermaster®

In a 2012 university study of more than 1,000 dairy cows, Quartermaster® Suspension (penicillin-dihydrostreptomycin in oil) was shown to be 93% effective in curing intramammary infections during the dry period.* Its two active ingredients, including a first-generation penicillin, deliver a powerful punch against mastitis-causing bacteria for highly effective dry cow therapy, round after round, year after year.

For more information on Quartermaster Suspension, contact your veterinarian or call (888) 493-0861.
Quartermaster-rx.com

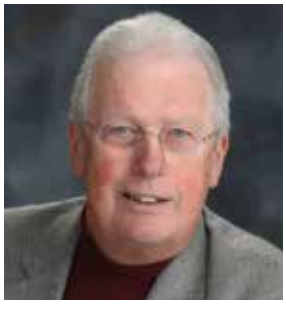
Quartermaster® Suspension
penicillin-dihydrostreptomycin in oil

Don't just treat mastitis. MASTER IT.

*Important Safety Information – **Indications:** Intramammary use to reduce the frequency of existing infections and to prevent new infections with* Staphylococcus aureus *in dry cows. **Limitations:** Not to be used within 6 weeks of freshening. Not for use in lactating cows. Milk taken from animals within 96 hours (8 milkings) after calving must not be used for food. Animals infused with this drug must not be slaughtered for food within 60 days from the time of infusion nor within 96 hours after calving. Federal law restricts this drug to use by or on the order of a licensed veterinarian. **Ingredients:** Each 10 milliliters of suspension contains 1,000,000 units of Procaine Penicillin G and 1 gram of Dihydrostreptomycin base, as Dihydrostreptomycin Sulfate.*

*Arruda AG, Godden S, Rapnicki P, Gorden P, Timms L, Aly SS, Lehenbauer TW, Champagne J. 2013. Randomized noninferiority clinical trial evaluating 3 commercial dry cow mastitis preparations: I. Quarter-level outcomes. *J Dairy Sci.* 96:4419-4435.
©2017 QUARTERMASTER is a registered trademark of West Agro Inc.





BY PATRICK T. MALONE

Patrick T. Malone is a Business Advisor and Leadership Mentor based in Blairsville, GA. He is the co-author of the best-selling business book *Cracking the Code to Leadership* and may be reached at ptm4936@gmail.com or 706-835-1308.

Evaluating Your Sales Leadership Mindset

You are a sales leader, but where do you stand among your peers in distribution? How do you evaluate where you are today and what it will take to get to the next level? There is always room for improvement, so consider these three actions you can take to improve your sales leadership skills.

Sales leadership is complicated. If you asked 100 sales leaders to articulate the skill that made them successful, you would probably get 100 different answers. The bottom line is every sales leader has a slightly different approach that has proved to be effective for them. Each approach has nuances that work for one leader but will come across as phony for another. However, I believe the following three actions are universal among distribution sales leaders. Let me share them with you and then you decide if they would help you.

Communication

Communication is your first step in leadership. Open communication will help you to understand the needs of your customers and your potential customers. So, be interested instead



of trying to be interesting. Listen to understand – not to respond. Respect all points of view including those with which you may disagree. Respect does not imply agreement.

Your response to your customer will always be dictated by their current point of view. Someone who finds your suggestion troubling needs a different response than someone who finds your suggestion interesting. Your communication needs to connect both logically and emotionally with your customers.

Once connected, your communication should lead the conversation to higher, more motivated points of view. Once again, your customer should control the pace of that journey. Not too fast, not to slow – just right for that customer.

Why

As a sales leader, one of your favorite words should be "Why." You need to understand your customer's perspective on every issue that arises during your interactions. The more you understand their needs, wants, and aspirations, the better you can serve them and help them get to where they want to go while you achieve your goal in the process.

Sales leaders often make assumptions based on their experience, but they never act on those assumptions unless they have verified that it is correct about that individual customer.

When sales leaders have asked every why question they can think of, there is always one more question to be answered before moving on: "Is there anything else I need to know that will help me better serve your needs?"

Evaluate

A sales leader needs to take stock of all their work and ask this question: How is what I am doing today aligning with the bigger picture? There is power in clarity on how your individual job performance aligns with your overall goals and drivers. This clarity becomes even more empowering to you when you can show linkage from your daily efforts towards the progress of your big hairy audacious goal. This transparency also exposes if you are working on something that is not supporting the movement towards your values and permits you to refocus your activities.

> Communication is your first step in leadership. Open communication will help you to understand the needs of your customers and your potential customers. So, be interested instead of trying to be interesting.

Be cognizant that there is always more to learn. Just because you are a top performer does not mean you know everything. You must be open to learning from others, including those who may not be performing as well as you. They will appreciate the chance to show their skills and expertise. Seek outside resources to guide you in the process of leadership development and performance excellence. These are practices where no single playbook works; each sales leader is unique in their goals and obstacles, so don't try to be an expert in everything. It can blow up in your face and have an adverse impact even though your intentions are in the right place.

Trying to understand what makes a great sales leader can seem elusive at times because it takes practice. Sales leaders must continue to self-improve and be dedicated to serving. So, set some leadership goals for yourself to start making those personal improvements. ■

BY DAWN SINGLETON-OLSON

Building A Loyal Customer Base



Open your medicine cabinet or kitchen cupboard and you'll probably see a few products you've used for years – the same peanut butter your mom packed in school lunches or the toothpaste you've brushed with since grade school. We all have favorite brands when it comes to products and services, but with so many choices in an ever-changing marketplace, brand loyalty can never be taken for granted.

An article in this issue examines the various reasons producers and practitioners switch to different products. As an inside sales rep, you'll no doubt help your clients make those changes with your knowledge of new products, backorders, price increases and discontinued items. This is just one way you add value to customer interactions with your own



personal "brand." Understanding the key drivers of customer satisfaction and loyalty will ensure that your clients won't have a reason to make the switch to a competitor.

Make it easy

Customer experience is integral to customer loyalty. In a recent survey by the Northridge Group, eighty-one percent of consumers admitted frustration dealing with companies that don't make it easy to do business with them, and that same number said they would likely stop doing business with a company after a poor service experience. To build and maintain customer loyalty, it's vital to make things as easy as possible for customers to engage with you and your company. Learn what your customers value most, and work to provide that at every interaction. This can be challenging, particularly if you work with a diverse customer base of producers, solo practitioners and multi-doctor practices – which is why it's so important to take the time to get to know your customers as individuals, even if you never meet them face-to-face.

To build and maintain customer loyalty, it's vital to make things as easy as possible for customers to engage with you and your company. Learn what your customers value most, and work to provide that at every interaction.

Companies spend millions to collect data on customer behavior and buying patterns, but you have a wealth of information at your fingertips with your client's purchase history. Having the data isn't enough unless you use it to add value to your customer interactions. What product lines do they use? What are their seasonal buying trends? What promotions have they participated in – and which ones might save them money next year, based on their purchases? Just as important as what they buy from you are the items you don't find in their history. Was there a drop in a particular product or category from the previous year? Are you missing out on add-on items or sales of consumables like needles, syringes, white goods, or fluids? If you are, find out why and what you can do to earn that business.

Feedback

Besides knowing your clients' preferences and buying habits, it's important to know why they're doing business with you – or why they're not. It might seem awkward to simply ask your customers for honest feedback, but most will welcome the opportunity and appreciate your interest and genuine commitment to improving their experience, and continue building on what's working well. Consumers who feel their opinions are valued become loyal customers. Over half of the respondents in the Northridge Group survey said they are willing to spend more with a company that provides an excellent customer experience.



A surprising statistic from the Northridge Group survey found that 57 percent of consumers have trouble finding the answers they're looking for on a company's website. Navigate a typical customer journey through your company's site so you can address any areas that could cause frustration.

Location may be critical in both real estate and retail, but for you, knowing your customer's location and how it impacts their business shows them that you go above and beyond as a true partner in their success. The needs of livestock operations and large animal practices, in particular, can vary greatly across the country, depending on geography, weather and accessibility. Taking the time to follow news of adverse weather events, pest or disease outbreaks, biosecurity problems or other issues that could impact your customers in their region of the country gives you the opportunity to discuss their needs, make recommendations and help them get ahead of a potentially negative situation.

Historically, the veterinary and livestock industries have lagged a bit behind when it comes to communication technology, but today's producers and practitioners have become much more tech-savvy, including how they access information on products, services and price. Knowing your customers' preferred channels for receiving information and making sure that your company is providing a simple, seamless experience across those channels makes it easy for them to do business with you. A surprising statistic from the Northridge Group survey found that 57 percent of consumers have trouble finding the answers they're looking for on a company's website. Navigate a typical customer journey through your company's site so you can address any areas that could cause frustration.

Your clients likely fall into multiple age groups, and while some channels like email are declining in use for customer service, it may still be the best way to get information to some of your customer segments. Texting, tweeting, and using social media to get the word out about new products and upcoming promotions are opportunities for direct and personalized communication that can lead to better engagement with your customers. Despite the increase of social media as a preferred channel with consumers, 25 percent say they never receive a response when they contact a company this way, so be sure your customers know they can count on hearing from you in a timely manner!

With so many existing choices, a steady stream of new products, and instant access to information and competitive pricing, finding and then keeping customers from making a switch to the competition is an ongoing challenge for every business. Going above and beyond traditional sales skills by getting to know your customers and understanding what's important to them, adding value to every interaction, and making it easy and enjoyable to do business with you will build a loyal customer base and keep them coming back. ■

Dawn Singleton-Olson has more than 25 years of experience in the animal health industry, including distributor sales, manufacturing, practice management and as a zoo supervisor. She is a volunteer, fundraiser and board trustee for several humane organizations and the Omaha (Neb.) Police Mounted Patrol.



HOW LONG DOES IT LAST?

THAT'S THE WRONG QUESTION.

The question to ask is how fast does the treatment kill BRD-causing bacteria.

Single-dose Baytril® 100 (enrofloxacin) Injectable delivers effective, therapeutic levels of drug in the lung tissues in 1-2 hours*[1] and kills 97% of BRD-causing bacteria in 1-2 hours.*[2,3] The sooner bacteria are killed, the faster a calf will feel better and get back to work eating and gaining weight. You know the drill. You turn to the one you trust.

*The clinical significance of *in vitro* data has not been demonstrated.
Federal law restricts this drug to use by or on the order of a licensed veterinarian.
Extra-label use of this product in food-producing animals is prohibited.



