Losses from Causes Other Than Poisonous Plants

By John Wenzel, Extension Veterinarian

Diseases can cause large and/or sudden livestock losses and can be confused with poisonous plant losses. It is important that you involve your veterinarian in investigating any large, sudden or suspicious livestock loss. It is also important that you involve your veterinarian when you see clinical signs in livestock that may be from poisonous plants, as some plant toxicoses are treatable especially when early in the disease process. Many plant toxicoses cause an abortion syndrome in livestock that looks like several diseases caused by infectious agents. You will need veterinary assistance to determine the cause of abortions or loss of pregnancy. Below we will list some infectious diseases and physical conditions that may look similar to plant poisonings.

Bovine Respiratory Disease Complex (BRD) – cattle

The infectious agents involved in BRD include the viruses *Infectious Bovine Rhinotracheitis Virus* (IBR) or “rednose”, *Bovine Virus Diarrhea Virus* (BVD), *Parainfluenza Virus* (PI3), *Bovine Respiratory Syncytial Virus* (BRSV) and the major bacteria *Mannheimia hemolytica*. This disease complex can cause very devastating losses to susceptible cattle and has been identified as the causative agent in adult cattle losses. Depending on the immune status and susceptibility of cattle exposed to the causative agents of BRD, clinical signs are generally associated with respiratory disease. Difficult breathing, reluctance to move, open mouthed breathing, loss of appetite, dehydration, coma and death are common with BRD. Many times the disease process can move so quickly that no clinical signs are noticed and sudden death may be the only finding. Vaccination and management can help prevent or minimize losses associated with BRD.

Clostridial diseases- cattle, sheep goats and horses

The *Clostridial* sp. of bacteria cause a variety of diseases that can cause large and/or sudden livestock losses. The most common Clostridial disease, “blackleg”, still causes livestock loss today. Other species of this genus cause musculoskeletal and gastrointestinal disease. Some clostridial organisms are found in soil and are very infectious to susceptible livestock. Overeating disease, tetanus, botulism, blackleg, redwater, black disease and malignant edema are all caused by Clostridia. Sudden death in suckling calves can be caused by *C. perfringens*, in stocker cattle by the blacklegs *C. chauvoei, novyi and septicum* and in cattle on feed overeating disease caused by *C. perfringens*. These diseases can be prevented or minimized by vaccination and management.

Listeriosis- sheep, goats and cattle

This disease that affects the brain is caused by the bacteria *Listeria monocytogenes*. This disease is usually seen as a brain problem and affected animals may show the clinical signs of circling, ataxia,
anorexia, stumbling, paresis, coma and death. The ataxia and “brain signs” are similar to many plant poisonings such as nitrate toxicity, etc. Other syndromes are possible but not as common as the brain signs. There is no vaccination to prevent the disease, but it is treatable with limited success if diagnosed early.

Thromboembolic meningoencephalitis- (TME) – cattle

This is a disease caused by Histophilus somnus (formerly Hemophilus somnus) that causes brain signs and damage. This form may be accompanied by a mild to moderate respiratory disease. This disease is usually seen in feeder cattle but can be seen in weaned calves on pasture, such as wheat pasture. Clinical signs include depression, ataxia, anorexia, stumbling, reluctance to move, knuckling over, paresis, paddling, coma and death. The respiratory disease may be associated with brain signs in some cattle. Vaccination and management may prevent or minimize losses with this disease. It is treatable when diagnosed early in the course of the disease.

Polioencephalomalacia (Polio) – cattle, sheep, goats

This disease is caused by many factors with the underlying result being a thiamine deficiency. Thiamine is needed in the central nervous system and toxicoses, nutritional imbalances, diseases or parasites that compete for, or cause, a thiamine deficiency that may result in livestock losses. Clinical signs include “brain signs” such as anorexia, ataxia, depression, head pressing, “star-gazing”, paresis, coma and death. Coccidiosis, a disease caused by the protozoan parasite Eimeria sp., can cause sudden death in feedlot cattle because the parasite competes with the animal for available thiamine. Polio is somewhat treatable, depending on the underlying cause of the thiamine deficiency. It is important that treatment begin quickly once clinical signs are seen, as brain damage is occurring due to neurons dying. Treatment of Polio must include the administration of parenteral thiamine.

High Altitude Disease (Brisket Disease) – cattle

This disease is caused by pulmonary hypertension resulting from decreased environmental oxygen pressures. Cattle acclimated at lower altitudes and higher environmental oxygen pressures, may develop hypertension when move to a higher altitude. Researchers are exploring a possible genetic predisposition to this disease. Some genetic lines of cattle appear to be more tolerant to changes in altitude and therefore show less hypertensive effects. Clinical signs of this disease are gradual loss of condition, depression, anorexia, swelling in the brisket region, jugular pulse, difficulty breathing, open mouth breathing, reluctant to move, recumbency and death. If cattle are moved back down to lower altitudes some may spontaneously improve. Testing cattle for pulmonary arterial pressure may identify susceptible cattle prior to moving to altitude. Bulls selected for low arterial pressures at High-Altitude Bull Tests should be considered for sires when altitude is involved in your ranching operation.

Bluetongue- sheep, cattle

Bluetongue Virus causes the disease Bluetongue. It is transmitted by midges or “no-see-ums” belonging to the Culicoides genus. This vector borne disease causes much more disease in sheep than cattle, but many cattle in NM are serologically positive for Bluetongue. This disease also affects wildlife. Clinical signs are varied but usually include anorexia, ataxia, swelling of the head and face, sores in the mouth and lameness. Sudden death can be seen with bluetongue. Brain signs can also be seen in some cases. In some instances, vaccination may be included in the management for preventing this disease.
Mesquite Bean Impaction- cattle, sheep, goats, horses

Mesquite beans can be a very good feed for livestock. At certain times and environmental conditions, the beans have a coating that becomes very sticky and when ingested in fairly large amounts, the pods can stick together and form a large mass that results in a gastric or intestinal obstruction. Clinical signs usually begin long after the ingestion of the beans. Signs include loss of condition, colic, anorexia, excessive chewing and wasting away. Sometimes the mesquite bean “ball” can be found in close proximity to a decomposing carcass. Treatment can be very difficult and is frequently unrewarding.

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UPCOMING EVENTS

Tucumcari Bull Test Bull Sale
Tucumcari, NM - March 14, 2015

Horse Expo & Sale
NMSU Horse Center – Las Cruces, NM
April 18, 2015 - Joby Priest, Horse Manager

NMSU Bull Sale
NMSU Horse Center – Las Cruces, NM
April 25, 2015 - Neil Burcham

US Dairy Education & Training Consortium
May 18 – June 26, 2015
Clovis, NM
Information at usdetc@tamu.edu

NM Youth Ranch Management Camp
Valles Caldera, NM
May 31 – June 5, 2015

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MONDAY, JANUARY 19TH – Martin Luther King, Jr. Holiday
Enjoy the 3-day weekend!

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