

CONNECTING THE DOTS: CLINICAL INSIGHT INTO BRD CONTROL FOR BEEF X DAIRY CALVES

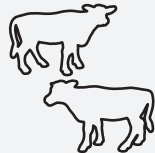
By Nathan Meyer, DVM, PhD, Boehringer Ingelheim

Bovine respiratory disease (BRD) continues to be the No. 1 cause of loss in weaned calves, and it's a challenge that doesn't discriminate—whether we're talking about dairy, beef or beef x dairy crosses. In recent years, the number of beef x dairy calves entering the supply chain has steadily increased, driven by market demands for improved feedlot performance and carcass quality.

While beef x dairy calves may benefit from hybrid vigor, they face many early-life stressors that increase BRD risk:



**INCONSISTENT
COLOSTRUM INTAKE**



COMMINGLING



TRANSPORT STRESS



**VARIABLE MANAGEMENT
PRACTICES**



For us as veterinarians, that means BRD prevention and treatment remain critical priorities. Even with sound husbandry, nutrition and sourcing practices in place, respiratory disease can strike, and when it does, timely intervention matters.

“FOR MY CLIENTS, TREATMENT PROTOCOLS FOR BEEF X DAIRY CALVES TEND TO MIRROR THOSE USED FOR STRAIGHTBRED DAIRY OR BEEF CALVES, AND HEALTH OUTCOMES ARE MORE CLOSELY TIED TO ENVIRONMENT AND MANAGEMENT THAN TO BREED. THAT OPENS THE DOOR FOR APPLYING INSIGHTS FROM BEEF AND DAIRY STUDIES DIRECTLY INTO BRD DECISION-MAKING FOR BEEF X DAIRY ANIMALS.”

— Nathan Meyer, DVM, PhD, Boehringer Ingelheim

ZACTRAN® (GAMITHROMYCIN) LEADS IN BRD METAPHYLAXIS OUTCOMES

While prevention remains the gold standard in managing BRD, even the best management protocols can't eliminate every case. When treatment is needed, ZACTRAN antibiotic delivers both effective results and economic value.

In a head-to-head comparison of BRD metaphylaxis treatments, Holstein steers treated with ZACTRAN had higher first-treatment success, fewer realizers and mortalities, and delivered more per-head savings compared to those given DRAXXIN® (tulathromycin).¹

Higher first-treatment success

When Holstein steers arrived at the feedlot, those treated with ZACTRAN responded

more effectively to initial BRD therapy. With a 58.85% first-treatment success rate — significantly higher than DRAXXIN (46.85%) — ZACTRAN helped more cattle recover faster.¹ ZACTRAN-treated cattle were also less likely to be pulled from the herd. The realizer rate dropped to just 4.16%, and the combined realizer and mortality rate was the lowest of all treatments at 8.60%, keeping more animals on track for full market value.¹

In a 100-head pen example, this 4.16% realizer rate for ZACTRAN (compared to 6.29% with DRAXXIN) could translate to up to 2.13 more calves per 100 head staying on track for full market value, adding approximately \$4,654.05 in additional revenue versus DRAXXIN.

COMPARISON	CALVES SAVED/100 HEAD	ESTIMATED \$ VALUE SAVED
ZACTRAN VS. DRAXXIN	2.13	\$4,654.05

*These values do not include potential differences in drug costs or other treatment-related expenses — this is purely the added value from reducing realizer rates.

Assumptions used in the calculations:

METRIC	ESTIMATE
Finished market weight	1,350 lbs
Market price (live basis)	\$2.30/lb
Full market value	\$3,105
Realizer weight/value	800 lbs x \$1.15/lb = \$920
Lost value per realizer	\$2,185
Pen size	100 calves

Healthier calves mean healthier margins
 ZACTRAN® (gamithromycin) not only improved health outcomes but also delivered significant cost advantages. Total cost per head, including metaphylaxis, re-treatment and outcomes, favored ZACTRAN.

difference. In a comparative study with dairy calves, ZACTRAN delivered significantly lower BRD morbidity and required fewer total treatments compared to *DRAXXIN*.²

Both ZACTRAN and *DRAXXIN* antibiotics improved calf health and improved average daily gain versus controls. However, ZACTRAN was superior to *DRAXXIN* for control of BRD, and BRD with comorbidity from otitis media (ear inflammation from BRD-causing pathogens).²

