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**“Stocker Cents” article**

**Developing a Rational Treatment Program for Stocker Calves**

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Any time that you are dealing with calves that are co-mingled in sale barns and hauled long distances, you are going to be faced with developing a treatment program. While pull rates are highly variable in these calves, we normally plan on treating at least 25-30% even if we give an antibiotic at arrival (metaphylaxis). Of the animals that we pull, over 85% of these calves will be diagnosed with respiratory disease of some form or fashion. So when you look at the sheer number of calves we are forced to treat for respiratory disease, it is imperative that we use a rational approach to make sure it is done effectively and economically.

Building a treatment program involves much more than choosing an antibiotic rotation. The single most important factor that affects the success of the treatment program is identifying and pulling the sick calf early. It has been said that we need to find the calf “when he doesn’t feel good” – before he actually gets “sick”. Calves need to be evaluated at least once per day, but new arrivals and problem groups may need to be ridden twice per day. Evaluating the calves at feeding time will aid in the identification of individuals that are off feed and in need of treatment. Depression is one of the most common signs associated with respiratory disease. It is characterized by lowered head, dullness, laying down, and not paying attention to pen riders. A soft cough may also be present. If respiratory disease is present, the animal’s temperature will usually be over 104° F.

As we put treatment protocols together, we normally work with a three or four antibiotic rotation. The choice of first-line treatment should be based on treatment records whenever possible. The follow up antibiotics are used when the treatment failure occurs. The most effective antibiotic should be used first in order to decrease the number of retreats and prevent calves from becoming chronic. Our target is to have at least 75% of the calves that we treat get better with our first treatment (treatment success rate). These antibiotics will give us multiple days of therapy from a single dose and we need to give the calves 48 hours or longer before we decide retreatment is needed. Switching antibiotics too early will only decrease the overall length of therapy, increase the number of calves retreated, and decrease overall animal health performance.

While it is critical to identify sick calves early, it is also important to know “when to say when”. If the calf fails to recover after three rounds of treatment, chances are, additional therapy will be unrewarding. Further treatment only adds to the

expense associated with the treatment program. In these cases, it is advantageous to have an area that can be designated as the “chronic” pen. This pen needs to provide a low stress environment with shade, forage, and water. It also needs to be isolated from the hospital and from newly arrived calves. Calves can be either hand fed or a self-feeder may be placed in the pen to encourage energy intake. Some producers will plant ryegrass in this pen to provide highly digestible forage. This helps as long as the pen does not become too muddy from soil preparation for planting. Once the third treatment is given, these calves need time to rest and recover – not another round of antibiotics.

It is important to understand why we recommend using only a single antibiotic for each treatment. There is no evidence to support the concept that combinations of antibiotics are more effective than giving a single drug. However, there is data to show that some of the newer antibiotics are more effective when used alone than in combination with other drugs. Giving an antibiotic IV at the same time you give one of the long-acting products is not necessary either. Antibiotics normally reach blood and lung levels relatively quickly when given subcutaneously, so there is no advantage to the additional IV product. Other treatments, such as steroids, non-steroidal anti-inflammatory drugs (NSAIDs), or antihistamines, have not been shown to give an advantage over antibiotics alone. Fever is part of the animal’s response to infection and helps control viral spread. Using these drugs to decrease the body temperature early in the disease has been shown to decrease recovery rates. Remember, when it comes to your treatment program, more is not necessarily better.

Hopefully I’ve given you some food for thought as you are looking at ways to improve treatment response and overall cost effectiveness of your program. There are factors that have a much greater impact on animal health performance than the antibiotic that you choose. The ability to recognize a sick animal in a timely fashion is the cornerstone of any treatment program and really sets the stage for treatment response. Using an effective antibiotic at the proper dose will outperform “drug cocktails” and other ancillary therapies. Finally, get your veterinarian involved in the planning process, and work with them to set up a monitoring system that will help you evaluate treatment response. This will ensure that as new treatment options come onto the market, you will be in a position to use them in a cost effective manner.