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Shipping Fever

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SHIPPING FEVER

Shipping fever has long been recognized as a complex infectious respiratory disease in cattle and sheep. Though a common and costly disease like the common cold in humans, little is actually known of its cause and prevention.

Shipping fever is observed in cattle of all breeds and ages and under various forms of management, but is most often observed in young animals under the stresses of transportation and re-establishment in a new environment. When the same conditions occur in animals that have not been transported it is referred to as pneumonia. Older animals appear to be more resistant.

Shipping fever may occur at any time of the year, but is most frequent when changeable and uncomfortable weather conditions exist. These conditions may include extreme heat as well as extreme cold. Most cattle are moved from the uncrowded and less contaminated range areas to the crowding and stresses of the feedlot during the time of year when temperatures are most variable.

Symptoms

The signs of shipping fever vary in degree and type with the source of cattle, time of the year, environmental conditions and training of the observers. Usually, it will vary in degree of severity from undetectable, other than by temperature elevation, to a peracute form and a rapid death.

Body temperature elevation is not a definite sign of onset of shipping fever symptoms, although it usually has been associated with shipping fever.

The signs of shipping fever, in the most frequent order of onset, include discharge from the nose, increased rate of breathing, hacking cough, depression, loss of appetite, tears, saliva flow and diarrhea. Stiffened gait, diarrhea and weight loss usually are associated with advanced cases. If recovery occurs, the animal often has a chronic respiratory condition and becomes an inefficient gainer. The final symptoms of a peracute case are bleeding from mouth and nose, with difficult breathing and death.

Other diseases of feedlot cattle may appear similar at first and make diagnosis difficult. These include IBR (red nose), mucosal disease (virus diarrhea), malignant head catarrh and the various forms of stomatitis.

The symptoms of these diseases appear so similar that it is impossible to tell them apart by observation, particularly in the early stages. The only sure method of diagnosis is by post-mortem examinations and laboratory isolation of a specific virus for each disease.

Causes

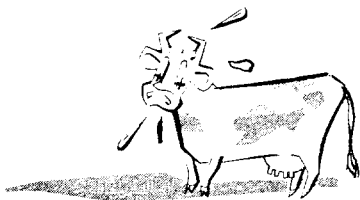
Though the symptoms observed are the result of viral and/or bacterial activity, the first cause is mainly one of stress. The viruses and bacteria that cause shipping fever are always present in the respiratory tract and the environment of cattle. Stress provides the means for these viruses and bacteria to become active or produce symptoms of shipping fever. The various viruses appear to injure the lining of the respiratory tract, causing a breakdown of

defenses to the bacteria that are normally present in the tract. Any process or event that will serve to lower the natural resistance of cattle may be considered as stress. The various stress factors usually associated with the change from range to feedlot condition in calves include weaning, herding together, driving, loading, overcrowding, inhalation of dust, transportation, overheating or chilling, dehydration and unavailability and/or changes in feed or water.

The exhaust gases from tractors flowing back on the upper deck of the trailer load of calves can be very irritating to the tissues of the respiratory tract. Some investigators report a 10 per cent increase in respiratory problems in calves that have inhaled tractor exhaust fumes.

Calves often arrive in the feedlot tired, frightened and worried. Contact with carrier animals contaminated in transportation vehicles and holding areas contributes to the stress conditions associated with shipping fever.

Generally, the bacterial organisms suggested as associated with shipping fever are Pasteurella hemolytica or Pasteurella multocida. Recent investigations have demonstrated that a complex of respiratory viruses such as the parainfluenza group alone or with the pasteurella organisms may cause shipping fever. There are many strains of viruses associated with the respiratory tract that will cause the symptoms of shipping fever. Some of these viruses are the same as those causing influenza or the common cold in humans.



PREVENTION

Good Management - Avoid Stress

Clean and disinfect the feedlot before the calves arrive. Get the premises and housing in shape to provide maximum comfort for the new calves.

Avoid long hauls without resting the calves, and avoid exhaust fumes of trucks during transportation. Move them during the cool of evening if the weather is warm. Protect the calves from exposure to cold and wet weather. Handle cattle gently--avoid beating or excitement.

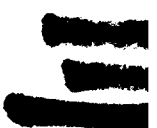
Give the calves time to get used to their new environment. Let them rest at least 10 days before any activity other than removing any that show signs of illness. Do not castrate or dehorn during this resting period. A pasture attached to the feedlot will serve to provide conditions more nearly similar to range conditions and decrease the stress of environmental change. Feed, water and minerals should always be freely available in the feedlot.