TOTAL COST PER HEAD:¹	
ZACTRAN: \$88.54	DRAXXIN: \$105.19
\$16.65 PER HEAD SAVED WITH ZACTRAN	
COST OF METAPHYLAXIS ALONE:¹	
ZACTRAN: \$7.38	DRAXXIN: \$10.55

MAKING THE RIGHT CHOICE FOR CROSSBRED CALVES

When beef x dairy calves face BRD challenges, veterinarians play a critical role in guiding antimicrobial decisions that impact animal health. ZACTRAN consistently delivers:

- **Higher first-treatment success¹**
- **Fewer combined removals and mortalities¹**
- **Lower total treatment costs¹**

With improved treatment success and reduced realizers/mortalities, ZACTRAN presents a cost-effective BRD metaphylaxis strategy for feedlot cattle.

These advantages allow veterinarians to recommend a proven, evidence-based approach to BRD metaphylaxis, helping clients reduce treatment failures, improve animal welfare and support more sustainable herd management.

Setting the standard for BRD control
 When calves face respiratory challenges, the choice of antimicrobial can make a measurable

^{*}Clinical relevance has not been determined.

^{**}A small percentage of cattle may have already suffered lung damage, and may be too far gone or will require a little longer to turn around.

¹ Buchanan JW, Nilles AR, Raymond RC. Comparison of three injectable metaphylactic antimicrobial treatments administered at feedlot arrival for control of bovine respiratory disease in calf-fed Holstein steers. *Bov Pract* 2021;54(2):112–119.

² Linhart RD, Brumbaugh GW. Control of bovine respiratory disease, with and without comorbidity by otitis media, in dairy heifers comparing gamithromycin, tulathromycin or no medication at a commercial development facility. *J Dairy Sci* 2019;102(6):5501–5510.

³ Giguere S, Huang R, Malinski TJ, et al. Disposition of gamithromycin in plasma, pulmonary epithelial lining fluid, bronchoalveolar cells and lung tissue in cattle. *Am J Vet Res* 2011;72(3):326–330.

⁴ Sifferman RL, Wolff WA, Holste JE, et al. Field efficacy evaluation of gamithromycin for treatment of bovine respiratory disease in cattle at feedlots. *Intern J Appl Res Vet Med* 2011;9(2):166–175.

⁵ ZACTRAN product label.

ADVERTORIAL

ONE DOSE. 30 MINUTES.^{3*}

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.

DOSAGE AND ADMINISTRATION

Administer ZACTRAN one time as a subcutaneous injection in the neck at 6 mg/kg (2 mL/110 lb) body weight (BW). If the total dose exceeds 10 mL, divide the dose so that no more than 10 mL is administered at each injection site.

Body Weight (lb)	Dose Volume (mL)
110	2
220	4
330	6
440	8
550	10
660	12
770	14
880	16
990	18
1100	20

Animals should be appropriately restrained to achieve the proper route of administration. Use sterile equipment. Inject under the skin in front of the shoulder (see illustration).



The Safety Data Sheet (SDS) contains more detailed occupational safety information. To report suspected adverse drug events, for technical assistance, or to obtain a copy of the SDS, contact Boehringer Ingelheim Animal Health USA Inc. at 1-888-637-4251. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS, or online at www.fda.gov/reportanimalae.

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

For information on effectiveness, the product label in full can be found at https://www.zactran.com/sites/default/files/pdfs/Zactran_Label.pdf.

Marketed by Boehringer Ingelheim Animal Health USA Inc.

Duluth, GA 30096

Origin France

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Knock out BRD in one dose with ZACTRAN[®] (gamithromycin). ZACTRAN reaches the lungs in 30 minutes to start fighting BRD at the site of infection.^{3*} It works fast, hitting peak concentration in just 12 hours,^{3*} with cattle health typically improving in 24 hours.^{4**} But the fight doesn't stop there: One dose delivers 10 days of therapy.⁵ Make the quick treatment choice, and get your cattle healthy fast.

TREAT BRD QUICKLY AT **ZACTRAN.COM**



IMPORTANT SAFETY INFORMATION: For use in cattle only. Do not treat cattle within 35 days of slaughter. Do not use in female dairy cattle 20 months of age or older, or in calves to be processed for veal. Subcutaneous injection may cause a transient local tissue reaction in some cattle that may result in trim loss of edible tissues at slaughter.

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