

Preserving herd health is essential to success in beef cattle production. A knowledge of health problems that affect beef cattle is vital. Developing a herd health program and knowing the proper routes of administration for giving vaccinations and medicines are an important part of maintaining herd health. A producer should work closely with a veterinarian to help keep his or her cattle healthy.

Herd Health Problems of Beef Cattle

Many diseases can affect beef cattle. A few of the major disorders are listed below. Producers should be familiar with their symptoms to be able to identify herd health problems.

Anaplasmosis - This disease is caused by parasites spread by biting insects. It results in the destruction of oxygen-carrying red blood cells. Symptoms include weight loss and labored breathing. Affected animals may die of a lack of oxygen. Controlling insects and giving vaccinations can help to prevent anaplasmosis. It is treated with tetracycline, a treated mineral, or daily doses of other antibiotics.

Blackleg - Blackleg is one disease caused by the clostridial microorganism. This disease usually results in the death of fast-growing calves. Symptoms include swollen and inflamed muscles and lameness. Gas from swollen muscles builds up under the skin and makes a crackling noise when pressed. Vaccines are inexpensive and very effective.

Bovine respiratory syncytial virus (BRSV) - This virus weakens the respiratory system, making the animal more vulnerable to infection. Symptoms include discharge from the mouth and nose, fever, and a hacking cough. Calves are more likely to become ill, especially ones that are under stress. Producers can vaccinate animals against this disease.

Bovine virus diarrhea (BVD) - BVD can cause severe diarrhea in cattle. Other symptoms that may be present include fever, coughing, and nasal discharge. It can be prevented through vaccinations.

Brucellosis - Brucellosis is an incurable reproductive disease causing abortions. Cows and bulls may also become sterile. Because the disease has no cure, infected animals must be slaughtered to keep it from spreading. Producers should vaccinate replacement heifers as calves.

The microorganism that causes the disease can also infect human beings.

Fescue foot - Fescue foot is a nutritional health problem that occurs in cattle pastured on tall fescue due to a toxin in the fescue. In severe cases, the animal may lose one or both of the rear hooves, as well as the tips of the ears and tail. Other symptoms include an arched back, rough coat, and stiffness or lameness. One way to prevent fescue foot is mixing legumes with the fescue.

Grass tetany - This nutritional disorder is found in cattle grazed on grass pastures that have insufficient levels of magnesium. It usually occurs in lactating cows but may develop in other cattle. Some symptoms are trembling and staggering. If untreated, it may cause death. Prevention involves feeding cattle magnesium supplements. The disorder is treated with intravenous administration of a solution containing magnesium and calcium.

Infectious bovine rhinotracheitis (IBR, red nose) - IBR is caused by a virus and takes several forms. One form is a respiratory disease characterized by fever, nasal discharge, and a reddened muzzle. In females, another form attacks the reproductive system and causes abortions and inflammation of the vagina and vulva. A third type is similar to pinkeye. Cattle should be vaccinated for IBR.

Leptospirosis - Leptospirosis is spread through the urine of infected animals. Symptoms of this disease include fever, rapid respiration, poor appetite, and jaundice. It causes abortions, weak calves, and stillbirths. Five different strains of leptospirosis exist, so producers should consult their veterinarian to learn which vaccine is appropriate. Humans can get this disease from cattle.

Pinkeye - This disease causes the eye to develop a pinkish color or, in the more serious form of the disease, to water and develop a white, cloudy film. Blindness may occur. Vaccinations can be used to help control pinkeye. Proper fly control also seems to help limit outbreaks of this disease.

Scours - Scours is a complex condition that can have many causes, including BVD. It causes severe diarrhea in calves and can cause death. Producers can vaccinate cattle before calving as an aid in prevention, although good sanitation is also important in controlling this disease.

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Shipping fever (parainfluenza-3 virus or PI-3, pasteurella, hemophilus pneumonia) - Shipping fever is a term commonly used to refer to several respiratory diseases. High fever, coughing, difficulty in breathing, and discharge from the eyes and nose are symptoms. This disease often appears in cattle that are under stress. It can be prevented with vaccinations.

Vibriosis - Vibriosis is a disease spread among females by the bull during breeding. It results in abortions with no outward signs of disease. It also causes poor conception rates. Vaccines are available to prevent the disease.

Herd Health Programs

Developing a herd health plan is very important for all beef cattle producers. The herd health program used by a producer affects the wholesomeness and profitability of the final beef product. Producers should always keep in mind that they are producing beef, not just cattle.

Herd health programs should focus on disease and parasite prevention rather than treatment, since prevention is far more economical and successful than treatment programs. Cow/calf producers and purebred breeders should vaccinate feeder calves against IBR, PI-3, BVD, BRSV, pasteurella, and clostridial diseases like blackleg before weaning. Producers should consult their local veterinarian and/or animal health supplier for the exact timing of all vaccinations. Many vaccines require a booster shot, which is a second round of injections given shortly after the original vaccination. Vaccines can often be purchased in combination with one another. The producer should also apply products that kill external and internal parasites. Injections, pour-on insecticides, and oral medications can control parasites.