[1]Davis JL, Foster DM, Papich MG. (2007). Pharmacokinetics and tissue distribution of enrofloxacin and its active metabolite ciprofloxacin in calves. *J Vet Pharmacol Ther.* 30(6):564-571.
[2]Blondeau JM, Borsos S, Blondeau LD, et al. (2005). The killing of clinical isolates of *Mannheimia haemolytica* (MH) by enrofloxacin (ENR) using minimum inhibitory and mutant prevention drug concentrations and over a range of bacterial inocula. In: ASM Conference on Pasteurellaceae; 23-26 October 2005; Kohala Coast, Big Island, Hawaii: American Society of Microbiology; Abstract B12.
[3]Blondeau JM, Borsos SD, Hesje CH, et al. Comparative killing of bovine isolates of *Mannheimia haemolytica* by enrofloxacin, florfenicol, tilmicosin and tulathromycin using the measured minimum inhibitory concentration (MIC) and mutant prevention concentration (MPC) drug values. In: International Meeting of Emerging Diseases and Surveillance (IMED); Vienna, Austria: International Society for Infectious Diseases. February 23-25, 2007. Figures 8-10.

©2017 Bayer, Shawnee Mission, Kansas 66201
Bayer, the Bayer Cross and Baytril are registered trademarks of Bayer. BL171579



Addressing Dairy Cattle Reproduction Challenges

In August, the Dairy Cattle Reproduction Council (DCRC) hosted a webinar reviewing the challenges of both dairy cattle reproduction and the council's efforts to improve fertility and resources to producers. The webinar was presented by Jeffery Stevenson, Ph.D., past president of the DCRC and professor of animal sciences and industry at Kansas State University.

The challenge

The 21st century began with a common belief that dairy cow fertility was on the decline. Pregnancy rates and conception rates were declining. Reproductive success is required for herd success – milk production requires refreshing of lactation. Yet, the reasons for the decline in fertility were not well understood at first. In fact, fertility of some herds during this time was quite successful.

Milk yield has increased at the same time as producers worldwide experienced reproduction challenges. Most of this increase is attributed to improved genetic selection.

Advances

Despite this negative trend, research in reproductive physiology led to significant advances. For example, in 1989 there was the first published paper showing the gonadotropin releasing hormone (GnRH) was contributing to synchronizing ovarian follicles. As we know today, this information has helped dairy producers more effectively time pregnancies and calving dates.

Solution

These new technologies would be the key to solving reproductive challenges in dairies. First, producers and veterinarians must be aware of these advances, understand them, then implement them. To solve this challenge, several individuals decided to found an organization to concentrate on this decline in fertility and turn the tide for the benefit of the entire industry. In 2005, an organizational meeting of the DCRC was held in St. Louis. The aim was to emulate the successful model of the National Mastitis Council (NMC).

Results

Efforts from the entire dairy industry have turned the tide on reproductive challenges. In particular, improved genomic selection has increased genetic gain for lowly heritable traits like daughter pregnancy rates (DPR), productive life (PL) and somatic cell scores (SCS). The quest for improved reproductive performance is not over. The future of the DCRC depends on integrating the disciplines of physiology, nutrition, genetics, economics and production medicine. ■

For more information about the Dairy Cattle Reproduction Council, visit www.dcrcouncil.org.

www.norbrook.com

The Choice is Simple



Single-Dose BRD Treatment & Control

Same Active Ingredient & Dosing Regimen as Baytril® 100 in Beef & Non-Lactating Dairy Cattle

Available in 100 mL, 250 mL & now in 500 mL Bottles

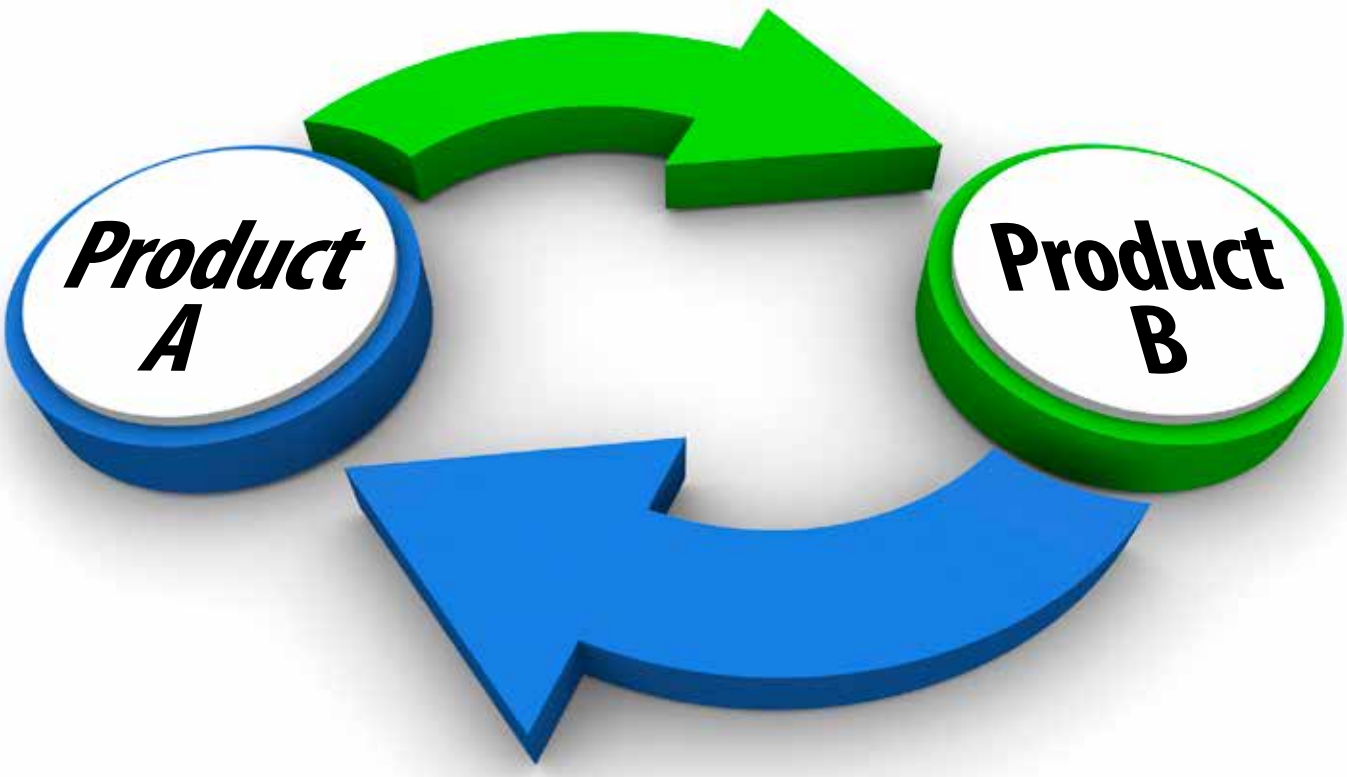
Federal law restricts this drug to use by or on the order of a licensed veterinarian. Federal law prohibits the extra-label use of this drug in food-producing animals. Cattle intended for human consumption must not be slaughtered within 28 days from the last treatment. This product is not approved for female dairy cattle 20 months of age or older, including dry dairy cows. Use in these cattle may cause drug residues in milk and/or 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. Use with caution in animals with known or suspected CNS disorders. Observe label directions and withdrawal times. See product labeling for full product information.

The Norbrook logos are registered trademarks of Norbrook Laboratories Limited
Enroflox is a registered trademark of Norbrook Laboratories Limited
Baytril is a registered trademark of Bayer Animal Health

0717-495-I02B

Norbrook®

BY JENNIFER RYAN



Making the Switch

When a brand gains customers, most often, they are switching from one brand to another. Keeping customer needs front-and-center is the best way distributor sales representatives (DSRs) can provide service during this transition.

Helping customers switch products is an opportunity to build trust

Supply and demand

The number one reason customers switch brands is due to backorders, says Eric Rothe, program development sales representative in Texas for Micro Technologies. Lack of adequate supply forces customers to evaluate other options.

From there, Rothe lets the customer follow one of three common paths: round up existing supply to extend the customer's stock; outline equivalent product options; or suggest new products.

"If we're given ample notice, and there's still some supply out there, we'll do what we can to keep the customer stocked," he says.

If the customer wants to compare similar products, Rothe offers options that align with the most important need, which can be price or efficacy or administration.

Opening the discussion to completely different products allows more flexibility.

"We have eyes and ears on the ground every day," he says. "We can offer suggestions on what other customers are doing and what is working best for their operation. Our customers value our opinion on those matters."

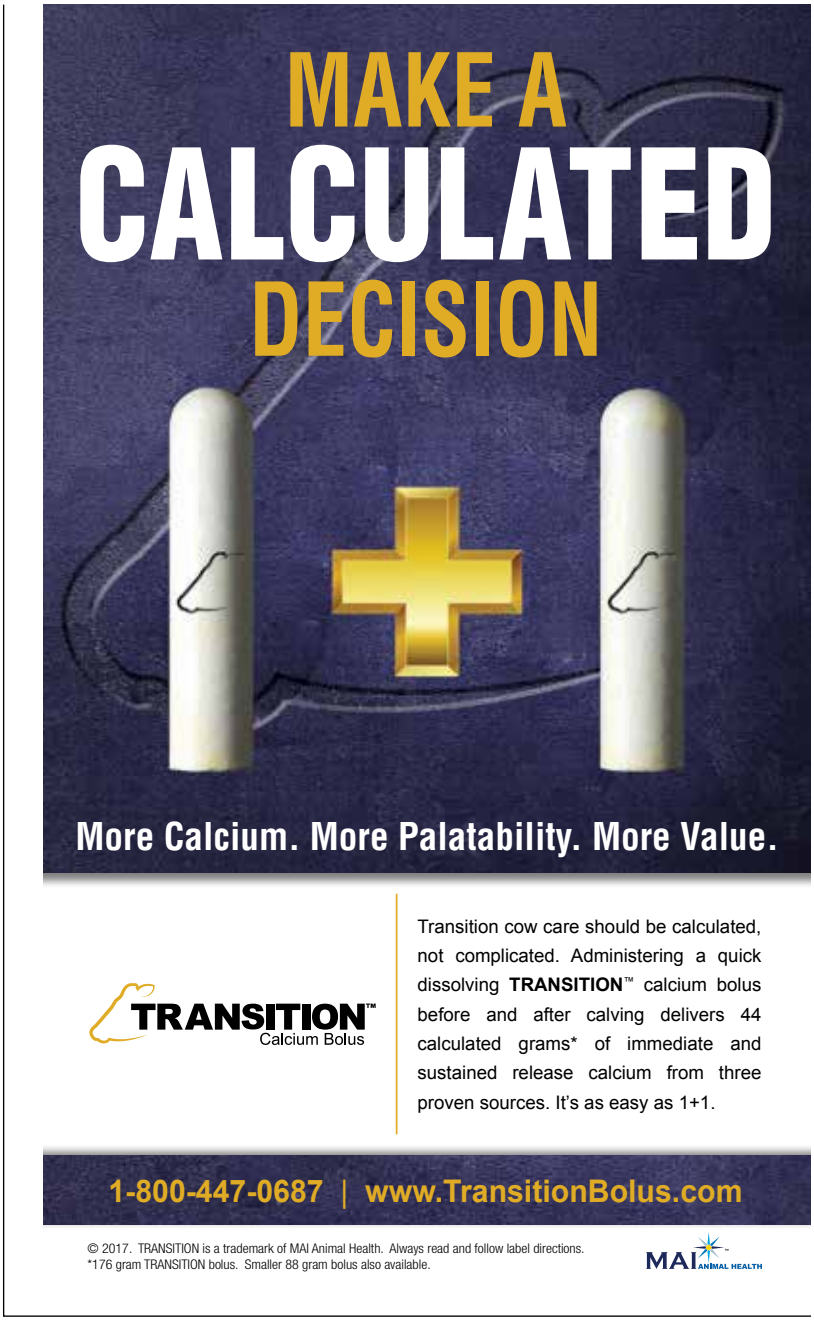
Customers typically want something similar to what is on backorder, says Joel Boschma, territory manager in Idaho with MWI Animal Health. However, it's important not to jump to that conclusion.

