

# FEEDLOT<sup>®</sup>



## FEEDER INFORMATION HIGHLIGHTS

Volume XXII Number 1

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### **Feedlot Focus**

- Quality gains in 2013
- Silage safety matters

### **Stocker Special**

- Eating the right stuff

### **Cow Calf Corner**

- Baby, it's cold outside



\$5.00

## ZACTRAN<sup>®</sup>

(gamithromycin)

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

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

### INDICATIONS

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

### CONTRAINDICATIONS

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

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

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

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

### PRECAUTIONS

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

### ADVERSE REACTIONS

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

### EFFECTIVENESS

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

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

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

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# Eating the Right Stuff

It all comes down to protein. A recent study at the Dickinson Research Extension Center (DREC) at North Dakota State verifies the critical value of protein in grass-fed cattle production – with startling results.

Steers that grazed annual crops late in the grazing season showed a 25 percent edge in rib-eye size over those grazing only perennial grasses, and spent 25 fewer days in the feedlot to finish.

“Growth requires the appropriate combination of many nutrients, including protein,” says DREC Director Kris Ringwall, Ph.D. “The challenge is finding adequate forage protein late in the season, and in our research, standing crops provided the solution.”

The research began with a study of early weaning as a way to manage short forage supplies in drought by turning calves out in standing crops. Calves were confined for a week to ten days, then placed in the cornfield. They grew well, producing results comparable to grazing grass and indulging in mother's milk.

“When they're that young, they're naïve and they don't know what's under the husk, so over-eating is no problem,” explains DREC Animal Scientist Doug Landblom, key researcher on the project. By the time they came out of the field, they were backgrounded and ready to move on up the chain.

That made Landblom and his cohorts wonder if a similar approach

could be used for older calves, specifically yearling steers. “It seemed a lot of available forage was not being utilized,” he says, “at a time when rising feed prices were pushing against profit.” Landblom also knew an obstacle to grazing cattle later in the season is a lack of protein (9-10 percent crude protein is considered a minimum acceptable level), an obstacle that could be overcome by a change in diet. “We needed a different model, a different way of capitalizing on forages while maintaining protein quality.”

The two-year research project began with 144 large-framed steers divided into three groups. The steers were weaned in early November, maintained on low-quality forage through the winter gaining less than 1.0 pound per day; then split into the three groups. Group one was sent directly to the feedlot. Group two grazed pasture only. Group three began on pasture, then switched to annual crops.

Groups two and three, the pastured animals, were put out on crested wheat grass in early May and fed there until the third week of August (104 days). By then, the forage was losing protein. Registering a crude protein content of 18 percent in early May, CP declined to 8.5 percent in early June. Other native grasses were at 13 percent CP in early June and 7 percent by early August.

At that time, half of the steers were moved to field pea-barley pasture for 27 days. There the protein



measured 15.8 percent. That dropped to 13.5 percent in early September. They were then moved to unharvested corn (CP of 18 percent in mid-August to 7 percent in early October) for 52 days before being shipped to the feedlot. Landblom says to avoid the danger of animals overeating the corn (“This time around they know what’s under those husks.”) the calves were fed a corn diet for four to five days prior to going into the field to prepare the rumen and to avoid sending them into the field too hungry.


“It’s important to match the calves’ growth needs to the forage,” says Landblom. Monitoring forage protein levels and moving calves accordingly seemed to do just that. The calves in group three went to the feedlot heavier, and thus spent less time there – 61 days, compared to 91 days for the pasture fed calves and 142 days for the feedlot fed control group. “The pasture and annual crops group went into the feedlot at around 1,200 pounds. It’s not far to go to get to 1,400.”

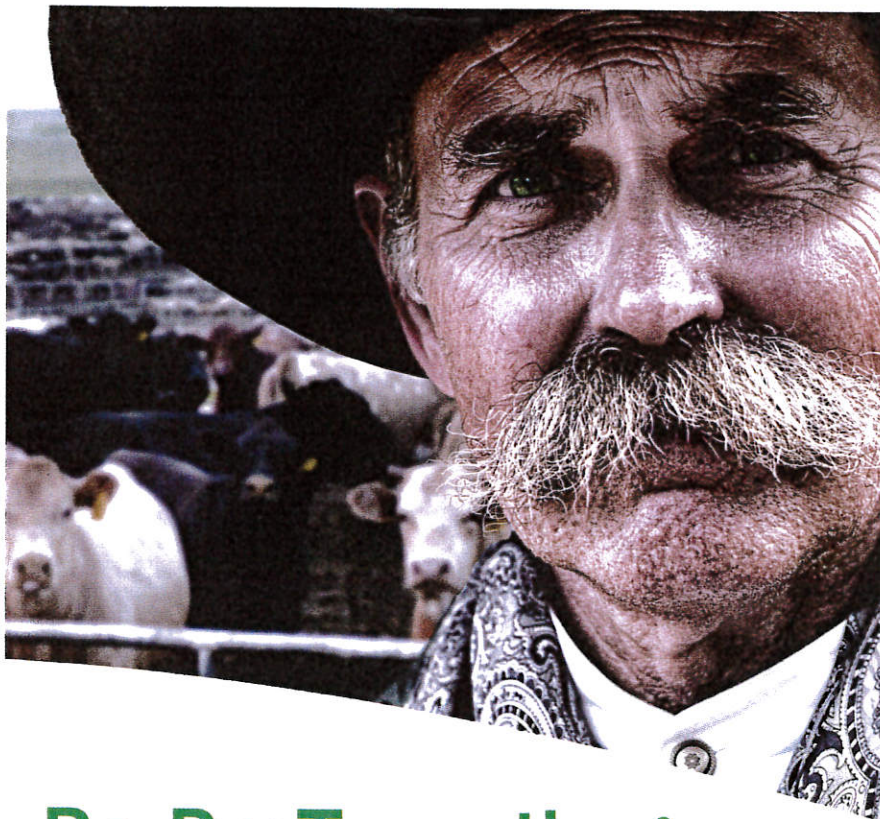
When compared to the first group of steers that went straight from winter grazing to the feedlot, they gained faster with better feed efficiency, costing less to produce per pound. “After two months in the feedlot, carcasses were heavier and hung a higher quality grade,” says Landblom. “It really works, on the farming side and on the net revenue side.” Both feed and labor costs were less. In the study, Landblom found the pasture and annual forage group to be profitable without risk management procedures netting an average \$9/steer, whereas the all pasture group netted a negative

\$30/steer and the feedlot netted a negative \$298/steer. “Cattle are grazing animals and will do most of the work for you.”

And there are other benefits, like waste management and getting the cattle out of confinement. Still, researchers admit the method is not for everyone; but for those with access to forage, water, fencing, and a desire to retain ownership,

Landblom says this is a viable and practical option.

“There are those raising eyebrows at this, asking ‘why not just harvest the grain?’” adds Ringwall, “and in some parts of the country, where the grain business is more prominent, that may be more feasible. But we’re such a grain-oriented country, we tend to forget about the forage component.” 



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