Cow/calf producers and purebred breeders should vaccinate replacement bulls and heifers against BVD, IBR, PI-3, leptospirosis, vibriosis, hemophilus pneumonia, pasteurella, and clostridial diseases. Replacement heifers also need to be vaccinated against brucellosis at four to nine months of age by giving them the OCV vaccine. Vaccinations are usually done thirty days before breeding to build immunity before breeding occurs. These vaccines may require that a booster shot be given. If parasites have not already been treated, the producer should apply products that kill external and internal parasites when giving the booster shots. At the same time, mature cows

and bulls should also be given boosters for leptospirosis, vibriosis, BVD, IBR, and clostridial diseases, along with external and internal parasite treatments.

Backgrounders and feedlot operators will usually revaccinate cattle because the history of the calves is unknown. They vaccinate their cattle against IBR, PI-3, BVD, BRSV, pasteurella, and clostridial diseases and treat animals for external and internal parasites. Work is currently being done on providing vaccination information on a certificate or special tag along with the cattle to save on the cost of boosters.

Routes of Administration

Producers can administer animal health products in a variety of ways. The label should always be consulted before giving any vaccines, dewormers, or other medicines to check on the proper routes of administration, expiration date, and use of the product. Common routes of administration are intramuscular, subcutaneous, oral, intranasal, and intravenous (see Figure 5.1).

Intramuscular (IM) - Intramuscular injections are made into the muscle. They should be given in the neck, never along the back or hip of the animal. Intramuscular injections are used for antibiotics and some vaccines.

Subcutaneous (Sub-Q) - Subcutaneous injections are given between the skin and muscle. They should be given in the loose skin on the side of the neck. This route is recommended because of the potential for carcass damage when injections are given into muscle tissue.

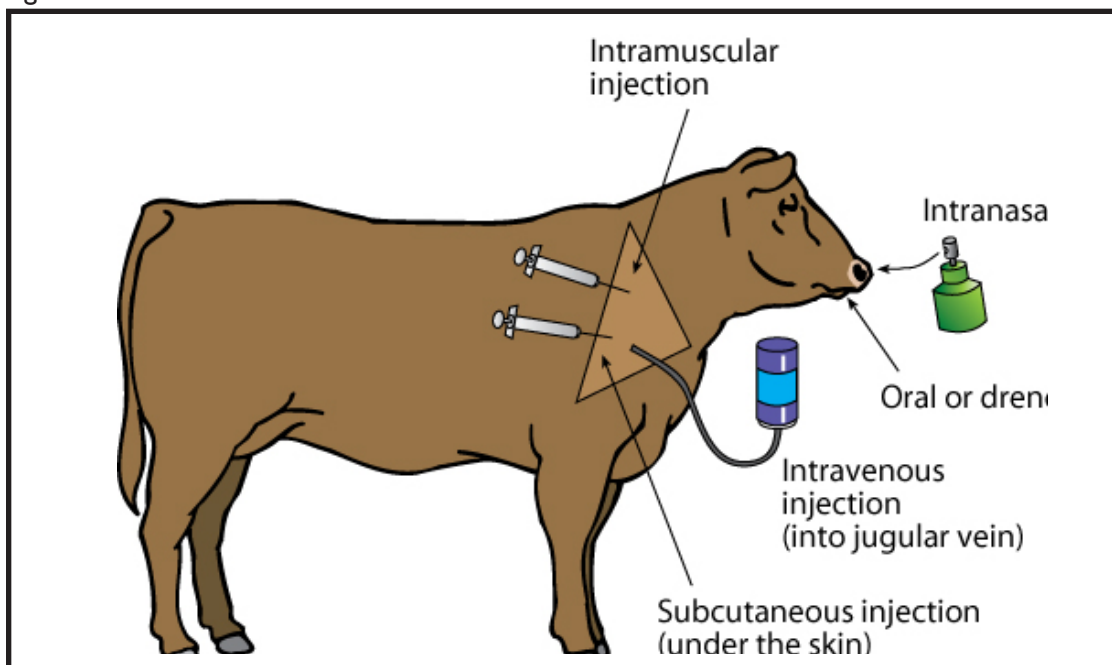
Oral - An oral, or drench, is administered through the animal's mouth. Dewormers and some vaccines are given orally.

Intranasal (IN) - Like nasal sprays used by humans, intranasal vaccines are sprayed into the nasal cavity.

Intravenous (IV) - Intravenous treatments are given directly into the jugular vein of the animal. Either injections or actual drip IVs can be administered in this way.

Subcutaneous injections should be used whenever possible, but the directions must be read and followed exactly. The producer should also be aware of withdrawal dates, which indicate the number of days after the

Figure 5.1 - Routes of Administration



injection is given that he or she must wait before selling the animal for slaughter.

Summary

Every cattle operation should develop a thorough herd health program. The veterinarian and producer both need to be involved in herd health management. Most cattle diseases can be prevented with proper management. Vaccinations should be given on schedule to help ensure herd health. Producers should follow the directions on the label exactly when vaccinating cattle. If an injectable vaccine is used, subcutaneous injections should be given if possible.

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