"Present them with everything," Boschma advises. "I'm not going to present them with what I want them to buy.

> "You're going to experience long-term success and loyalty if you give the customer as much help as possible. Help them through the process. A positive experience is the best relationship building opportunity with the customer."
>
> **– Joel Boschma, territory manager, MWI Animal Health**

You're going to experience long-term success and loyalty if you give the customer as much help as possible. Help them through the process. A positive experience is the best relationship building opportunity with the customer."

Boschma owns a 2,000-cow dairy himself, which informs his experiences with products. Even his firsthand experience is carefully framed to the customer.



"I make it a point to mention that it's only my opinion, so I'm not coming across as influencing their decision. Every customer is different. Maybe a product hasn't worked so well for me, but it worked great for another customer I have respect for. Every situation is different and every customer is different."

Pricing

A change in price is another common reason customers want to make a switch. Sometimes Rothe notes these are knee-jerk reactions to regular price increases. Of course, no customer wants to sacrifice efficacy for a less expensive product.

"In some cases, you may have a customer that wants something cheaper, but if it's not saving cattle it just becomes more expensive in the long run," he says.



A customer's comfort level with a product can negate a price difference, Boschma adds.

"Some people will continue to use a more expensive product because they are comfortable with it. With other people, it just doesn't matter to them at all. For pricing questions, I just hit the high points and leave the decision up to the customer entirely."

Early adopters

Once in a while, a product comes along that is a "game changer." With "game changers," customers may be interested but slow to adopt new technology. In these cases, Boschma emphasizes a trial period over using the product throughout the herd.

"Sometimes people just need time to get comfortable with it, to understand it," he says. "It's our role to help them through that process. If it's a product that you believe can really help them, it's important to make sure each one of your customers understand. If they are hesitant, I encourage them to try a little and see if it works."

Participating in manufacturer meetings is a key step in being prepared to answer any customer questions – but especially when considering product changes, Rothe says.

"For new products, I have to pass on what we've been educated about in manufacturer meetings. Then, explain to my customers what the benefits are, what the cost efficiency is – or what it may be. At that time, it's up to them to decide if they want to be a pioneer."

> "About 70 percent of the time, when a customer has their mind made up, they are going to switch, and it's going to be hard to sway them in another direction."
>
> **– Eric Rothe, program development sales representative, Micro Technologies**

Switching teams

The DSRs' first concern is always the customer, Rothe says. However, he considers it a professional courtesy to give manufacturer reps a heads-up when customers may be considering a brand switch due to a negative experience.

"Sometimes, I may call up a manufacturer rep and let him know a particular customer has concerns, and it may be in their best interest to visit with them and try to work out any issues," he says. "About 70 percent of the time, when a customer has their mind made up, they are going to switch, and it's going to be hard to sway them in another direction."

The bottom-line for product choice is a positive customer experience. No matter what the brand or pricing, the product simply must perform.

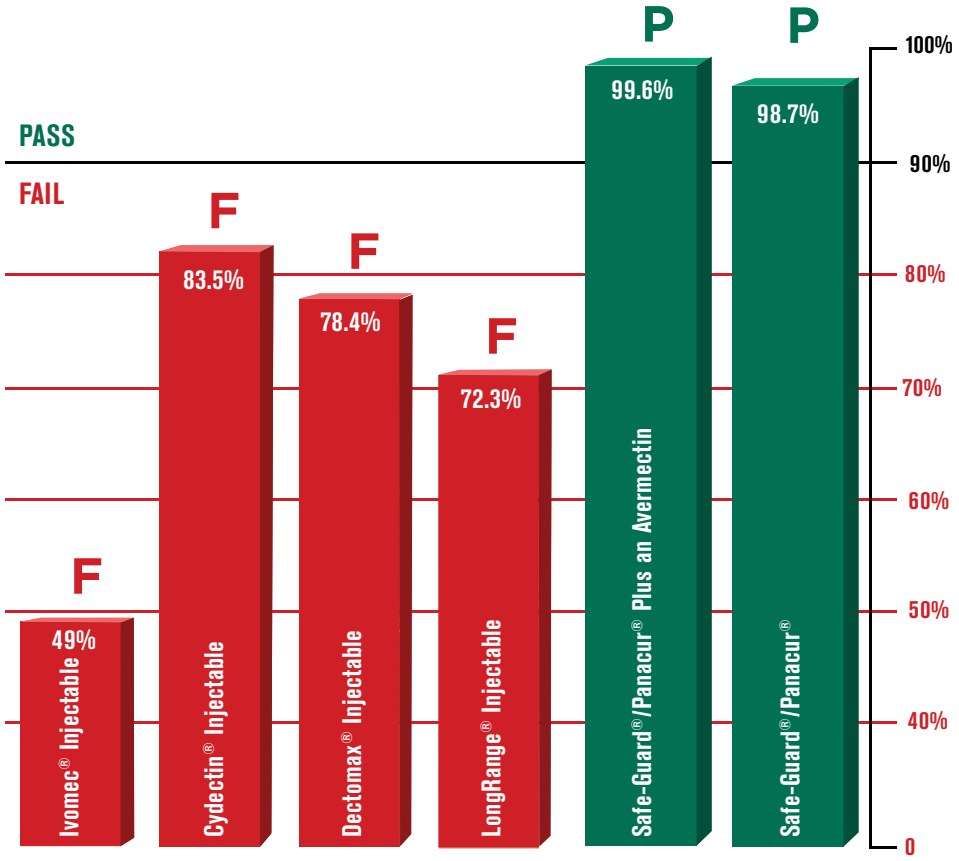
"At the end of the day, a producer has to use the product that works best for them," Rothe says. "Other factors that come into play are going to take a secondary role. If the product isn't effective, pricing and availability aren't an issue anyway." ■

IS YOUR DEWORMER PASSING THE TEST?

AVERAGE PERCENT EFFICACY[2]

90% Required to Pass[4]

safe-guard®
(fenbendazole)



The FDA has identified growing levels of internal parasites resistant to the Macrocyclic lactones (Avermectin) class of dewormers.[1]

Results from the Merck Animal Health Fecal Egg Count Reduction Test National database[2] shows several cases of internal parasite resistance and supports concurrent treatment protocol to manage resistant parasites.

The majority opinion among parasitologists attending the FDA public forum on managing resistant parasites was that concurrent treatment of two different classes of anthelmintics is the best way to manage these resistant parasites.

Merck's database supports 2008 USDA National Animal Health Monitoring Study (NAHMS) showing confirmed or suspected resistance in several U.S. states to Macrocyclic lactone (Avermectin) class of dewormers.[3]

ADD SAFE-GUARD ADD POUNDS

Consult your local veterinarian for assistance in the diagnosis, treatment and control of parasitism.

IMPORTANT SAFETY INFORMATION

Safe-Guard EN-PRO-AL Molasses Block
RESIDUE WARNING: Cattle must not be slaughtered within 11 days following last treatment. A withdrawal period has not been established for this product in preruminating calves. Do not use in calves to be processed for veal.

Safe-Guard Protein Block
RESIDUE WARNING: Cattle must not be slaughtered within 16 days following last treatment. A withdrawal period has not been established for this product in preruminating calves. Do not use in calves to be processed for veal.

Safe-Guard Mineral, feed through products and liquid feed
RESIDUE WARNING: Cattle must not be slaughtered within 13 days following last treatment. For dairy cattle, the milk discard time is zero hours. A withdrawal period has not been established for this product in preruminating calves. Do not use in calves to be processed for veal.

Safe-Guard Drench and Paste
RESIDUE WARNING: Cattle must not be slaughtered within 8 days following last treatment. For dairy cattle, the milk discard time is zero hours. A withdrawal period has not been established for this product in preruminating calves. Do not use in calves to be processed for veal.

Safe-Guard is a registered trademark of Merck Animal Health. Panacur is a registered trademark of Merck Animal Health. Ivomec is a registered trademark of Merial, Ltd. Cydectin is a registered trademark of Boehringer Ingelheim Vetmedica. Dectomax is a registered trademark of Zoetis. LongRange is a registered trademark of Merial, Ltd.

1 FDA Public Resistance Forum-March 2012
2 Tests from 1/1/2008 - 4/12/2016
3 NAHMS 2008
4 Dobson R., Jackson F., Levecke B., Besier B., et al. Guidelines for fecal egg count reduction tests (FECRT). World Association for the Advancement of Veterinary Parasitology (WAAVP) (2011) Proceedings: 23rd International Conference of the World Association for the Advancement of Veterinary Parasitology

2 Giralda Farms – Madison, NJ 07940 – merck-animal-health-usa.com –
800.521.5767 Copyright © 2016 Intervet, Inc. d/b/a Merck Animal Health, a subsidiary of Merck & Co., Inc.
All rights reserved.
5/16 BV-SG-55108

MERCK Animal Health



Keeping It Clean

Properly selecting, using disinfectants is critical to maintain herd health

BY JENNIFER RYAN



Today's confinement livestock operations help keep animals safe from diseases transmitted by wildlife and other outside sources. Yet, understanding the basics of cleaning and disinfecting barns is an important step for biosecurity protocols.