Make it easy for the calves to get fresh, clean water. Providing extra tanks or tubs of water during the first week or 10 days may prevent dehydration. Remember, the new calves may not know how to use drinking cups that require nose pressure. Dehydration can be the first cause of shipping fever. The addition of 1/2 to 1 per cent of salt to the drinking water may help in preventing dehydration. Electrolytes are also useful in preventing dehydration, which is one of the stresses to which new feedlot calves are often subjected and may aid in causing respiratory diseases.

Fence walking and inhaling dust may be avoided by a staggered arrangement of the feed bunks in the feedlot. Several aged steers, cows or bulls in the feedlot will often aid in quieting the new calves and show them where and how to get water and feed.

Keep good quality hay always available. Small quantities of a good protein supplement with vitamin A and minerals are valuable in providing the nutrients for building resistance to disease. Trace mineral salt should be available, free choice, at all times. Animals that are undernourished may be more subject to infection than those that overeat.

Much of this activity can be minimized if calves come from ranches where they have been acclimatized to feedlot environment at least four weeks before moving to the feedlot. If the rancher has been feeding a special starter ration, use the same brand for the next week, then gradually change over to the desired concentrate.



Avoid digestive upsets. Start cattle on their rations slowly. Be sure the troughs are clean, to avoid contamination. Vaccination for enterotoxemia will help prevent digestive upsets.

Good restraint equipment arranged to handle calves with a minimum of excitement and respiratory stress is of great value in preventing shipping fever in the feedlot.

Have a hospital pen so that any calves showing signs of shipping fever may be removed immediately from the rest of the calves. Watch the calves closely, and begin medication immediately upon detection of any illness. The calves should be observed closely at least twice daily.

Preventive Medication

Numerous preparations have been advocated as a means of preventing shipping fever. One of the earliest was bacterins (vaccines); later sulfonamides and antibiotics were used. There is no one specific material or approach to give absolute protection against shipping fever.

VACCINES. Vaccines have been made from pasteurella organisms and viruses isolated from shipping fever. Very few controlled investigations with vaccines of any form or combination have been of demonstrable help in preventing shipping fever. In many instances, more severe respiratory problems occur following vaccination and are usually much more difficult to successfully medicate. Shipping fever vaccines generally cause undue stress on the animal and are costly.

ANTISERUMS. Pasteurella antiserums are available and give temporary (maximum of 15 days) protection. If antiserums are given in large enough dosage they are extremely costly.

ANTIBIOTICS. Various antibiotics have been suggested for preventing shipping fever. They may be administered intramuscularly or in the feed or water. Penicillin-streptomycin combinations administered IM should be given when the calves are loaded on trucks or at the time of unloading if the transportation time does not exceed 24 hours. They may also be readministered five to seven days following arrival in the feedlot. This approach appears to be the best preventive measure for shipping fever that is known today.

Provision of antibiotics or sulfonamides in the feed or water has the disadvantage of not being available to those calves that neither eat nor drink. This is usually the case with a sick calf. Most controlled investigations have not demonstrated any benefit in preventing shipping fever or other respiratory problems by the addition of sulfonamides or antibiotics to the feed or water. Antibiotics or sulfonamides are not effective against virus diseases. It is also difficult to provide sufficient quantities of antibiotics or sulfonamides by this method to be of any benefit as a preventative for the bacterial diseases.

TRANQUILIZERS. Many tranquilizers are available. They vary in effectiveness and should be given only under the supervision of a veterinarian. Overdosage can cause "downer cattle" during transportation. Injury will often result. Improperly used tranquilizers can induce cattle not to eat or drink for several days. Tranquilizers have been beneficial when correctly used. They are comparatively more costly than many of the other shipping fever preventives.

Good management and avoiding unnecessary stress are of much more value than the so-called preventive medication.

Treatment

At the first signs of shipping fever, separate the sick animals from the healthy ones. A hospital pen apart from the rest can be of much help. The best general treatment is the oral administration of long-acting sulfamethazine and simultaneous intramuscular administration of long-acting penicillin-streptomycin combination. Always give adequate dosage. Under-dosage can only lead to poor results and the necessity of readministration.

Accurate Diagnosis is Important

Any form or combination of sulfonamide or antibiotic will be valueless in the treatment of IBR, BVD or other respiratory viral diseases.

Consult your local veterinarian regarding treatment. The success of various materials for treatment varies from area to area and from season to season. The local veterinarian is in constant contact with shipping fever medication and knows the best approach under conditions in your area.

No one treatment will correct all cases of shipping fever. The longer the animal is deprived of medication following the onset of shipping fever, the less are its chances for recovery.

