The Economics of Metaphylactic Antibiotic Treatment

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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 the health in these cattle; vaccines, immune stimulants, feeding programs, low stress handling and antibiotics. Many of these 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, economic decision, metaphylactic treatment with antibiotics.

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 this 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 the use of this in a cattle operation.

As cattle are unloaded at a feed yard 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, this includes;

-Source and history

-Buyer/owner history

-Co-mingled
- Age and weight
- Distance hauled
- Weather conditions and season
- Break even estimate and risk management

Observation off the truck plus the above factors lead to the decision; do these cattle need to be mass treated (metaphylactic) on arrival?

This then becomes an economical decision, influenced by many other issues such as;

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

**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 well being/welfare issues.

**Conclusion**

The decision to or not to use methphylactic 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. Methaphylactic 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 economical outcome of a group of cattle as well as the cattle operation.