"Because we have the advantage of keeping animals confined, we minimize the risk of new introductions to diseases we don't already have on our farm," says Alejandro Ramirez DVM, MPH, PhD, Diplomate ACVPM, associate professor, Veterinary Diagnostic and Production Animal Medicine at Iowa State University. "The second part of our biosecurity is, once we have something in our farms, how do we control it to make sure it doesn't spread to other farms and other stages of production."



Morgan Radford



Alejandro Ramirez

For example, porcine epidemic diarrhea virus (PEDV) may cause only minor health consequences in finishing operations. Yet, it can have devastating effects if carried into farrowing operations, Ramirez says. The goal of biosecurity is to minimize the risk of infection between different farms, stages and even buildings.

The benefits of good protocols are evident in healthy animals that maintain production and don't require expensive veterinary treatments. This reduces costs – and contributes to judicious use of antimicrobials across the industry.

"The less disease you have, the less you need antibiotics," Ramirez says. "It can even help with bacterial infections because, many times, viral infections can lead to secondary

bacterial infections that cause more damage. We want pigs to be healthy, happy and minimize stressors. That can make welfare even greater."

In addition to PEDV, porcine reproductive and respiratory syndrome (PRRS) is a persistent concern among pork producers, says Morgan Radford, senior manager, professional and technical services, at Virox Animal Health.

Production costs can be significant when producers face diseases like these, and others, she says.

"Only healthy animals can be harvested," Radford notes. "If an animal is not marketed, a producer doesn't get paid and any costs from raising the animal up until that point are lost. Even if the animal takes time to recover, it could require veterinary care and more feed and more days to market weight. In some cases, we might even have a whole herd culled. Not only do producers lose animals, but the barn loses productivity. In the cases of breeding stock, the time and investment in genetics is gone."

> "When people have been on high alert for a long time, fatigue can creep in and the perceived risk is lower. We know when biosecurity isn't working because there's an outbreak."
>
> **– Morgan Radford, senior manager, professional and technical services, Virox Animal Health**

Biosecurity basics

The formula for disease is simple, Ramirez says. First, animals must be exposed to a live pathogen or virus. Second, that pathogen must be present in significant numbers.

"Pigs can fight off a low level of infection or attack," he says. "As that exposure dose increases, it's harder for the immune system to overcome it. Just having *Salmonella* present on the farm doesn't mean sick animals unless we have *Salmonella* in high enough numbers."

Cleanliness, disinfectants and biosecurity measures like restricting visitors help limit introduction of pathogens and can also decrease the potential pathogen load introduced on the premises.

Biosecurity protocols should be customized to each operation. Requiring clean clothes for everyone and disposable boots for visitors are typical requirements. If possible, showering before entering facilities helps reduce possible contamination.

"If you can't shower, then washing hands when touching animals. Maybe I can put on disposable gloves – that's another layer of extra safety. At the top of the process is decreasing contamination," Ramirez says. "The challenge is really for the workers to have to do it every day. Sometimes we get into a routine, it gets hectic and we take short cuts. The days when everything breaks down, that creates risk."





SPONSORS Veterinary advantage

An Official Publication of the NAVC

PLATINUM

Boehringer Ingelheim

Dechra Veterinary Products

BAYER

zoetis

GOLD

3M

MERCK Animal Health

MIDMARK

WG CriticalCare Animal Health

SILVER

Bovie ANIMAL HEALTH

Bimeda

Ceva

JorVet

nutramax LABORATORIES VETERINARY SCIENCES, INC.

VetriSCIENCE Laboratories

Virbac

BRONZE

Ansell

EXEL INT ANIMAL HEALTH DIVISION

COLORADO SERUM COMPANY

MAI ANIMAL HEALTH

Medical Illumination

Norbrook

SARSTEDT

SOL-MILLENNIUM Building a Healthier Tomorrow

TERUMO

Vetericyn

VIROX ANIMAL HEALTH

Revolutionary Disinfectants for Infection Control & Biosecurity



Key points

Top tips for cleaning and disinfecting:

- Train employees on the farm standard for cleanliness
- Use the correct detergent for the job
- Select the appropriate disinfectant for target pathogens
- Consider the safety profile, environmental impact, cleaning properties (if any) and contact time of the disinfectant
- Properly calibrate dilution equipment
- Always read and follow label indications of the disinfectant
- If possible, allow the clean surfaces to dry completely

The only feedback to biosecurity occurs when a poor job is done, Radford says. When a disease is spreading rapidly, biosecurity often improves. However, people can become complacent.

"When people have been on high alert for a long time, fatigue can creep in and the perceived risk is lower," Radford says. "We know when biosecurity isn't working because there's an outbreak."

People can unknowingly track disease just from moving to different locations and not using dedicated boots at specific facilities, she says.

Clean up

The first step in reducing the pathogen load is cleaning up. Yet, not everyone on the farm may have the same standard for "clean." Training can help set a standard the whole team can work toward. Cleaning is also the step that takes the longest, which makes it a prime target for cutting corners to speed things up, Radford notes.

"It's a time consuming and messy, dirty job that's not overly pleasant," she says. "Ideally, we would clean, then disinfect, any time animals are removed from a barn. The cleaning step is not overly complicated, but it's critical to allowing the disinfectant chemistry to do its job."





Typically, a detergent is needed to help break down organic matter on surfaces. Removing organic matter allows disinfectants to work. Many are inactivated by the presence of organic matter, which can be a waste of both time and product.

"If you have a pile of manure, and you add disinfectant, the organic matter isn't going to allow it to work," Ramirez says. "However, if you take an additional step and remove the large number of pathogens with a simple power washing, it will look clean and remove all the organic matter. Then we can start thinking about disinfecting."

Detergents also help break down a biofilm, or a slimy buildup of bacteria on surfaces, he says. Different detergents can help break down proteins or fats more effectively. DSRs can help their customers choose a detergent for their cleaning needs.

Disinfect

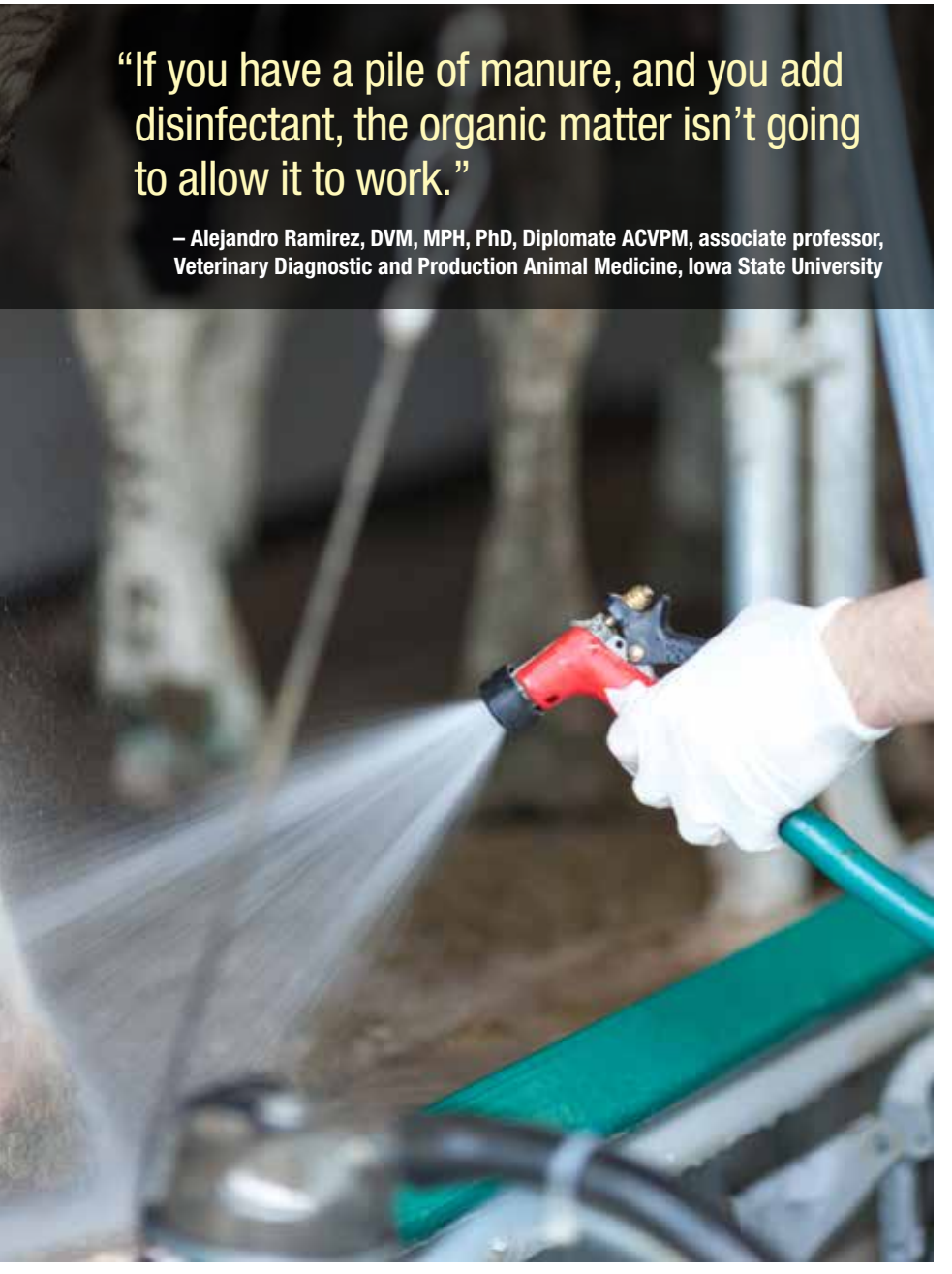
Just like antibiotic choices, disinfectants are developed to target different pathogens. Radford advises producers choose a disinfectant with a wide spectrum of efficacy including virucidal, bactericidal and fungicidal activity.

"You want a product that will do everything, but we've got to set it up for success first with a good cleaning," she says.

