

Deadly Feed Additive Killing Donkeys  
by Amy McLean, Sowhatchet Mule Farm, Inc. Madison, GA

It has recently been approved by the FDA (the Food and Drug Administration), that ionophores (a subtherapeutic medicine/additive that increases feed consumption by increasing nutrient absorption in the rumen of the cow or acts as an anticoccidial in poultry), such as rumensin can be added to dairy rations. In the past ionophores or more commonly known as monensin have been added to feeder calf diets and almost all commercial poultry diets. Ionophores are deadly to equine and occasionally you will hear of equine being affected by ionophore poisoning. It's very likely that more cases occur but go undetected or diagnosed.

Cross contamination of feeds containing this ingredient with feed being fed to equine can cause deadly problems for the equine consuming contaminated feed. Normally when a ration is being made with an ionophore the mill will purge the equipment with whole corn. The purging is suppose to clean the system of the ionophore. Some companies such as Purina Mills, LLC. added firewalls to their equipment several years ago to prevent cross contamination and today they no longer produce cattle feed in the same mill as where horse feed is being made to prevent any contamination problem. Unfortunately, some feed companies are not as proactive, or well equipped or simply do not recognize ionophore consumption of equine as a deadly problem.

Well, it's very LETHAL! Many studies have shown that only a small amount of monensin in feed can kill a horse (equine). Symptoms of monensin toxicosis include lack of mobility and incoordination (it attacks the neurological system, so the animal can not get up or stand), may see animal paddling or trying to get up before death, profuse sweating, tachycardia and cardiac arrhythmia, dark colored urine, and increase in blood serum of creatine phosphokinase (CPK). Blood can be drawn in live animal to detect increase in CPK levels. Studies have shown that death occurred in 12 out of 16 horses in Brazil that ingested feeder calf feed that contained 180 +/- 20 ppm of sodium monensin. The morbidity rate was 100% and the lethality was 60, 75, and 100% (Bezerra, et al., Monensin poisoning in Brazilian horses *Vet Hu Toxicol.* 199 Dec;41(6)383-5). Death can be acute (sudden) or prolonged. If death is prolonged the ionophore will eventually cause the heart to explode or degenerate. It has been reported that the prolonged condition can last as long as several months and the most common cause of death was cardiac failure. These horses that died several months later exhibited signs of cardiac myopathy and fibrosis which can cause sudden death or delayed death due to cardiac myodegeneration (Muyllé E, et al. Delayed monensin sodium toxicity in horses. *Equine Vet J.* 1981Apr; 13(2); 107-8). Lesions may also be found on the heart and the heart may even explode according to Dr. Leo Eldridge.

This problem is not new but will be more prevalent by adding it to another feed and is still very LETHAL. Please be aware that at this time there is no current antidote or treatment for equine that ingest monensin. Evaluate where you are purchasing your feed, ask the feed company questions about this issue to help prevent your animals from ingesting ionophores such as, what other types of feed are being made at that mill, are you using ionophores in the feeds, or if you are buying a commercial made feed by a feed company ask the dealer to find out for you or call the company from who you are purchasing the feed about how they can assure that no ionophores are in your equine feed.

We had to learn the hard way. After losing 4 donkeys within several weeks we finally had a necropsy done on the last jenny who was a 16.2 hand, young, 6 year-old, mammoth jenny who had produced some fine donkeys. She had no previous history of illness or locomotive problems. The pathology results indicated the clinical signs pointed to ionophore contamination. If you lose a donkey, or mule in the near future I highly encourage you to have a necropsy done to ensure that ionophore contamination is not the problem. I hope this article can help prevent another donkey or mule from suffering and dying from this horrible feed additive!

