

# The economics of metaphylactic antibiotic treatment

Tom Latta, DVM

Latta Veterinary Consulting, Spearman, TX 79081

## Abstract

If you are involved in the cattle business, you can't help but be aware of the low margin of profitability and high risk of this business. Certainly, animal health is in the forefront of managing profit and risk.

Of all the health issues facing new cattle in an operation, by far the bovine respiratory disease (BRD) complex is the most common and most costly. There are many approaches to managing health in these cattle: vaccines, immune stimulants, feeding programs, low-stress handling, and antibiotics. Many loads of cattle are candidates for metaphylactic treatment with antibiotics on arrival or soon after. The above factors determine the need for this program, but still in most cases it boils down to an economic decision.

**Key words:** BRD, economics, metaphylactic treatment with antibiotics, metaphylaxis

## Résumé

Si vous êtes impliqués dans la production bovine, vous ne pouvez pas ignorer la faible marge de profits et le haut risque de cette production. La santé animale joue certainement un rôle de premier plan dans la gestion du risque et des profits. Parmi tous les problèmes de santé auxquels font face les nouveaux bovins dans une exploitation, le complexe respiratoire bovin est de loin le plus fréquent et le plus onéreux. Il existe plusieurs approches pour gérer la santé de ces bovins : les vaccins, la stimulation immunitaire, les programmes d'alimentation, le traitement peu stressant et les antibiotiques. Plusieurs lots de bovins sont des candidats au traitement antibiotique en métaphylaxie dès l'arrivée ou peu après. Les facteurs précédents déterminent la nécessité de ce programme mais dans la plupart des cas cela revient en bout de ligne à une décision économique.

## Introduction

There are many trials that show the obvious benefit of metaphylactic treatment with antibiotics: lower morbidity, lower mortality, and improved performance. This is a true picture of the impact on this group of cattle, but not necessarily the total economic impact of the program on a population of cattle, on the financial status of the operation, on risk positions, the impact on employees, equipment, and facilities. This impact is very difficult to analyze and varies from operation to operation.

The factors listed below are involved not only in the decision to use metaphylactic treatment with antibiotics on a load of cattle, but also in developing the protocol for its use in a cattle operation.

As cattle are unloaded at a feedyard, many things are considered before they are assigned a processing protocol. The person unloading the cattle will make an assessment of general condition and health. Usually a risk assessment of animal health will have already been made before the cattle arrive, including:

- Source and history
- Buyer/owner history
- Commingled
- Age and weight
- Distance hauled
- Weather conditions and season
- Break-even estimate and risk management

Observation off the truck plus the above factors leads to the decision: do these cattle need to be mass treated (metaphylaxis) on arrival? This then becomes an economic decision, influenced by many other issues such as:

- Current perception of antibiotic use in food animals
- Owner/customer preferences
- Antibiotic resistance
- Future response to antibiotic treatment
- Human health issues
- Feedlot labor
- Hospital pen space
- Number of cattle being received at a given time
- Data from trials and lab samples
- Recent death loss numbers
- Animal wellbeing (welfare)

### *The Role of the Veterinarian in this Decision*

The veterinarian should be involved in accessing all of the factors mentioned above. I believe a key role of the veterinarian is to make sure the decision makers of an operation are keenly aware of the factors more related to the veterinarian's knowledge and passions:

- The social and political perception of antibiotic use in food-producing animals; more specific, metaphylactic treatment with antibiotics
- Antibiotic resistance issues in people and food-producing animals
- Future treatment response in pulls after mass treating with an antibiotic
- Animal wellbeing/welfare issues.

### **Conclusion**

The decision to or not to use metaphylactic antibiotic treatment in a group of cattle should be not an emotional decision, it should be based on information on all the factors mentioned above, and it should not be based on pressure or information from uninformed individuals. Metaphylactic

treatment with antibiotics remains a valuable tool in treating and preventing BRD in cattle. The key is to use it as a tool, not a crutch. It is a tool that can significantly impact the economic outcome of a group of cattle and can improve animal well-being.