There is more to choosing the correct chemistry than just looking at efficacy. Consider:

- The safety profile of the disinfectant, since precautions needed to keep employees and animals safe will differ between chemistries.
- Environmental impact should also be assessed to ensure manure pits and lagoons are not negatively affected.
- Some disinfectants contain a surfactant package in their formulations, meaning they also have cleaning properties.
- Contact time – which is the amount of time a surface must remain wet in order to reach the pathogen kill-time – varies significantly between products.

Radford also advises producers to properly calibrate dilution equipment. This ensures enough product is used to disinfect the premises, but it isn't wasted.



"If you have a pile of manure, and you add disinfectant, the organic matter isn't going to allow it to work."

– Alejandro Ramirez, DVM, MPH, PhD, Diplomate ACVPM, associate professor, Veterinary Diagnostic and Production Animal Medicine, Iowa State University

"Sometimes people think that a little more is good, so a lot must be better," she says. "In the case where a dilution system is set up, if it's not calibrated we don't know what is being used. Team members must be properly trained on the equipment and products and comfortable with the chemistry. It can lead to not adding enough product to ensure disinfection."

Some disinfectants can be corrosive to building materials. If so, a rinse may be required to ensure no irritants remain that could damage the infrastructure or animals' skin. Some products have test strips available that can be used to verify that the correct concentration has been achieved, she notes.

Products must be applied according to label indications. Disinfection does not occur immediately: the proper contact time must be respected. If the product dries on the surface before the contact time has been reached, the disinfectant will need to be reapplied to ensure kill time has been met. Legacy chemistries will typically require between 10 to 30 minutes, Radford says. Newer technologies require only a five-minute contact time to help facilitate a quick turnaround.

"Ideally, we would then let the building completely dry," Ramirez says. "All living cells require water or moisture. That is one more step in ensuring pathogens are removed and neutralized. Then, we can move the animals in."

Ramirez notes that some operations may be more challenging to complete the full process. A farrowing house, for instance, often requires animals be moved in the same day, which doesn't provide an opportunity for allowing the room to completely dry.

Protocols can be flexible depending on the animal, Ramirez notes. Baby animals are highly susceptible to disease. Thorough cleaning will pay dividends in improved viability. On the other hand, older animals have more robust immune systems.

"When we look at biosecurity in containing what we already have, the more we can decrease contamination, the less likely pathogens are to affect our pigs. Any time we can do cleaning and disinfecting, we should, but it's a matter of balance." ■

EPRINEX® (eprinomectin) a Merial product

Eprinex® (eprinomectin)

BROADEST SPECTRUM?

WELL, HOT *DAMALINIA BOVIS!*



EPRINEX keeps it clean.

EPRINEX kills more species and stages of internal and external parasites than any other brand.[1] Including that doggone, blasted biting louse and all the others that are a pain in your operation's (and your cows') you-know-what. Talk about a dewormer that's worth getting worked up about. Satisfaction guaranteed.

Find it at a retailer near you.
EPRINEX.com.

IMPORTANT SAFETY INFORMATION: *No meat or milk withdrawal is required when used according to label. Do not use in calves intended for veal or unapproved animal species as severe adverse reactions, including fatalities in dogs, may result.*

Boehringer Ingelheim

[1]Based on FOI summaries and product labels.

Merial is now part of Boehringer Ingelheim. ®EPRINEX and the Cattle Head Logo are registered trademarks of Merial. ©2017 Merial, Inc., Duluth, GA. All rights reserved. BOV-0628-ANTH1017



The Future is a Foreign Country



BY JIM WHITT

Jim Whitt is an organizational development and employee engagement consultant with Purpose Unlimited in Tulsa, Okla. He is the author of *Riding for the Brand: The Power of Purposeful Leadership*. Sign up for his newsletter at www.purposeunlimited.com. Reach him at jim@purposeunlimited.com or (918) 494-0009.

There's a monument in Liberal, Kan., that reminds me of how different the world looked like 30 years ago. It's easy to miss because it lies flat on the ground like a stone marking a grave in a cemetery. And in a sense, that's what it is. It's a concrete slab upon which once stood a Purina feed mill.

I used to ship feed out of that plant when I was in sales with Purina. When I left the company in 1987, that mill was running 24 hours a day, 365 days a year. It was idle for only 12 hours on Christmas Day. Now, there's nothing left but a magnificent concrete marker with no words or dates to memorialize the life of its once very successful past.

What to aim for

The world has changed a lot since that mill was running full tilt. In 1986, Ralston Purina sold Purina Mills to British Petroleum. Purina Mills went through a couple of more ownership changes until it found a home with Land O' Lakes. In the mid-1980s, who would have imagined Purina Mills would be sold to an oil company and eventually be owned by a cooperative?

"Times and conditions change so rapidly that we must keep our aim constantly focused on the future," observed Walt Disney. That observation is never more true than today, where change appears to be on steroids.



The graveyard is filled with businesses that failed to keep their aim focused on the future. They kept doing what they were doing until what they were doing was irrelevant. And today there are many businesses repeating that pattern. They either choose to ignore the future or simply refuse to change the way they do business. Why?

The future is like a foreign country in our minds. First, we don't know if we really want to go there. And if we do decide to take that trip, we don't know where to go or what to do. We don't know the language or the customs. Should we hire a guide (consultant)? Figuring all that out takes a lot of time and energy. It's a lot easier to stay at home and just keep doing what we're doing.

The problem with home

The present is like home in our minds. Everything is familiar. We get up in the morning and set about our normal routines. We need no guide because we know where everything is. We know where to go and what to do. We understand the language and customs. Staying home is comfortable.

The problem with home is that it is constantly evolving, but the landscape changes so slowly that we lose perspective of time. Then one morning we wake up and find ourselves in a foreign country. We don't know where to go or what to do. The language and customs are different. Home is no longer a comfortable place. It changed, but we didn't. Home is now a slab in the cemetery.

The problem with home is that it is constantly evolving, but the landscape changes so slowly that we lose perspective of time. Then one morning we wake up and find ourselves in a foreign country. We don't know where to go or what to do. The language and customs are different. Home is no longer a comfortable place. It changed, but we didn't.

If you don't like that picture of the future, then it's up to you to change it. Change is a two-way street. Either you make it happen or it happens to you. When you make it happen you take control of your future. When you wait for it to happen, the future takes control of you.

Google "1987" and you'll find sites that describe what the world looked like then. When you see how much things have changed since 1987, you'll realize just how much things will change in the next 30 years.

My Google search turned up an article published in the September 28, 1987 issue of *Newsweek* that featured a 41-year-old "brash billionaire" whose rapid rise to fame led to rumors of his running for public office. "I'm not running for president, he is quoted as saying, "but if I did … I would win." Thirty years ago, who would have believed Donald Trump could become President of the United States – except Donald Trump?

Keep that in mind as you ponder what the world will look like in 2047. It will look like a foreign country – so it's time to start planning the trip. ■



Living to Serve

Ohio FFA members pay tribute to fallen heroes at Arlington National Cemetery

Junior and senior high school members from Ohio's Knox County FFA Chapter are living out the FFA mission to serve on a national level.

In 2013, Jim Scott, Knox County FFA advisor and landscape design and management instructor, had the vision for the annual trip. Participating students are now becoming leaders in their field.

"Ours is the only high school in the country that has this unusual opportunity to serve the military men and women resting at Arlington National Cemetery," Scott says. "It came about because our students are members of the National Association of Landscape Professionals, and we do this service project each year with 500 green industry professionals from across the country. It's one way our students can give back to our nation."

Every July, Scott takes up to six students on the 400-mile trip to D.C., where they spend two days working at Arlington National Cemetery. They also visit a major league baseball park or the Congressional Country Club so students can see career opportunities in landscape design.

"At Arlington, we are assigned a crew leader who leads our group through tasks such as irrigating, fertilizing and planting flower beds," Scott says. "Our students interact with green industry leaders from across the country, which allows them to network and build connections. We also spend time on Capitol Hill, where we meet our senators and express concerns we have about agriculture and the green industry."

Money for the trip is raised by their FFA chapter, and each student attending contributes a portion of the cost. Austin Anderson, a senior, served at Arlington National Cemetery in 2016.

"I'm involved in JROTC, so I'm pretty patriotic already, but being at Arlington and seeing where thousands of people who protected our country are buried was a true privilege," Anderson says. "We cared for those grounds like we were caring for our brothers. It was very meaningful."

Junior Joe Arms also attended in 2016. It was his first time to visit Washington, D.C.

"It was astonishing. We got to go into parts of the cemetery that the public doesn't get to see," he says. "To see what seems like miles of gravestones in a historic place like that was an incredible, once-in-a-lifetime opportunity. You can't understand the significance of it until you are there."



Scott says students are usually a little apprehensive about serving at such a sacred cemetery, but it's extremely rewarding.

"Students often have an 'aha' moment," Scott says. "Living to serve is a key part of the FFA motto, and we try to serve in a way that will make a difference in students' lives. This project helps them become contributing members of society and builds their character. For me, that's one heck of a payday." ■

Vet-Advantage SoundByte Gallery

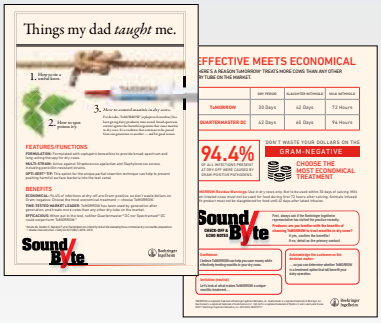
Refresh on key features and conversation starters

Access SoundBytes in the Vet-Advantage Resource App and at www.Vet-Advantage.com/Soundbytes

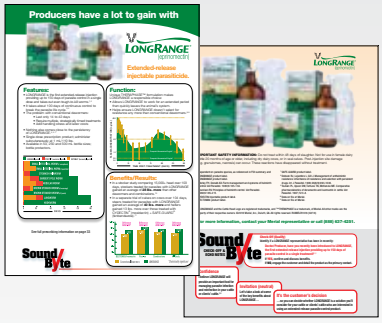
FEATURED SOUNDBYTES



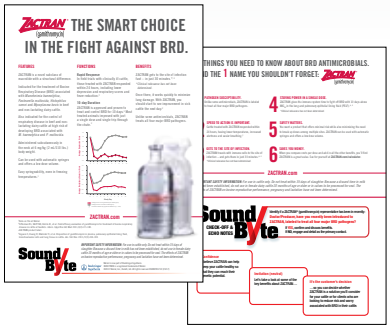
Bayer Zelnate® DNA Immunostimulant on Arrival with MLV Vaccine on Arrival or Delayed



