

### ***A NEW ANTIBIOTIC FOR BEEF CATTLE***

Almost every month a new or improved product for beef cattle becomes available. Most of these new products represent significant advances for cattle health and production. However, once in a while a new product comes along that is so different I feel it is important to bring it to the attention of California beef producers. This recent addition is an antibiotic that is licensed for the treatment of respiratory disease in beef cattle and non-lactating dairy cattle (it cannot be used in lactating dairy cattle or in dairy cattle 20 months of age or older). You might ask, "What is so new and unique about this antibiotic?" First, this product is administered subcutaneously in the back of the ear—no injection site blemishes in the muscle tissue. Also, the dose needed is low, there is a zero withdrawal time for slaughter, the product can be stored at room temperature (68° to 77°F), and it has a long duration of action (long acting).

#### ***What is this new antibiotic?***

This new product is called Excede™ and it is marketed by Pfizer. The parent drug has been around for some time and is called ceftiofur which has been marketed as Naxcel® and Excenel®RTU. The Excede™ formulation is however new and unique.

#### ***How is this drug administered?***

This drug is very compatible with the Beef Quality Assurance guidelines as it is given subcutaneously and even more unique it is given under the skin of the back of the ear. It does require a very specific location in the back of the ear. Also, a special needle is needed to administer this compound and it must be given by a specific method. Included in this article are some photographs that will illustrate how to inject Excede™. Additionally, you will want to have your veterinarian teach you the proper method to safely administer this product as it is quite different from any antibiotics you have used in the past.

#### ***What conditions or diseases is Excede™ labeled for?***

Excede™ is labeled for the treatment of bovine respiratory disease (BRD, shipping fever, pneumonia) associated with the following bacterial pathogens: *Mannheimia hemolytica* (formerly called *Pasteurella hemolytica*), *Pasteurella multocida*, and/or *Hemophilus somnus*. These are the most important bacterial pathogens that cause respiratory disease in cattle. So it can be used for this very common disease syndrome in cattle. It can also be used for cattle that are at high risk for developing BRD due to these organisms. It is important to remember, it can not be legally used to treat other diseases that are not listed on the label. So you cannot use the drug to treat other (non-listed) diseases like foot rot or pinkeye.

#### ***How long does this drug provide therapy?***

After subcutaneous injection into the back of the ear, the blood level of Excede™ increases rapidly within 2 hours and with a peak blood concentration at about 12 hours. An effective blood level is maintained for about 7 days after a single injection. It is suggested that the animal

should be observed after treatment and a favorable clinical response should be seen by 2-3 days after initial treatment. If a favorable response is not seen in 2-3 days, your veterinarian should re-evaluate the diagnosis and the treatment strategy. The long duration of therapy is a distinct advantage of this product as it decreases handling and stress of the sick animals associated with re-treatment.

***If the drug provides therapy for 7 days how can it have a zero withdrawal time for slaughter?***

The unique site of injection is part of the answer. The ear is discarded at slaughter and any unabsorbed drug goes with the discarded ear. Secondly, this drug does not concentrate in the muscle tissues of the animal. In fact, the drug concentrates in the lung tissue of the animal—right where the bacteria that cause pneumonia are located. The lungs are also discarded at slaughter. These are the reasons that the product can have a zero withdrawal time for slaughter. The same cannot be said for lactating cows as the drug does achieve high concentrations in the milk and thus cannot be used in lactating dairy cattle.

***What about the Beef Quality Assurance aspects of this product?***

As we all know and appreciate, the value of beef has increased tremendously and we no longer have the luxury of being able to tolerate injection site blemishes, abscesses, or toughness of meat due to injected products. There will be continued development of products for cattle health that do not require injection (particularly intramuscular injection). This will result in more products like the pour-on dewormers, Excede™, and products given orally including vaccines. This product takes a major step in that direction.

***Are there any disadvantages or dangers associated with the use of this product?***

No product is perfect and the use of any product must take into account the potential advantages and disadvantages. If this product is injected into the blood vessels that are in the back of the ear the animal can die suddenly. Therefore, the proper method of injecting this compound must be mastered and followed at all times. Obviously, proper restraint of the animal's head will be a critical element in the successful use of this product. Also, the site of injection on the ear must be clean—disinfection may be necessary. This product is approved only for respiratory disease caused by bacteria in cattle, so it is not a general purpose product. It will be very important for your veterinarian to train you and your employees on the proper administration and use of Excede™. Included in this article are a number of photographs used to illustrate the administration of this product. These are included for purposes of information only, it is suggested that you consult your veterinarian before using this product.

John Maas, DVM, MS  
Diplomate, ACVN & ACVIM  
Extension Veterinarian  
School of Veterinary Medicine  
University of California-Davis