Cattle Business in Mississippi – October 2004
"Stocker Cents" article

Stocker Receiving Health Management

Brad White, D.V.M. and Terry Engelken, D.V.M.
Mississippi State University College of Veterinary Medicine

Introduction

Young, lightweight feeder calves collected from multiple sources and combined for a brief feeding or grazing phase prior to sending to a finishing yard represent a unique set of challenges for the producer and veterinarian. This class of cattle is at high risk for disease due to high stress and pathogen exposure associated with this stage of production. Profitability for the stocker or backgrounding phase is greatly influenced by animal health and negative consequences of disease during this stage may adversely impact animal performance until harvest.

Proper management, prevention and treatment procedures aimed at reducing disease risk factors help minimize the impact of health problems and optimize cattle performance. There is no magical, "Silver Bullet" treatment or vaccine that will keep all animals healthy; the production of healthy animals is based on attention to detail and doing all the little things correctly. A good health program involves participation of all farm personnel and a working goal of continuous improvement.

Individual operations differ significantly in management techniques and health programs. It is important to analyze your operation to ascertain the biggest areas for potential improvement to allow proper allocation of resources. A farm evaluation should examine the general areas of cattle receiving, initial processing, nutritional management, and disease management. This article will concentrate on the receiving and initial processing portions of the evaluation.

Cattle Receiving

Animal selection for placement in a calf growing facility is a major factor in the outcome of this phase because purchase price greatly impacts final profitability and all groups of animals are not at a similar risk for disease. Groups of calves should be divided into risk classifications of High or Low risk based on the assessment of the animals and historical performance of this animal type if available. The risk classification influences initial animal management, treatment protocols, and labor allocation for the pen. The operation should evaluate current resources and match the purchase pattern to ensure proper animal management.

Disease patterns often mirror cattle flow. "All In, All Out" procedures instituted in other production animal operations would be ideal, but in many situations, purchasing an entire pen of cattle from a single source at one time is infeasible. To minimize the effect

of adding cattle to an existing pen, try to limit the adding of calves to a period of 3 days or less. As cattle become clinically ill after arrival they typically shed higher number of pathogens and adding new cattle to pens can lengthen the time of peak disease pressure for the pen.

Initial Animal Management

Our ability to maintain good health statistics on the animals starts on arrival. Each group of calves entering the facility should be recorded along with initial procedures performed to these animals. Recording the number of head, where they came from and which pen they were placed in is critical for determining disease and mortality incidence rates. These numbers can be maintained with minimal time and effort.

Initial processing timing and technique is critical because stressed animals do not generate an adequate immune response; thus care should be taken to avoid undue stress. Timing of initial processing is influenced by initial calf evaluation and history of travel. Calves that have traveled a long distance should be placed in receiving pens that have plenty of space for the cattle to feed and water prior to initial processing. If necessary, bedding should be placed in the receiving pens to give cattle a comfortable place to rest and recover. Cattle that traveled a short distance may be processed on arrival and placed in their pen.

Processing timing should be planned to avoid weather stress events. Heat stress is a very real event which decreases the animal's ability to respond to vaccines or compensate for other stresses such as processing or disease challenges. In warm weather, attempt to avoid working cattle when the Temperature Humidity Index is 80 or above. Cattle do not cool down immediately after a hot day; it may take up to 6 hours for heat dissipation to occur. Thus, cattle worked at the end of the day or immediately after sunset may still incur large amounts of heat stress. During the hot times of the year, early morning is optimal for working the cattle because we have had the maximum time of heat dissipation overnight. Try to complete processing before it begins to get hot again in the morning (by 8-9 am).

Initial processing should be calm, quiet, and efficient to minimize animal stress. Loud noises (yelling) and excessive hot shot use should be avoided. If these techniques are necessary to move cattle through the system, then facility renovation should be considered. The goal is to work the animals as efficiently as possible – not as fast as possible. The quality of each procedure performed is more important than the speed at which it is performed. Improperly administered products do not prevent disease, thus we may end up getting that calf up again for treatment, which in the long run adds additional time we must spend on each calf. It is better to spend a few extra seconds to perform the injections correctly the first time than to have large numbers of animals that need to be treated again.

Injection site selection and injection technique influence product efficacy. All injections should be administered in accordance with Beef Quality Assurance guidelines in approved injection locations. All products should be given following label directions

regarding dose and route of administration. If given the choice between intramuscular (IM) and subcutaneous (SC), injections should be given subcutaneously.

Accurate processing records are important to enable us to maintain quality controls and evaluate product performance. A processing record should be completed on each group of calves. This is also important because the administration of many products induces a withdrawal time on each set of calves and proper records makes compliance with withdrawal times possible.

Initial Processing Protocols

A specific protocol for each risk classification should be generated for each operation using the history of specific disease prevalence on the farm. The viral vaccine should be modified-live (MLV) vaccine including at least infectious bovine rhinotracheitis (IBR) and bovine viral diarrhea (BVD) with the farm specific option of bovine respiratory syncytial virus (BRSV) and parainfluenza-3 virus (PI3). Strategic management of deworming program is critical for calves that will be turned out to pasture or may stay on the farm for extended periods of time. Individually identifying calves is ideal, but if not possible a pen or lot tag should be placed in the calves so they can be recognized by group. The goal of initial processing is not to eliminate disease, rather to prevent exponential spreading of disease through the pen.

The major differences between the High and Low Risk protocols are the decisions regarding metaphylaxis (mass medication upon arrival), abortifacients, and testing for BVD. These choices should be made based on previous farm history and specific signalment of calf group. The use of an appropriately selected prophylactic antibiotic has been shown to decrease morbidity and mortality attributable to pneumonia in weaned calves and your veterinarian should be consulted to make the antibiotic selection for your farm.

Low Risk (Farm Fresh or Preconditioned) Cattle: **Initial Processing (within 24 hours of arrival)**

Antigens / Procedures	**Comments**
IBR/BVD/PI3/BRSV	All components modified live vaccine
Dewormer	Must control inhibited Ostertagia
Clostridial Diseases	Prefer products with 2 ml subcutaneous dose
Ear Tag	Record color & numbers, use sequential tags for easier record keeping
Implant	Selection based on time calves will be on farm

High Risk Cattle: **Initial Processing (within 24 hours of arrival), includes Low Risk Protocol and some or all of the following:**

Antigens / Procedures	**Comments**
Injectable Metaphylaxis	Product dependant on farm history and preference
Abortifacient	Prostaglandin, heifers only, use determined based on risk assessment
BVD IHC Test	If deemed economically feasible on specific operation

Summary

Feeder calves provide a unique set of health and management challenges. A thorough farm evaluation and implementation of a receiving and initial processing protocol created specifically for the operation can help decrease animal disease problems. Health records should be kept and the program constantly re-evaluated and improved to generate the best outcomes. Next month Stocker Cents will address cool-season forage and supplementation.