Boehringer Ingelheim ToMorrow® (cephapirin benzathine)



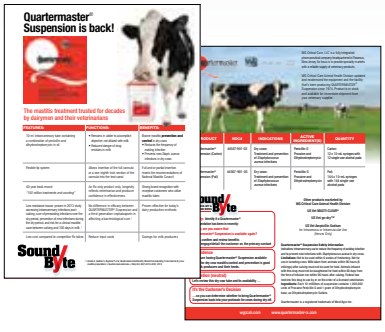
Merial (now a part of Boehringer Ingelheim) LongRange® (eprinomectin)



Merial (now a part of Boehringer Ingelheim) Zactran® (gamithromycin)



Vetericyn Plus® Pink Eye Spray



WG Critical Care Quartermaster® Suspension (penicillin dihydrostreptomycin) in oil



WG Critical Care Ampicillin for Injectable Suspension, Veterinary (ampicillin trihydrate)



Zoetis Dectomax® Pour-on, Dectomax® 1% Injectable and Valbazen® Suspension

Wildland fire suppression costs exceed $2 billion

According to a *USAgNet* report, U.S. Agriculture Secretary Sonny Perdue announced that wildland fire suppression costs for the fiscal year have exceeded $2 billion, making 2017 the most expensive year on record. Wildfires have ravaged states in the west, Pacific Northwest, and Northern Rockies regions of the United States this summer. As the Forest Service passed the $2 billion milestone, Perdue renewed his call for Congress to fix the way the agency's fire suppression efforts are funded. "Forest Service spending on fire suppression in recent years has gone from 15 percent of the 23 budget to 55 percent – or maybe even more – which means we have to keep borrowing from funds that are intended for forest management," Perdue said. "We end up having to hoard all of the money that is intended for fire prevention, because we're afraid we're going to need it to actually fight fires. It means we can't do the prescribed burning, harvesting, or insect control to prevent leaving a fuel load in the forest for future fires to feed on. That's wrong, and that's no way to manage the Forest Service."

50th AABP Annual Conference sets attendance record

At the 50th Annual Conference of the American Association of Bovine Practitioners, held Sept. 14–16, 2017 in Omaha, Neb., veterinarians and many other professionals from across the country and the globe heard from industry experts in the conference program geared toward the 2017 theme, "What We Know That Isn't So." A record attendance of 1,432 individuals included 384 students, 137 American Association of Small Ruminant Practitioner (AASRP) members, 32 graduate students, five veterinary technicians, 150 accompanying persons, and 447 exhibitor representatives from 125 booths. Total attendance was 2,029 from 19 countries. The 50th AABP Annual Conference was once again held jointly with the AASRP.

Sales of organic ag production up 23 percent in 2016

According to *Feedstuffs*, sales of organic agricultural production continued to increase in 2016, when U.S. farms produced and sold $7.6 billion in certified organic commodities, according to data released by the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS). Results of the "2016 Certified Organic Survey" showed that 2016 sales were up 23% from the $6.2 billion sold in 2015. During 2016, the number of certified organic farms in the country increased 11% to 14,217, and the number of certified acres increased 15% to 5.0 million. The top commodities in 2016 included: Milk – $1.4 billion, up 18%; Eggs – $816 million, up 11%; Broiler chickens – $750 million, up 78%.

Tyson Foods to build $320 million poultry plant

According to *USAgNet*, Tyson Foods Inc. said it is planning to build a $320 million poultry complex in eastern Kansas, in response to strong demand for chicken. The company will build a processing plant, hatchery and feed mill, close to the city of Tonganoxie, in Leavenworth County, creating about 1,600 jobs. The company will contract with local farmers and ranchers to raise chickens. Production is scheduled to begin in mid-2019. The plant will have the capacity to process 1.25 million birds a week and is expected to generate an annual economic benefit of $150 million for the state of Kansas.

Beef exports continue above last year's pace

According to *MEAT+POULTRY*, statistics released by the US Dept. of Agriculture (USDA) and compiled by the US Meat Export Federation (USMEF) show US beef exports stayed above last year's pace in July while posting one of the highest monthly export value totals on record. Export value for pork dipped below its year-ago level for July for the first time in 15 months with export value down slightly as well. July beef exports were up 5 percent year-over-year and totaled 115,178 tons with export value up 18 percent from a year ago reaching $623.7 million, the highest since Dec. 14, 2016. For January through July, exports increased 11 percent in volume (784,145 tons) and 15 percent in value ($3.97 billion) compared to the first seven months of last year.

Wholesale prices of chicken-wings hit all-time high

According to the *Wall Street Journal*, sports bars and restaurants are facing record-high wholesale prices for chicken

wings – and many are having to choose between raising menu prices, reining in promotions or cutting portion sizes. America's favorite spicy, sticky appetizer has been a rare bright spot for casual-dining restaurant chains, which are struggling with declining traffic. A wave of chicken wing-themed deals and promotions has led to lower restaurant prices: The price of an average chicken-wing order at a full-service restaurant fell 18% in the 12 months through June to $7.23 from $8.85, according to NPD. In 2017, though, wholesale prices for chicken wings have climbed by almost 20% – to a record $2.09 a pound in August for jumbo whole wings, according to market-research firm Urner Barry.

NPPC applauds U.S. pork access to Argentina

The National Pork Producers Council (NPPC) applauds the Trump administration for negotiating U.S. pork access to the Argentine market, according to a release. Argentina was among several countries with non-science based barriers to U.S. pork imports. "U.S. pork producers are the most competitive in the world and we have long sought the opportunity to provide affordable, high-quality pork in Argentina," said NPPC President Ken Maschhoff. "We thank Secretaries Perdue and Ross, and their teams at the USDA and the Department of Commerce, as well as U.S. Trade Representative Lighthizer and his team, for their diligent work to win Argentine market access."

ImmuCell team expands

ImmuCell announced the hiring of Kathy Becher, Matt Scoville and Dale Miller. Kathy Becher joins the team in a dual role as customer service, and sales and marketing support representative. Her position focuses on building marketing relationships with animal health distributors. Before joining ImmuCell, she served as customer service and office manager at DAY 1 Technology, LLC. Matt Scoville serves as the regional sales and marketing manager for California, Arizona and Nevada. In this role, he establishes and builds relationships with animal health distributors, veterinarians, calf raisers, dairy farmers and cow/calf operators. Scoville held past positions as a large animal veterinary technician, in pharmaceutical warehousing and dispensing, and as an outside sales representative for Veterinary Service, Inc. Dale Miller joins the team as the regional sales and marketing manager for the northeast United States and Canada. Like Scoville, Miller will continue building relationships with distributors, veterinarians and producers. Previously Miller was a territory manager for AgriLabs and led Animart's northeast sales and marketing team.

Zoetis launches BRD-Solutions.com

According to *The Cattle Site*, Zoetis recently launched BRD-Solutions.com, a comprehensive resource for managing against bovine respiratory disease, that causes up to 70% of deaths in feedlots and 89% of deaths in stocker operations. This interactive website provides producers, and their veterinarians, with information on: BRD education to help better understand strategies to combat this complex disease; Solutions that can help optimize cattle health and well-being; Good antibiotic stewardship; Disease management insights from veterinarians and producers. "BRD is already complicated, and our goal is to make a solution feel simple," said Shawn Blood, DVM, Beef Strategic Technical Services at Zoetis. "When we talk about BRD Solutions, the solution is not necessarily just a product. It may be a product, multiple products, services or just good management practices. As BRD continues to be a costly threat to the health and well-being of cattle, costing the cattle industry around $1 billion each year, applying customizable BRD Solutions can help producers and veterinarians meet the needs of their operation to better manage BRD."

Global pork production expected to be up in 2018

According to *National Hog Farmer*, the USDA's Foreign Agricultural Service recently updated their estimates of world meat production and trade. Their October numbers predict world pork production will be up 1.0% this year and up 1.8% in 2018. Except for the European Union and Japan, major pork-producing countries are expanding production. USDA/FAS is predicting that U.S. pork production will be up 3.6% this year and up 4.0% next year. They think Chinese pork production will be up 1.0% this year and up 2.3% next year. EU pork production is expected to be down 0.5% this year and down 0.2% next. Canadian pork production is forecast to be up 2.4% this year and up 2.0% next year. FAS expects world pork exports to be down 0.6% this year, but up 2.6% in 2018.

Injectable Baytril® 100 (enrofloxacin)

100 mg/mL Antimicrobial Injectable Solution
For Subcutaneous use In Beef Cattle, Non-Lactating Dairy Cattle
For Intramuscular Or Subcutaneous Use In Swine
Not For Use In Female Dairy Cattle 20 Months Of Age Or Older
Or In Calves To Be Processed For Veal

BRIEF SUMMARY:
Before using Baytril® 100, please consult the product insert, a summary of which follows:

CAUTION:
Federal (U.S.A.) law restricts this drug to use by or on the order of a licensed veterinarian.
Federal (U.S.A.) law prohibits the extra-label use of this drug in food-producing animals.
To assure responsible antimicrobial drug use, enrofloxacin should only be used as a second-line drug for colibacillosis in swine following consideration of other therapeutic options.

INDICATIONS:
Cattle - Single-Dose Therapy: Baytril® 100 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; and for the control of BRD in beef and non-lactating dairy cattle at high risk of developing BRD associated with *M. haemolytica, P. multocida, H. somni* and *M. bovis*.

Cattle - Multiple-Day Therapy: Baytril® 100 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.

Swine: Baytril® 100 is indicated for the treatment and control of swine respiratory disease (SRD) associated with *Actinobacillus pleuropneumoniae, Pasteurella multocida, Haemophilus parasuis, Streptococcus suis, Bordetella bronchiseptica* and *Mycoplasma hyopneumoniae*. Baytril® 100 is indicated for the control of colibacillosis in groups or pens of weaned pigs where colibacillosis associated with *Escherichia coli* has been diagnosed.

Use within 30 days of first puncture and puncture a maximum of 30 times with a needle or 4 times with a dosage delivery device. Any product remaining beyond these parameters should be discarded.

RESIDUE WARNINGS:
Cattle: Animals intended for human consumption must not be slaughtered within 28 days from the last treatment. This product is not approved for female dairy cattle 20 months of age or older, including dry dairy cows. Use in these cattle may cause drug residues in milk and/or in calves born to these cows. A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal.

Swine: Animals intended for human consumption must not be slaughtered within 5 days of receiving a single-injection dose.

HUMAN WARNINGS:
For use in animals only. Keep out of the reach of children. Avoid contact with eyes. In case of contact, immediately flush eyes with copious amounts of water for 15 minutes. In case of dermal contact, wash skin with soap and water. Consult a physician if irritation persists following ocular or dermal exposures. Individuals with a history of hypersensitivity to quinolones should avoid this product. In humans, there is a risk of user photosensitization within a few hours after excessive exposure to quinolones. If excessive accidental exposure occurs, avoid direct sunlight. For customer service or to obtain product information, including a Safety Data Sheet, call 1-800-633-3796. For medical emergencies or to report adverse reactions, call 1-800-422-9874.

PRECAUTIONS:
The effects of enrofloxacin on cattle or swine reproductive performance, pregnancy and lactation have not been adequately determined.

The long-term effects on articular joint cartilage have not been determined in pigs above market weight.

Subcutaneous injection in cattle and swine, or intramuscular injection in swine, can cause a transient local tissue reaction that may result in trim loss of edible tissue at slaughter.

Baytril® 100 contains different excipients than other Baytril® products. The safety and efficacy of this formulation in species other than cattle and swine have not been determined.

Quinolone-class drugs should be used with caution in animals with known or suspected Central Nervous System (CNS) disorders. In such animals, quinolones have, in rare instances, been associated with CNS stimulation which may lead to convulsive seizures. Quinolone-class drugs have been shown to produce erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species. See Animal Safety section for additional information.

ADVERSE REACTIONS:
No adverse reactions were observed during clinical trials.

ANIMAL SAFETY:
In feeder calves, clinical signs including depression, incoordination, muscle fasciculation and inappetance have been observed at higher than approved label dosages. In swine subcutaneous safety studies, incidental lameness of short duration and musculoskeletal stiffness have been observed at higher than approved label dosages.

In swine intramuscular safety studies, transient decreases in feed and water consumption were observed after each treatment. Mild, transient, post-treatment injection site swellings were observed in pigs receiving the 37.5 mg/kg BW dose. Injection site inflammation was found on post-mortem examination in all enrofloxacin-treated groups.

V-04/2016
©2015 Bayer HealthCare LLC

Baytril® 100
Bayer, the Bayer Cross and Baytril are registered trademarks of Bayer.
NADA 141-068, Approved by FDA
Bayer HealthCare LLC, Animal Health Division
Shawnee Mission, Kansas 66201 U.S.A.
GHG080217

Bayer

ZACTRAN® (gamithromycin)

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

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

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

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

WARNING: FOR USE IN CATTLE ONLY. NOT FOR USE IN HUMANS. KEEP THIS AND ALL DRUGS OUT OF REACH OF CHILDREN. NOT FOR USE IN CHICKENS OR TURKEYS.
The material safety data sheet (MSDS) contains more detailed occupational safety information. To report adverse effects, obtain an MSDS or for assistance, contact Merial at 1-888-637-4251.

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

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

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

EFFECTIVENESS
The effectiveness of ZACTRAN for the treatment of BRD associated with *Mannheimia haemolytica*, *Pasteurella multocida* and *Histophilus somni* was demonstrated in a field study conducted at four geographic locations in the United States. A total of 497 cattle exhibiting clinical signs of BRD were enrolled in the study. Cattle were administered ZACTRAN (6 mg/kg BW) or an equivalent volume of sterile saline as a subcutaneous injection once on Day 0. Cattle were observed daily for clinical signs of BRD and were evaluated for clinical success on Day 10. The percentage of successes in cattle treated with ZACTRAN (58%) was statistically significantly higher ($p<0.05$) than the percentage of successes in the cattle treated with saline (19%).
The effectiveness of ZACTRAN for the treatment of BRD associated with *M. bovis* was demonstrated independently at two U.S. study sites. A total of 502 cattle exhibiting clinical signs of BRD were enrolled in the studies. Cattle were administered ZACTRAN (6 mg/kg BW) or an equivalent volume of sterile saline as a subcutaneous injection once on Day 0. At each site, the percentage of successes in cattle treated with ZACTRAN on Day 10 was statistically significantly higher than the percentage of successes in the cattle treated with saline (74.4% vs. 24% [$p<0.001$], and 67.4% vs. 46.2% [$p = 0.002$]). In addition, in the group of calves treated with gamithromycin that were confirmed positive for *M. bovis* (pre-treatment nasopharyngeal swabs), there were more calves at each site (45 of 57 calves, and 5 of 6 calves) classified as successes than as failures.
The effectiveness of ZACTRAN for the control of respiratory disease in cattle at high risk of developing BRD associated with Mannheim*ia 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%).

Marketed by Merial Limited
3239 Satellite Blvd., Duluth, GA 30096-4640 U.S.A.
Made in Austria

®ZACTRAN is a registered trademark of Merial.
©2016 Merial. All rights reserved. Rev. 01/2016

ANADA 200-495, Approved by FDA

Enroflox® 100
(enrofloxacin)

100 mg/mL Antimicrobial Injectable Solution

For Subcutaneous Use in Beef Cattle, Non-Lactating Dairy Cattle and Swine Only.
Not for Use in Female Dairy Cattle 20 Months of Age or Older Or In Calves To Be Processed For Veal.

Brief Summary: Before using Enroflox® 100, consult the product insert, a summary of which follows.

CAUTION: Federal (U.S.A.) law restricts this drug to use by or on the order of a licensed veterinarian. Federal (U.S.A.) law prohibits the extra-label use of this drug in food-producing animals.

PRODUCT DESCRIPTION: Each mL of Enroflox 100 contains 100 mg of enrofloxacin. Excipients are L-arginine base 200 mg, n-butyl alcohol 30 mg, benzyl alcohol (as a preservative) 20 mg and water for injection q.s.

INDICATIONS:
Cattle - Single-Dose Therapy: Enroflox 100 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; and for the control of BRD in beef and non-lactating dairy cattle at high risk of developing BRD associated with *M. haemolytica, P. multocida, H. somni* and *M. bovis.*

Cattle - Multiple-Day Therapy: Enroflox 100 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.

Swine: Enroflox 100 is indicated for the treatment and control of swine respiratory disease (SRD) associated with *Actinobacillus pleuropneumoniae, Pasteurella multocida, Haemophilus parasuis* and *Streptococcus suis.*

RESIDUE WARNINGS:
Cattle: Animals intended for human consumption must not be slaughtered within 28 days from the last treatment. This product is not approved for female dairy cattle 20 months of age or older, including dry dairy cows. Use in these cattle may cause drug residues in milk and/or in calves born to these cows. A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal.
Swine: Animals intended for human consumption must not be slaughtered within 5 days of receiving a single-injection dose.

HUMAN WARNINGS: For use in animals only. Keep out of the reach of children. Avoid contact with eyes. In case of contact, immediately flush eyes with copious amounts of water for 15 minutes. In case of dermal contact, wash skin with soap and water. Consult a physician if irritation persists following ocular or dermal exposures. Individuals with a history of hypersensitivity to quinolones should avoid this product. In humans, there is a risk of user photosensitization within a few hours after excessive exposure to quinolones. If excessive accidental exposure occurs, avoid direct sunlight. For customer service, to obtain a copy of the Safety Data Sheet (SDS) or to report adverse reactions, call Norbrook at 1-866-591-5777.

PRECAUTIONS:
The effects of enrofloxacin on cattle or swine reproductive performance, pregnancy and lactation have not been adequately determined.
The long-term effects on articular joint cartilage have not been determined in pigs above market weight.
Subcutaneous injection can cause a transient local tissue reaction that may result in trim loss of edible tissue at slaughter.
Enroflox 100 contains different excipients than other enrofloxacin products. The safety and efficacy of this formulation in species other than cattle and swine have not been determined.
Quinolone-class drugs should be used with caution in animals with known or suspected Central Nervous System (CNS) disorders. In such animals, quinolones have, in rare instances, been associated with CNS stimulation which may lead to convulsive seizures. Quinolone-class drugs have been shown to produce erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species. See Animal Safety section for additional information.

ADVERSE REACTIONS: No adverse reactions were observed during clinical trials.

ANIMAL SAFETY:
In cattle safety studies, clinical signs of depression, incoordination and muscle fasciculation were observed in calves when doses of 15 or 25 mg/kg were administered for 10 to 15 days. Clinical signs of depression, inappetance and incoordination were observed when a dose of 50 mg/kg was administered for 3 days. An injection site study conducted in feeder calves demonstrated that the formulation may induce a transient reaction in the subcutaneous tissue and underlying muscle. In swine safety studies, incidental lameness of short duration was observed in all groups, including the saline-treated controls. Musculoskeletal stiffness was observed following the 15 and 25 mg/kg treatments with clinical signs appearing during the second week of treatment. Clinical signs of lameness improved after treatment ceased and most animals were clinically normal at necropsy. An injection site study conducted in pigs demonstrated that the formulation may induce a transient reaction in the subcutaneous tissue.

Norbrook Laboratories Limited,
Newry, BT35 6PU, Co. Down, Northern Ireland

I02 September 2016

The Norbrook logos and Enroflox® are registered trademarks of Norbrook Laboratories Limited.

Norbrook

ANADA 200-591, Approved by FDA

Norfenicol®
(florfenicol)
Injectable Solution
300 mg/mL

For intramuscular and subcutaneous use in beef and non-lactating dairy cattle only.

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.

Manufactured by:
Norbrook Laboratories Limited, Newry, BT35 6PU, Co. Down, Northern Ireland.

The Norbrook logos and Norfenicol ® are registered trademarks of Norbrook Laboratories Limited.

Norbrook®

Quartermaster® Suspension

penicillin-dihydrostreptomycin in oil

Bovine Mastitis Prevention and Control in Dry Cows

DESCRIPTION:
Each 10 mL disposable syringe contains 1,000,000 units of Procaine Penicillin G, micronized, and 1 gram of Dihydrostreptomycin base, as Dihydrostreptomycin Sulfate, in an extended action base consisting of 1% w/v Hydrogenated Peanut Oil, 3% w/v Aluminum Monostearate, and Peanut Oil, q.s. Manufactured by a non-sterilizing process.

ACTION:
Infusion of antibiotics at the start of the drying off period has the following advantages: (1) it is active against existing infections; (2) it is prophylactic against new infections, during the time when cattle are likely to become infected [1]; (3) the antibiotic remains in the udder for a sufficiently long period to accomplish the intended objective and is not diluted with milk, as is the case in lactation therapy; (4) the danger of drug residues in the milk is reduced.

Antibiotic control is to be considered an adjunct to good herd hygiene management and milking management. Detailed field studies in England and the United States have demonstrated that a program consisting of treatment, at the time of drying off, with a highly effective antibiotic preparation in a slow-release base, and routine dipping of teats after each milking with an effective disinfectant, markedly reduces the incidence of all udder infections at calving [2,3,4].

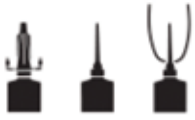
It has recently been recommended that a disinfectant teat dip be used on unmilked cows, or at least be used for 10 days before parturition [5], to reduce the bacterial challenge to the depleted levels of antibiotic in the teat as freshening is approached [6].

When the herd infection level has been reduced, or when herds are not heavily infected initially, it may be desirable to be selective in treating dry quarters [7].

INDICATIONS:
For intramammary use to reduce the frequency of existing infection and to prevent new infections with *Staphylococcus aureus* in dry cows.

DIRECTIONS FOR USING THE FLEXIBLE TIP SYSTEM:
The flexible tip is designed to provide the choice of either insertion of the full cannula, as has traditionally been practiced, or insertion of no more than 1/8 inch of the cannula, as recommended by the National Mastitis Council.
a. Full Insertion: Remove the white end cap by pulling straight up as shown. Gently insert the full cannula into the teat canal; carefully infuse the product.

a.



b. Partial Insertion: Remove *both* the white end cap and the red cannula by pushing sideways as shown. Gently insert the exposed white tip into the teat canal; carefully infuse the product.

b.



DIRECTIONS FOR USE:
At the last milking prior to drying off, completely milk out cow. Warm the syringe containing **Quartermaster** Suspension to body temperature; choose the desired insertion length (full or partial) and insert tip into teat canal; slowly infuse the entire contents. Instill the contents of one syringe into each quarter. Discard the syringe after use. Treated teats should then be dipped into an effective teat dip. The teat or quarter should not be manipulated again until the cow freshens. To achieve and maintain a lower frequency of infection, proper dipping of teats during lactation is recommended.

Shake vigorously for 10 seconds immediately before using.

WARNINGS:
For udder instillation upon drying off only. Not to be used within six (6) weeks of freshening. Not for use in lactating cows. Milk taken from animals within 96 hours (8 milkings) after calving must not be used for food. Animals infused with this product must not be slaughtered for food within 60 days from time of infusion nor within 96 hours after calving.

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

STORAGE CONDITIONS:
Store at controlled room temperature 20° to 25°C (68° to 77°F). Store under dry conditions.

HOW SUPPLIED:
Quartermaster Suspension is supplied as:
Packers of 12–10 mL (.33 Fl Oz) disposable syringes with 12 convenient single-use isopropyl alcohol pads..... NDC 44567-901-03

Pails of 144–10 mL (.33 Fl Oz) disposable syringes with 144 convenient single-use isopropyl alcohol pads .....NDC 44567-901-05

ATTENTION DOCTOR:
It is your responsibility to inform your client of the warnings stated above so as to avoid adulteration of meat or milk and possible prosecution under Federal law.

REFERENCES:

[1] Smith, A.; Westgarth, D.R.; Jones, M.R.; Neave, F.K.; Dodd, F.H.; & Brander, G.C., Methods of Reducing the Incidence of Udder Infection in Dry Cows, *VETERINARY RECORD* 81:504-510, 1967.

[2] Dodd, F.H. & Neave, F.K., Mastitis Control, *N.I.R.D. BIENNIAL REVIEWS* 1970, pp. 21-60.

[3] Roberts, S.J.; Meek, A.M.; Natzke, R.; & Guthrie, R., A Mastitis Control Program Combining Teat Dipping & Dry Cow Therapy, XIX WORLD VETERINARY CONGRESS (Mexico City, 8/15-21/71), *PROCEEDINGS* 3:935-939, 1971.

[4] Newbould, F.H.S.; Carey, P.G.; & Barnum, D.A., The Numbers of Intramammary Infections & Teat Duct Colonizations in a Herd of Twins During a Hygiene Experiment, *CANADIAN JOURNAL OF COMPARATIVE MEDICINE* 34:203-208, 1970.

[5] Neave, F.K. & Jackson, E.R., The Prevention of Intramammary Infection, pp. 15-24 in *The Control of Bovine Mastitis* (Proceedings, Joint Meeting, British Cattle Veterinary Association & The Agricultural Development Association, Reading University. 1/5-6/71), N.I.R.D., 1971.

[6] Feagan, J.T.; Hehir, A.F.; & White, B.R., The Effectiveness in Control of Mastitis of Iodine as a Post Milking Teat Dip, *AUSTRALIAN JOURNAL OF DAIRY TECHNOLOGY* 25: 87-90, 1970.

[7] *Supplement to Current Concepts of Bovine Mastitis.* The National Mastitis Council Inc., Washington, D.C. 22003, 1972, page 7.

WG CriticalCare
A PHARMASPHERE COMPANY

WG Critical Care, LLC
Paramus, NJ 07652

***Quartermaster** is a trademark of West Agro, Inc.*

Rev. 6/2016

BEYOND THE BOTTLE

Winning the praise of cattlemen and veterinarians requires top performance, reliability and a fair price.

NORFENICOL®
(florfenicol 300 mg/mL)

- Less Viscous and More Syringeable Than Nuflor*
- Shorter Sub-Q Withdrawal Time Than Nuflor®
- Plastic Bottles Eliminate Breakage and Product Loss
- FDA-Approved for Sub-Q Use in Cattle at High-Risk of BRD
- Broad Spectrum Treatment and Control Against BRD
- Unique Formulation



Norfenicol®
[florfenicol]

*Data on file

www.norbrook.com

The Norbrook logos and Norfenicol are registered trademarks of Norbrook Laboratories Limited. Nuflor is a registered trademark of Merck Animal Health.

Observe label directions and withdrawal times. Federal law restricts this drug to use by or on the order of a licensed veterinarian. For use in beef and non-lactating dairy cattle only. Not approved for use in female dairy cattle 20 months of age or older, including dry dairy cows. Animals intended for human consumption must not be slaughtered within 28 days of the last intramuscular treatment or within 33 days of subcutaneous treatment. Do not use in calves to be processed for veal. Intramuscular injection may result in local tissue reaction which may result in trim loss at slaughter. See product labeling for full product information, including adverse reactions. 0717-591-101A

Norbrook®

Boehringer Ingelheim

2017 BIVI DSR Rewards Points Program

Merial is now part of Boehringer Ingelheim!

Starting July 1, 2017 the Boehringer Ingelheim Vetmedica, Inc. (BIVI) Rewards Points Program includes all Merial cattle and equine products. For a limited time all Merial cattle and equine products will earn double points from 7/01/2017 until 12/31/2017. It's a great time to bring your customers value with BIVI and Merial products and earn lots of BIVI DSR rewards points while you do it!



Redeem your BIVI DSR Rewards Points for reloadable debit cards as well as individual gift cards!

BIVI reward points earned from multiple BIVI programs, promotions, and bonus opportunities will automatically be combined into individual DSR accounts.

Program period: July 1 - December 31, 2017

To track and redeem your BIVI DSR Rewards Points log in to BIVIRewards.BHEngage.com

Program Rules

DSRs must watch assigned training modules and complete assigned quizzes. Frequency of quizzes is expected to be once every trimester but timing and frequency are subject to change without notice.

DSRs must achieve sales of $50,000 in eligible BIVI Cattle or Equine products to qualify for any award payments.

Keep In Mind

- All Cattle and Equine products are eligible toward awards in the program.
- BIVI DSR Reward Points are retroactive to dollar one (less BIVI DSR Reward Points previously paid at lower levels).
- BIVI DSR Reward Points will be deposited in DSR accounts on a monthly basis.
- BIVI DSR Reward Points earnings will be rounded to the next highest whole number.
- BIVI DSR Reward Points are removed if products are returned.

For any questions about the Rewards Points Program, how to access the website or help with a lost or stolen debit card, please contact the BIVI Discounts and Rebates team:

Phone: 1-800-862-0389
Email: AHBIVIprogramhelp.US@boehringer-ingelheim.com

Once the minimum threshold is met, DSRs earn BIVI DSR Rewards points as follows:

Cattle

Sales Level	Sales Rep Earnings
SILVER LEVEL $50,000 – $199,999	**One Point for every $100** in combined BIVI and Merial Cattle product sales
GOLD LEVEL $200,000 - $399,999	**Two Points for every $100** in combined BIVI and Merial Cattle product sales
PLATINUM LEVEL* $400,000 - $699,999	**Four Points for every $100** in combined BIVI and Merial Cattle product sales
DIAMOND LEVEL** $700,000 and above	**Five Points for every $100** in combined BIVI and Merial Cattle product sales

* DSRs with sales exceeding $400,000 in 2016, and are at or above 100% of previous year's sales, will automatically earn awards at the PLATINUM LEVEL on all 2017 sales.

** DSRs with sales exceeding $700,000 in 2016, and are at or above 100% of previous year's sales, will automatically earn awards at the DIAMOND LEVEL on all 2017 sales.

*** Sales to BIVI Reporting Strategic Veterinarian Program (RSVP) and Reporting Strategic Dealer Program (RSDP) accounts are NOT part of the program. Sales to RSVP and RSDP accounts contribute to qualifying volume to achieve level minimums but do not pay BIVI DSR Reward Points.

BIVI DSR Rewards Points have no cash value and cannot be supplemented with cash or credit card toward redemption of any program awards. No award substitutes are allowed. Boehringer Ingelheim Vetmedica, Inc. will make the determination of eligibility, interpretation of the rules, and final award issuance. BIVI DSR Rewards Points are awarded for sales reported for individual sales reps and are based on the account assignment reported by the distributor at the time the sales were made. BIVI is not responsible for changes in account assignments or how they affect sales history totals or level achievements. Boehringer Ingelheim Vetmedica, Inc. reserves the right to change, modify or cancel this program at any time. Participants must be employed with a participating distributor at the time of each award issuance to receive awards. All applicable federal, state, and local taxes are the sole responsibility of program participants. Participants will be asked to fill out a W-9 tax form if their annual earnings are over $600 per year. Special Notice: All Cydectin SKUs will only be counted towards BIVI DSR Rewards Points Program until the product line is officially divested to the prospective buyer. After the Sale of the Brand no more points will be paid on the BIVI DSR Rewards Points Program.

© 2017 Boehringer Ingelheim Vetmedica, Inc. MSP-0002-GEN0117